STATE OF NEW MEXICO OIL CONSERVATION COMMISSION Case Nos. 24018 - 24019, 24024 - 24027, 24683, Moderated by Gerasimos Razatos Thursday, August 15, 2024 9:00 a.m. Wendell Chino Building 1220 South St. Francis Drive Santa Fe, NM 87505 Reported by: James Cogswell JOB NO.: 6861370 Page 1

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|----|------------|-----------------------------|---------|
| 2 | NO. | DESCRIPTION | ID/EVD |
| 3 | Case 24594 | | |
| 4 | Targa: | | |
| 5 | Exhibit A | Hearing Application and | |
| 6 | | Attached C-108 | 110/114 |
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| 11 | OCD: | | |
| 12 | Exhibit 1 | Conditions of Approval | 115/194 |
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1 PROCEEDINGS 2 MR. RAZATOS: Well, good morning to It's nine o'clock. This is the August 15th 3 everyone. meeting of the Oil & Conservation Commission. 4 I'm 5 Gerasimos Razatos. I am the acting director for the 6 Oil Conservation Division in the interim. So nice to 7 meet all of you. 8 And it is time to call our meeting in 9 session. So we'd like to do a roll call. As I said, I'm Gerasimos Razatos, I go by Gerry. I'm the acting 10 11 director, and I'm Oil Conservation Commission chair. 12 Doctor. 13 DR. AMPOMAH: I am Dr. William Ampomah, 14 designee of the energy secretary. 15 MR. RAZATOS: And I believe Mr. Bloom 16 is going to be joining us electronically today. 17 Mr. Bloom, Commissioner Bloom, are you 18 on? 19 There he is. 20 MR. RUBIN: Can we have Commissioner 21 Bloom just test his mic so we can make sure we hear 22 him? Is he muted? 23 MR. RAZATOS: Well, I think we lost him 24 again. 25 Commissioner Bloom? Page 11

1 MR. BLOOM: Hi there. 2 MR. RAZATOS: Awesome. 3 MR. BLOOM: Good morning, everyone. Okay. So I believe we 4 MR. RAZATOS: 5 have a quorum. So let the record note that we do have 6 a quorum. 7 Okay. We have this week's agenda. 8 Everybody have a copy of the agenda? It has been 9 published. Is there any changes that we need to do or any edits or anything like that? 10 11 Is this echoing because it's too far 12 away from me, Sheila? 13 MS. APODACA: It could be. If you are 14 logged into the meeting on another device, mute the 15 volume on that device. 16 MR. RAZATOS: I have. 17 MS. APODACA: Okay. Let me try to turn 18 down the volume then on your mic. Okay. Let's see if 19 that's any better. 20 MR. RAZATOS: Okay. Yep. There we go. 21 So were there any changes or anything? No. Not from me. 22 DR. AMPOMAH: 23 MR. RAZATOS: Awesome. Do we have a 24 motion to accept the agenda? 25 MR. BLOOM: I so move. Page 12

1 DR. AMPOMAH: I second. MR. RAZATOS: Excellent. So our agenda 2 3 has been accepted. Thank you. Our next motion is our meeting minutes 4 5 from last meeting. Any changes that we need to do to 6 the meeting minutes? 7 MR. BLOOM: I thought the meeting 8 minutes look good. I would move to approve. 9 MR. RAZATOS: Excellent. 10 DR. AMPOMAH: I second. 11 MR. RAZATOS: Okay. So we'll move that 12 our meeting minutes are accepted. Thank you for that. 13 All righty. So now we have our cases. We're coming up to our cases. Our first case this 14 15 morning -- and of course --16 MR. BLOOM: Mr. Chairman. 17 MR. RAZATOS: Yes, please. 18 MR. BLOOM: I'm sorry. Do we need a 19 vote on the agenda and the meeting minutes from the 20 last month? Or just want to say --21 MR. RAZATOS: T think we do. 22 MR. BLOOM: Yeah. That we have -- you can say they pass unanimously. 23 24 MR. RUBIN: Mr. Chairman, members of 25 the commission, yes, that is correct. We should Page 13

1 formally have a motion. 2 MR. RAZATOS: Sorry. Let's formally 3 have a motion then. A motion that we accept the 4 meeting minutes and the agenda. 5 MR. BLOOM: I so move. DR. AMPOMAH: And I second. 6 7 MR. RAZATOS: Excellent. So 8 every -- both of them are accepted; correct? Do it 9 separately? MR. RUBIN: We do need a roll call vote 10 11 because we have one member that is appearing 12 virtually. 13 MR. RAZATOS: Okay. So Commissioner 14 Bloom. 15 MR. BLOOM: Approve. 16 MR. RAZATOS: Okay. Commissioner 17 Ampomah. 18 DR. AMPOMAH: Approved. 19 MR. RAZATOS: And I approve as well. 20 Excellent. So now they're accepted? 21 MR. RUBIN: Yes, the agenda and the 22 minutes have been accepted by one motion. 23 MR. RAZATOS: Excellent. I'm getting 24 my feet wet, people. I'm sorry I'm learning. 25 MR. RUBIN: And I'd like to thank Page 14

1 Commissioner Bloom for reminding we had the open 2 meetings --3 MR. RAZATOS: Yes. Thank you, Commissioner Bloom. I need all the reminders I can 4 5 get, so -- plus it's blazing hot in here, so I apologize. I look like I'm swearing, but it's, 6 7 like -- heat is right here, so -- stress and heat. 8 Got to love it; right? 9 Okay. Cool. Now we can get to our 10 next part, which is our actual procedures. Our first 11 case today is the consolidated cases 24018 through 19, 12 and 24024 through 24027, an application by Empire for 13 New Mexico to revoke the injection authority for the 14 Andre Dawson SWD number 001 in Lea County, New Mexico. 15 Are all parties present? Excellent. Go ahead. 16 MR. RUBIN: Mr. Chair, members of the 17 commission, if I may brief the commission on my review of the expedited motion and the response and the 18 19 reply? 20 MR. RAZATOS: Please. 21 MR. RUBIN: As you may have gleaned 22 from them, the issues raised here do tend to relate to the pending hearing that is set in a few months before 23 24 Hearing Officer Kip Harwood -- Rip Harwood, and relate to the propriety of the respondent in this motion's 25

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continuing injection of produced water into those
 basins at issue.

Certainly a lot of the issues raised in the expedited motion do relate to what would be hopefully resolved at that hearing. In other words, the propriety of and whether there is any -- there are obviously legal issues as well. There is an issue raised in the expedited motion of it that needs to be addressed today.

10 And that is the accusation, for lack of 11 a better word, in the expedited motion that the 12 respondent has been exceeding its permitted amount of 13 injection of produced water. And that, of course, is of serious concern to the commission. Any violation 14 of its permits warrants immediate consideration, so 15 16 the expedited nature of this motion is certainly 17 warranted in my view.

And interestingly, there were 18 no -- there was no evidence submitted with the 19 20 expedited motion asserting these over injections. 21 Nonetheless, the response didn't dispute that. Ιt 22 rather reluctantly referred -- it rather, instead, argued that as part of -- framing it as part of the 23 24 standards for preliminary injunction, well, whatever damages are marginally are being caused to Empire by 25

| 1 | |
|----|--|
| 1 | whatever over diversion amount there is would not |
| 2 | weigh in favor of granting this as a preliminary |
| 3 | injunction. |
| 4 | I am not sure I agree with that |
| 5 | argument. You know, there's an analogy to that |
| 6 | preliminary injunction Rule 66 of course, but it does |
| 7 | seem to be a concern that it's basically even |
| 8 | there's no evidence and we don't know what the amounts |
| 9 | are, that there is you know over diversion under |
| 10 | that permit. |
| 11 | So what I would recommend is we don't |
| 12 | know the amount, we also don't know the effects that |
| 13 | would be resolved at the upcoming hearing through |
| 14 | testimony and argument, and the hearing officer's |
| 15 | report. Nonetheless, we do need to deal with this. |
| 16 | My recommendation is for the commission |
| 17 | to immediately order, and this would be an order |
| 18 | effective immediately, for the respondent here to |
| 19 | immediately cease any over diversions. Not over |
| 20 | diversions. Sorry, that's a state term. Any over |
| 21 | injections that are there, currently may be they |
| 22 | may be perpetrating. And that would be go into |
| 23 | immediate effect. |
| 24 | To provide a full accounting of any |
| 25 | such over diversions to the hearing officer and to all |
| | Page 17 |

1 the parties in the case as part of that hearing so the 2 board can that -- the commission can then assess that 3 as part of the rest of the issues in that case, and to basically hold in advance any further action on the 4 5 expedited motion, so --6 Of course, that's one way to handle it 7 that perhaps, you know, splits the baby, so to speak, 8 without having to take the drastic step of shutting 9 anyone down. But nonetheless, I think would help get to the bottom of this. And certainly, if -- and stop 10 11 any violation of any permits at the time. 12 So if any of the commissioners have any 13 questions for me or of the parties, and certainly if the commission wishes, they can hear argument of 14 15 counsel on this point, but it does seem like a fairly 16 straight forward motion. 17 MR. BLOOM: Mr. Rubin, Mr. Chair, if I 18 may? 19 MR. RAZATOS: Please. 20 MR. BLOOM: I'm wondering, I guess, a 21 question related to scope and jurisdiction here. And 22 I would like to hear from the parties, in particular, the OCD. I'm wondering if this matter should be first 23 24 addressed by the OCD and handled as a typical -- I quess say typical for lack of a better 25

| 1 | word accusation of over injection. |
|----|--|
| 2 | MR. RAZATOS: Mr. Moander, you're |
| 3 | representing the OCD; correct? |
| 4 | MR. MOANDER: I am, Mr. Chair. |
| 5 | Commissioner Bloom, just to make sure |
| 6 | I'm clear on the what the request is, it sounds like |
| 7 | you want to know what OCD's overall position is on the |
| 8 | allegation of over injection, or are you talking about |
| 9 | within the confines of the, like, relevance to this |
| 10 | particular matter? |
| 11 | MR. BLOOM: Maybe both. But I'm |
| 12 | wondering if now that you mention it. But I'm |
| 13 | wondering if this might be something that the OCD |
| 14 | would typically deal with, and perhaps should deal |
| 15 | with in this case, given that this claim of over |
| 16 | injection has been made. I'm thinking that the first |
| 17 | stop would typically be the OCD and not the OCC. |
| 18 | MR. MOANDER: So as to generally |
| 19 | speaking, an allegation between operators like this is |
| 20 | one that we would certainly take a look at. We do |
| 21 | have some caution when the matter's actively being |
| 22 | litigated. And we don't know yet what the evidence |
| 23 | will show in this case. And I think there's some |
| 24 | value. |
| 25 | And that's really the nature of my |
| | |
| | Page 19 |

1 response was written towards that, Commissioner Bloom, 2 is that we want to see all the evidence, we want the opportunity to examine witnesses. And whatever flows 3 from the hearing would be most likely material to our 4 5 jurisdiction and our role. And then at that point, we 6 would reevaluate, and then look to pursue whatever 7 remedy that may be appropriate at that time. 8 It's not often the case where we have a 9 matter that OCD appears in where we'll get this pointed of an accusation. So I think that the 10 11 interests of the public are going to be served by 12 fleshing out the evidence in the hearing, see what 13 comes out, and then evaluate matters from there. Chris, I have a follow 14 DR. AMPOMAH: 15 So is it a position of OCD that they do not have up. 16 the injection volumes and they do not have the 17 injection pressures to see straight away whether the accusation is true or not? 18 19 MR. MOANDER: At this point, I would 20 not be able to tell you what that specific evidence would look like. Well, I would imagine we could -- we 21 22 may have some filings that would reflect a yes or a no 23 on that. And that's why OCD wants to proceed pretty 24 severely with this hearing, is to sus all this out 25 and --

1 And the other angle on this is, is 2 there's an opportunity to get testimony about these things, additional information that might -- we could 3 get potentially from an RFI, but there's also the 4 5 issue of we can get it through this case. And that's 6 part of why OCD has not, as far as I'm aware, taken 7 any action one way or the other about the injection 8 volumes. 9 DR. AMPOMAH: So Counsel, I do have a

follow-up question then based on your submission. So 10 11 if we do not have the evidence, how then can we say 12 that Goodnight should cease the operation if, let's 13 say, the -- more or less make sure there are not any over injection if we do not have any evidence? 14 15 MR. RUBIN: Commissioner Ampomah, 16 members of the commission, that is why I -- that is a 17 good point, and that is exactly why I couched my advice as I did, because we do not know. And so all 18 we can do is issue an order, which is -- should be 19 20 self-apparent saying do not -- cease all over 21 diversions.

Do not -- we're not shutting anyone down, but this commission may want to take strong action as OCD counsel has stated. Once all the information is in and we know the full extent of these

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1 over diversions as to penalties, whatever remedial 2 action the hydrology may warrant as well. So I'm not 3 recommending that we shut anyone down at this point. But if there is by issue we can order 4 5 today saying, "Cease any over injections," if the 6 evidence comes out that for some reason they continued, well, we want to know that too. And this 7 8 will all come to light through the prism of the hearing. And so all we could do today is say, "Stop 9 it," and hold everything else in advance. We would 10 11 get a full accounting about the --12 MR. RAZATOS: The OCD wants to add 13 something else. 14 MR. MOANDER: I am conferring with my 15 cocounsel on this. Is the commission concerned about 16 remanding this issue to OCD hearings? Is that what's 17 underlying this? Just to kind of clarify things. 18 I would agree with Counsel MR. RUBIN: 19 Moander there that in this case because we have 20 pending litigation, the pending adjudicatory matter 21 that this directly relates to, I could see why this 22 was brought by Empire directly to the commission 23 rather than going through the division as an 24 enforcement mechanism. 25 MR. RAZATOS: Commissioner Bloom, you Page 22

| 1 | look like you want to say something. |
|----|--|
| 2 | MR. BLOOM: Thank you, Mr. Chairman. |
| 3 | Yes, when the moment's right, I would like to hear a |
| 4 | response from Goodnight Midstream and then Empire, |
| 5 | Counsel. |
| 6 | MR. RAZATOS: So Counsel, just wanted |
| 7 | to make sure, we're not necessarily saying remand it |
| 8 | back to the OCD hearings. We're just saying we don't |
| 9 | know we don't have any evidence to show that |
| 10 | there's an over injection; correct? |
| 11 | MR. RUBIN: Mr. Chair, members of the |
| 12 | commission, correct, I'm not saying remand to the |
| 13 | division. The commission has set this for a hearing. |
| 14 | MR. RAZATOS: Right. |
| 15 | MR. RUBIN: The hearing is through the |
| 16 | hearing officer, who speaks who is an extension of |
| 17 | this commission. |
| 18 | MR. RAZATOS: Okay. |
| 19 | MR. RUBIN: So there's no remand that |
| 20 | I'm advocating for. |
| 21 | MR. RAZATOS: Okay. Does that answer |
| 22 | your question, Mr. Moander? |
| 23 | MR. MOANDER: Yes. Thank you. |
| 24 | MR. RAZATOS: Okay. Great. So should |
| 25 | we proceed to hear the parties? What's the |
| | |
| | Page 23 |

1 suggestion, I guess? 2 MR. RUBIN: Well, I did find that the 3 motion, the response to reply fairly succinctly captured the issues as I've explained them. There 4 5 might be some -- but in the interest -- if the 6 commission wants to hear from counsel -- 'cause it an 7 interesting argument that -- whether --8 We don't have any facts in the motion 9 or the reply and affidavit or some other discovery 10 that was provided that would say exactly what the 11 amounts are. We have not heard from Goodnight saying 12 "Yes, we have" or "No, we haven't." So there might be 13 something to be gained from that. It's up to the commission. 14 15 MR. RAZATOS: Okay. So then I'll just 16 ask commissioners, do you want to hear the parties? 17 I'll start with Dr. Ampomah. 18 DR. AMPOMAH: Yeah. Greg wants to 19 hear, so I also want to hear. 20 MR. RAZATOS: I know Commissioner Bloom 21 wants to hear. 22 Commissioner Bloom, is that an 23 affirmative? 24 MR. BLOOM: Yes. And I think, you 25 know, five minutes approximately should suffice. I Page 24

| 1 | mean, if people need more time, that's fine, but I |
|----|--|
| 2 | would like to hear from both parties. |
| 3 | MR. RAZATOS: Okay. Excellent. So the |
| 4 | parties are present; correct? |
| 5 | MR. BLOOM: And I would start with the |
| 6 | movement, Empire. |
| 7 | MR. RAZATOS: We'll start with Empire? |
| 8 | MR. BLOOM: Yes. |
| 9 | MR. RAZATOS: Yeah. Just making sure |
| 10 | that all the parties are present. That's all. |
| 11 | Okay. Awesome. So let's start with |
| 12 | Empire, please. |
| 13 | MR. PADILLA: Mr. Chairman, members of |
| 14 | the commission, my name's Ernest L. Padilla, appearing |
| 15 | for Goodnight. With me are Sharon Shaheen and Dana |
| 16 | Hardy. We're counsel for Empire. I will be speaking |
| 17 | concerning this motion today. And first of all, let |
| 18 | me just say that I agree with Mr. Rubin's analysis of |
| 19 | the situation. |
| 20 | The only thing that he missed that I |
| 21 | think is reporting. If we don't have any public |
| 22 | records, OCD records, of injection volumes from the |
| 23 | Andre Dawson well, the Ernie Banks well, there's been |
| 24 | no reporting on those two wells at all. But if you |
| 25 | look at our motion, all of the wells that we listed |
| | |

| 1 | there are there's evidence of over injection. |
|----|--|
| 2 | Now, I take it you want evidence on |
| 3 | this, in particularly, those wells that are outside |
| 4 | the unit. Where we have to prove that there's going |
| 5 | to be migration from those wells into the San Andres |
| 6 | formation. But when you look at this, all you see is |
| 7 | an abuse of orders. |
| 8 | For example, the allegation that we |
| 9 | came up with and that was based on discovery |
| 10 | evidence, the evidence that was submitted to us in |
| 11 | discovery by Goodnight. There, we finally saw that |
| 12 | there was over injection, especially in the Andre |
| 13 | Dawson is egregious to where you have 41,000 barrels a |
| 14 | day when you have a limit of 25,000. And who knows |
| 15 | what the pressures are. |
| 16 | Seems to me that if you have a bottle |
| 17 | of water in a confined area, and you start pouring |
| 18 | more water in it, the water's going to have to go |
| 19 | somewhere. We're saying it's going into the Grayburg |
| 20 | formation, which is a producing formation for the |
| 21 | unit. |
| 22 | I won't go into residual oil zones at |
| 23 | this point, but that is what Empire is trying to |
| 24 | protect. We're confident that in September, we'll be |
| 25 | able to show that there's a residual oil zone, ROZ, in |
| | Page 26 |
| | rage 20 |

1 the San Andres, and therefore, it needs to be 2 protected. Right now, with 3 uncontrolled -- seemingly uncontrolled or excessive 4 5 over injection, I think the order of the commission, 6 and the commission has authority to do that, is to 7 stop the over injection. That is one goal that we 8 have. 9 Now, we asked also to balance and suspend, but doesn't seem like from what I understand 10 11 and Mr. Rubin's analysis, is that you want to wait 12 until the September hearing to find out what the 13 evidence will show. But the problem here is that you 14 have overnight just simply in every well there's over 15 injection. 16 Some not as bad as others, but if you 17 look at the Andre -- the allegations on the Andre 18 Dawson well, I mean, that is really almost criminal in 19 terms of -- I don't know what the profit -- well, I 20 know it's a profit motive that drives that. 21 But it's -- you can't exceed the order 22 of the division in all of these cases where you're limited to 25,000 barrels a day and the pressure, and 23 24 you're going to have problems with pressure gradients and potentially fracturing the zone between the San 25 Page 27

Andres and the Grayburg.

1

2 There are already -- we're going to 3 show that there are already natural fracturing in areas of the -- between the San Andres and the 4 5 Grayburg. So to add pressures and add volumes, you're 6 not going to -- it's going to impair the ROZ in the 7 San Andres. So I -- to speak again, I think Mr. Rubin 8 analyzed this, and I think the pleadings speak for 9 themselves pretty much.

10 Now, as far as division is concerned, I 11 don't know where they're coming from. If I saw a 12 motion like that and I was counsel for the division, I 13 would certainly try to find out whether or not those orders are being violated instead of being in an 14 15 adversarial situation where you want to prove 16 something. I don't know where the OCD's coming from 17 in this case.

So the OCD should be looking at over 18 injection and try to find out if the allegations are 19 20 correct. We're pretty certain they care correct. We 21 wouldn't have put that in there without some basis, and evidence that we obtained only through discovery, 22 not through the publics records of the OCD. We 23 should've got it -- we should've been able to get it 24 from the OCD records. We don't have that. 25

1 MR. RAZATOS: Mr. Moander. 2 MR. MOANDER: I'll wait my turn on 3 that. 4 MR. RAZATOS: Okay. I was saying --5 MR. MOANDER: I'm just preparing. 6 MR. RAZATOS: You were very insistent 7 there, so --8 Okay. Thank you, sir. Appreciate it. 9 Goodnight now; right? Doctor? The doctor has -- should we wait till we're done, or --10 11 MR. RUBIN: Oh, you always can. You're 12 the Commissioner. 13 MR. RAZATOS: Okay. Go ahead. DR. AMPOMAH: So Mr. Padilla, I do have 14 15 one quick question and probably some follow-up. How 16 do you define over injection? Or how is Empire 17 defining over injection? 18 MR. PADILLA: Through evidence that we 19 obtained and the litigation part of this case. We 20 asked in discovery what volumes they were injecting. 21 Now, some of them there is reporting at the OCD, but 22 the Ernie Banks and the Andre Dawson, there's no reporting on those wells from data first inception, 23 24 from first injection into those wells. 25 So it's hard to figure out where -- how Page 29

1 much water there is or being put in the zone. In one 2 instance in a four-day period, we were able to establish that it was 41,000 barrels per day. 3 That's, like, 15,000 barrels over the limit. And you 4 5 shouldn't do that. Does that answer your question? 6 DR. AMPOMAH: Well, from a reservoir 7 engineering standpoint, I want to see the fracture 8 pressure for this particular formation, and then I 9 want to see the allowable pressure that OCD gave in the order for me to more or less come to a conclusion 10 11 whether you are more or less injecting above what the 12 order is saying. 13 From a previous hearing, OCD made clear that the pressure is the main item that -- the main 14 15 parameter that they go to in terms of assigning what 16 should be the maximum injection. So if I don't see -- if I don't know what the fracture pressure is, 17 it becomes very difficult to just make an assumption 18 19 that just based on the volume, someone is injecting 20 above the fracture pressure, or more or less doing over injection. 21 22 MR. PADILLA: I can tell you that the Andre Dawson maximum pressure is 862. 23 24 DR. AMPOMAH: Surface? 25 MR. PADILLA: Daily. You can't exceed Page 30

1 that pressure. The Ernie Banks, I think, is 867, and 2 the Sosa well that we also have in there, it can't exceed 900 pounds PSI injection pressure. 3 Now, I don't have the information on 4 5 the fracture pressure -- on the fracture gradient what 6 will part the formation. 7 DR. AMPOMAH: And I think that is 8 certainly something that OCD has to be able to respond 9 to. Thank you. MR. PADILLA: Well, if that information 10 11 isn't available and if you don't have any reporting on 12 that, then that needs to be obtained. 13 MR. RAZATOS: Any other questions? 14 Commissioner Bloom, did you have any 15 questions? 16 MR. BLOOM: No. No, thank you, 17 Mr. Chair. 18 MR. RAZATOS: Dr. Ampomah, anymore? 19 DR. AMPOMAH: No, not from me. 20 MR. RUBIN: Mr. Chair, just one 21 question for Mr. Padilla. 22 So Mr. Padilla, why did you not submit any evidence that you were referring to from 23 24 discovery --25 MR. PADILLA: Well, perhaps --Page 31

1 MR. RUBIN: -- as part of the motion? 2 MR. PADILLA: That would -- we probably 3 should've added discovery information that we got. Or at least verified the motion. 4 5 MR. RUBIN: Thank you. 6 MR. RAZATOS: Any other questions? 7 Yeah. So Counsel, even DR. AMPOMAH: 8 if they do not more or less submit any substantive 9 evidence to support your claim, I think it is a matter 10 of a concern that if that is happening, then more or 11 less OCD has to be able to figure that out and respond 12 to these allegations. 13 MR. PADILLA: I agree. 14 DR. AMPOMAH: It's for more or less a 15 public concern, not necessarily for Empire alone. 16 It's a public concern if that is certainly happening. 17 Commissioner Ampomah and MR. RUBIN: members of the commission, if I understand 18 19 Mr. Moander's response, OCD cannot be -- may not 20 necessarily have had knowledge of this if a lot of the 21 information was gained in the discovery process and 22 adjudication. I am not sure if they were able to 23 monitor pressures in that region. I don't know if 24 Mr. Moander would want to speak to that. 25 MR. MOANDER: May I assume this will be

| 1 | my argument now? And as part of my response? |
|----|--|
| 2 | MR. RAZATOS: We definitely can do that |
| 3 | if we all agree. |
| 4 | MR. MOANDER: Okay. So starting off, |
| 5 | the nature of OCD's response was fairly |
| 6 | straightforward and simple because OCD construed the |
| 7 | primary issue in Empire's motion, focusing on the |
| 8 | suspension more so than the stay, because the |
| 9 | suspension would be a final determination. So OCD |
| 10 | looked at the motion as being essentially a backdoor |
| 11 | summary judgement without those terms ever actually |
| 12 | appearing in the motion. |
| 13 | For OCD's view, first of all, is we |
| 14 | have a hearing set for this, and OCD fully intends to |
| 15 | participate, argue, ask questions. OCD has |
| 16 | participated in discovery. We've had active |
| 17 | litigation. The injection allegation is a more recent |
| 18 | development that occurred within the confines of |
| 19 | litigation. |
| 20 | And it from OCD's position, it |
| 21 | stands to reason that since we have an active |
| 22 | opportunity to conduct discovery, also, we'll have an |
| 23 | opportunity to examine witnesses, and more importantly |
| 24 | for this purpose, cross examine witnesses. That's the |
| 25 | forum where this evidence will need to be developed. |
| | Page 33 |

| 1 | I did not come today primarily more |
|----|--|
| 2 | than that I'll say in terms of my reply. There was |
| 3 | no evidence provided at any the showing from |
| 4 | Empire's side that they could demonstrate the over |
| 5 | injection. OCD's also aware that there are filings |
| 6 | that are currently pending concerning some of this |
| 7 | material. Those filings have not been finalized from |
| 8 | the OCD end, so there is information there. |
| 9 | I cannot speak to whether that will |
| 10 | have been fully processed by the time of the hearing |
| 11 | or not. But when it comes to OCD's need to |
| 12 | know the need to know about what parties are |
| 13 | injecting, this when you have the reporting |
| 14 | structure, that's nice, but now we have the additional |
| 15 | opportunity to actually ask some questions, develop |
| 16 | evidence, and make representations to this commission |
| 17 | and its hearing officer in about six weeks. |
| 18 | Generally, it's not ideal to have |
| 19 | parallel litigation ongoing when you also if you're |
| 20 | conducting enforcement plus active litigation before |
| 21 | the commission. I'll just say it bluntly. It's much |
| 22 | easier to proceed with gaining information and |
| 23 | knowledge through litigation like this than it is |
| 24 | through traditional enforcement action. |
| 25 | And so OCD is pursuing this litigation. |
| | Page 34 |
| | raye Ji |

1 And if evidence ultimately does show that there is 2 over injection, then OCD would evaluate that for 3 potential future enforcement purposes. So back to the original motion as it's 4 5 been presented today. No, I did not come prepared to 6 provide exhibits or anything of the kind because there 7 were none to really respond to. It was mostly legal argument and allegations. And so OCD's position is we 8 9 very much would like to proceed with this hearing at the end of September so we can fully learn the 10 11 contours of both parties' cases and their evidence. 12 Thank you, Mr. Moander. MR. RAZATOS: 13 Any questions from the commissioners? DR. AMPOMAH: Not from my side. 14 15 MR. RAZATOS: Commissioner Bloom? 16 MR. BLOOM: Not with -- no, Mr. Chair. MR. RAZATOS: Excellent. Thank you. 17 18 Goodnight, please. MR. RANKIN: Morning. Acting Director 19 20 Razatos, commissioners. Thank you for the opportunity 21 to speak. We've heard this morning and in the papers 22 that were filed by Empire are some very serious allegations verging on criminal this morning. And we 23 24 take these allegations very seriously. And I'd like the opportunity rebut everything that was said this 25

morning.

1

| - | morning. |
|-----|--|
| 2 | In fact, we have some images to show to |
| 3 | allay Mr. Ampomah's concerns about pressures, about |
| 4 | whether that's occurred. I think I would like to take |
| 5 | some time to clear the air and put this into context a |
| 6 | little bit. The motion that they filed happened to |
| 7 | have been filed when I was on vacation for three |
| 8 | weeks, so I didn't have a lot of time to respond to it |
| 9 | when I got back. |
| 10 | Well, our response was limited to |
| 11 | mostly legal arguments because counsel and Empire did |
| 12 | not file any exhibits or any evidence substantiating |
| 13 | their claims. If I may, I'm just going to walk |
| 14 | through this very quickly, because I think it would be |
| 15 | helpful. It goes into the context here of what I want |
| 16 | to say and review for the commission if I can share my |
| 17 | screen. |
| 18 | Number one, Mr. Rubin, I do want to |
| 19 | make clear that in response, Goodnight does deny the |
| 20 | allegations that were raised by Empire vigorously. |
| 21 | That we it's a general denial of the allegations |
| 22 | because there was nothing specific to respond to in |
| 23 | terms of evidence. |
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24 So if they had presented us with some 25 evidence to directly attack, address, we would have

1 done so. Instead, they didn't, and they relied on the 2 argument of counsel, so we did not see the need to 3 attach any evidence or specifically rebut their 4 claims.

5 Under the commission's precedence and 6 guidance, when you're seeking a stay or suspension 7 or -- of an order of the division or commission, the 8 commission has very clear guidance. It's a high 9 threshold. They cite to the Tenneco Oil Company case. 10 The requirement is to -- sorry. I wish I had my 11 mouse.

You have to make several showings. You have to make showings, which means you have to present evidence. You have to show that you're likely to prevail on the merits. You have to show that there's going to irreparable harm unless the stay is granted. You have to present evidence that no substantial harm will result as a result of the stay.

You have to make a showing that no harm will ensue to the public interest. All these things were not done. They also have to show under the commission's own regulations that a stay is necessary to prevent waste, to protect correlative rights, protect public health, and prevent gross negative consequences to an affected party.

1 So what is it that they're claiming 2 here, and what has the commission done? The 3 commission has very clearly in the past required clear showing -- evidentiary showing of what is necessary to 4 5 overcome -- that you're likely going to prevail on the merits of the claims. When that hasn't been, where 6 there's been no evidence shown, then those motions to 7 8 stay are denied. 9 Here, again, they have submitted nothing. They rely entirely -- we're provided them 10 11 lots of evidence and the record, pressure data, 12 injection volumes, all that has been produced to them 13 and the division. So mere allegations of counsel, as we understand from Tenneco, is not sufficient to 14 15 demonstrate their burden. 16 So let me just address the specific 17 issues here; okay? What would they need to show? Well, they're going to need to show that the injection 18 is causing waste. To do that, they have to show that 19 20 the wells that Goodnight is operating tend to reduce 21 the total quantity of oil and gas ultimately recovered 22 from --23 They have to show what the amount of 24 oil or gas is that can be recovered and that were causing an impairment, the prohibition of them from 25 Page 38

1 recovering that amount; okay? That's a pretty big 2 showing. They haven't attempted to make that showing. Number two, they're saying that they 3 were harming their correlative rights. Okay. To make 4 5 that showing, you have to demonstrate that there's 6 recoverable oil or gas; okay? They're claiming that we're impairing their correlative rights in the San 7 8 Andres where they're alleging an ROZ, a residual oil 9 zone. So to make that claim, to say that 10 11 we're actually impairing their correlative rights, 12 they have to show that the gas down there is 13 recoverable. Technically, feasibly, reasonably. Not only that, but under the correlative rights, under the 14 15 water -- under the numeration of power statute, which 16 defines the commission's authorities, they're alleging 17 that we're watering out in the unit strata. Well, what does that require -- what do 18 19 they need to show to prove that? They need to show 20 that the strata are capable of producing in paying 21 quantities. They have to show that the San Andres ROZ 22 that they're alleging exists is capable of producing in paying quantities, and that our injection tends to 23 24 reduce the total ultimate recovery from that pool. 25 So they have to show how much could

1 actually be recovered, and they need to show that they 2 can produce paying quantities in order for them to show that we're watering out that zone. They haven't 3 even attempted to make that showing at all. And so 4 5 for those reasons, they cannot prevail on this motion. 6 Now, the allegations that they raise are serious and concerning, and everybody agrees, 7 8 including Goodnight, that if there are over 9 injection -- continuous over injection issues, that they need to be addressed. 10 11 In fact, Goodnight self-disclosed to 12 the division more than a year ago that it had 13 discovered itself that it was over injecting in the Andre Dawson well. And it was -- and it disclosed the 14 15 reason for that over injection was due to a 16 malfunctioning meter. 17 So back, more than a year ago, end of May, early June, Goodnight submitted a disclosure to 18 the division, to counsel, and the UIC group, that had 19 20 discovered that it was over injecting for a period of time in the Andre Dawson, explained what it found, the 21 22 efforts it made to correct the issue, and that was more than a year ago; okay? So that was disclosed by 23 24 Goodnight and more than a year ago. 25 The reason that Empire hasn't been able Page 40

to identify the C-115s that would normally show the public reporting volumes is because the completion reports, the C-104 and C-105s that are required once a well is drilled, you need to get those approved before you can physically upload the C-115 reports, the volumes and the pressures that go along with your monthly reporting requirements.

8 So the division has not yet approved 9 those. They've been with the division for some time. 10 Goodnight has been actively engaged with the division 11 to try to get those approved as quickly as possible. 12 They have, in the interim, provided the division with 13 email of the C-115 reports identifying all the volumes 14 and pressures.

As the commission may or may not be aware, there is a -- there is, has been, a substantial backlog in these completion report approvals from the division. There are a lot of them. It does tend to impact public reporting about not just injection volumes, but also production volumes as well. So that is the issue.

For those two wells, the reason that you're not seeing those volumes publicly is because we don't -- we have no way to upload them into the division system because the C-104, C-105 haven't been

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| 1 | approved. Once they are approved, then the system |
|----|--|
| 2 | allows for the volumes to be uploaded. So |
| 3 | those the division is aware of those issues and |
| 4 | we've been working with them for more than a year to |
| 5 | try to get that resolved. |
| 6 | The injection issues, in their |
| 7 | complaint in their complaint, in their motions, |
| 8 | they allege that all of these wells have limits of |
| 9 | 25,000 barrels of water per day. In fact, it's really |
| 10 | easy to look at the orders, and you'll see that |
| 11 | actually four of them have no limits whatsoever, and |
| 12 | they're entirely based on the pressures; okay? |
| 13 | Now, more recently, the division has |
| 14 | over concerns of induced seismicity, especially in the |
| 15 | deeper Devonian where you're closer to basement rock, |
| 16 | had imposed some rate limitations for high capacity |
| 17 | disposal wells. |
| 18 | Now, the concern around those higher |
| 19 | rate wells is generally limited to the Devonian where |
| 20 | you've got basement rock. I understand there's some |
| 21 | scientific papers and research that indicates that for |
| 22 | those deeper formations, rates can influence induced |
| 23 | seismicity, even though the injection pressures may |
| 24 | not be an issue. |
| 25 | So the division has instituted more |
| | |
| | Page 42 |

| 1 | recently rate limits on some of the SWDs. I'm going |
|----|--|
| 2 | to explain a little bit for you on that because I |
| 3 | think it's helpful to put this all in context. |
| 4 | The way the rate limits came up for the |
| 5 | San for the Andre Dawson and the Ernie Banks is |
| 6 | that when Goodnight filed a C-108 application, which |
| 7 | is this snippet up here showing what they proposed, |
| 8 | they initially proposed 25,000 barrels per day for the |
| 9 | Andre Dawson and the Ernie Banks. |
| 10 | The reason they chose that number, as |
| 11 | you will hear in about a month, is because 25,000 |
| 12 | barrels per day is more than what they inject on an |
| 13 | average basis in a month; okay? That is generally |
| 14 | more than enough to manage their injection rates. |
| 15 | The issue is, and it's becoming more of |
| 16 | an issue now as we move into more modern well |
| 17 | completion practices, is that Goodnight experiences |
| 18 | surges of disposal volumes. More commonly now, |
| 19 | operators out in the field are completing their wells |
| 20 | in batches. So rather than drilling one or two wells |
| 21 | and getting flow back from one or two wells, they're |
| 22 | doing batch drilling. |
| 23 | So when Goodnight first terminated |
| 24 | these wells, you maybe you get batch drills for |
| 25 | four or five days, and you get a slug of water over |
| | |
| | Page 43 |

four or five days. Now, you're seeing batch drills that take two weeks or so to complete. So you're getting more wells, you're getting longer laterals, and you're getting more flowback water, so you get more volumes in a big slug.

6 Goodnight's practice has been disperse 7 the flows to as many wells as possible over an area so 8 they have a central receipt point on their pipeline, 9 they monitor the flows, they treat the water, they put 10 it out to their multiple SWDs to manage the volumes 11 and pressures.

So they have initially identified 25,000 barrels as enough, and in fact, the four wells that are currently injecting into the EMSU since January 2023 have averaged less than 15,000 barrels of water per day; okay? That's the average for the four wells injecting into the EMSU. So well under the 25,000 barrel per day limit.

Same here with the Ernie Banks. This just shows you, you know, what was initially proposed, what the order provides for, and you'll see that it does provide for 25,000 barrels with the rates and the pressures. So those are the only two wells out of all of the ones that were being accused of here that have an injection limit.

1 As I mentioned before, we've already 2 self-disclosed on the Andre Dawson. As a result of 3 the allegations here, we went through more recent 4 injection volumes and did identify a few days for the 5 Ernie Banks that have exceeded the 25,000 barrel 6 limit. I understand that there is a valve issue that may have caused that. It's a few thousand barrels 7 8 exceedance for a couple days.

9 But I'm going to show you at the end 10 here to address any concerns about what the -- I mean, 11 we take this very seriously obviously because 12 Goodnight did self-disclosed when it did go over. And 13 the intent is to make sure that they are in 14 compliance. We take it -- Goodnight takes it very 15 seriously.

Now, this just to sort of explain again the context here. The 25,000 barrel per day limit, was it proposed by Goodnight? It's not a technical limit -- space limit. It's not a limit that's tied to pressures. It's simply what Goodnight proposed. The division adopted it when it issued the orders.

And for one of the wells, the Andre Dawson here, we're actually asking for an increase as part of these cased just to accommodate the spikes that occur on occasion so we can make sure that we're

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1 staying within our limits; okay? 2 Now, what does this look like in terms 3 of pressure; okay? We 100 percent agree with Dr. Ampomah that the issue here is about pressures. 4 5 So this is a chart that shows back from January 2023 6 to about the present for two of the wells that have 7 the injection rate limits. 8 The squiggly lines here are the surface 9 injection pressures; okay? You'll see that they tend to be very low and they bop up and down here and 10 11 there; okay? And you'll see that for the blue line 12 here, that's the Ernie Banks, there are some higher 13 points up here; okay? Now, what is the limit that the 14 15 division has imposed; okay? Well, you look on the 16 lefthand side on the y-axis, that's the PSI. You'll 17 see the limits are way up here; okay? The Dawson is at 857, the Banks is at 862. We are far below those 18 limits. 19 20 And the reason you're seeing some of the spiking here is simply because of scaling. 21 22 Scaling is a common occurrence with saltwater disposal 23 wells. As scaling occurs, Goodnight periodically will 24 acidize its wells. And you'll see they just acidized at the end of July. 25

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1 After they did their acid test -- acid 2 cleanout, the wells both went back to vacuum; okay? Despite their injection rates. In other words, there 3 is no impact to the reservoir. The reservoir is 4 5 receiving the volumes on vacuum, meaning there is zero pressure buildup in the well. 6 7 Now, on the point that Empire made, 8 they're seeking relief, they're seeking -- they want 9 us to suspend or stop injection until -- on the 10 assumption, I presume, that we're injecting 11 continuously over the volumes here. And so they're 12 asking for Goodnight's wells to be shut in until the 13 net -- the over injections are balanced with the amount of the authorized injection. 14 15 Well, here's -- you know -- we've given 16 them the data, and they would be able to see that if 17 you put this data on a plot, you'll see that for both these wells, we're actually under by more than five 18 million barrels. I mean, if you were to ask us to 19 20 apply that relief right now, we could continue to inject because there's no issue. I mean, every day 21 22 we're under injecting on average what the total

23 volumes are with these wells.

24 So not only was there no evidence, but 25 the claims, I think, are unsubstantiated. There are a

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1 few days that have exceeded the injection rates. 2 Goodnight takes it very seriously. They're addressing those issues. In one case, it was a metering from 3 last year. We self-disclosed that. 4 On the Ernie Banks, there were a few 5 6 additional days that had a different issue with a 7 valve. And Goodnight, as I understand it, has 8 completed that in fixing that issue. That was back in 9 2023. My understanding, and we'll provide all the data to Goodnight -- to Empire and to the division, is 10 11 that there have been no further exceedances of the 12 injection rates. 13 So Mr. Acting Director Razatos and commissioners, we ask that this motion be denied. 14 15 These issues all are going to be heard by the 16 commission in a month. They can continue to raise 17 their allegations about over injection or over pressurization or communication with other zones, and 18 we'll address them in the full course of that hearing. 19 20 And, you know, rather than present the 21 data to the commission, for us to actually respond

to -- they just relied on allegations. And we take those very seriously and want to have a full hearing and airing of all these issues in September.

25

MR. RAZATOS: Thank you, Mr. Rankin.

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| 1 | Any questions from the commissioners? |
|----|--|
| 2 | MR. PADILLA: Mr. Chairman, may I |
| 3 | respond? |
| 4 | MR. RAZATOS: Please. |
| 5 | MR. PADILLA: Mr. Rankin makes an |
| 6 | interesting argument about injection rates and volumes |
| 7 | and that kind of thing, and he throws in the Devonian |
| 8 | here. That one's particularly interesting because the |
| 9 | Devonian has a disposal interval between 1,000 and |
| 10 | 1200 feet of disposal zone. That's not the case with |
| 11 | the San Andres. And the Devonian has nothing to do |
| 12 | with the Devonian. The Devonian is not even |
| 13 | relevant to this proceeding. |
| 14 | He talks about the C-115s. They have |
| 15 | never been produced to us in discovery. And I don't |
| 16 | know why, but we haven't received the C-118s that they |
| 17 | have in their pockets somewhere, so |
| 18 | And then he talks about surges. If you |
| 19 | have surges, you got to do something about evening out |
| 20 | those surges. And that means reduce injection volumes |
| 21 | so that you can even out and not have the surges. The |
| 22 | question the issue of whether or not a meter was |
| 23 | inoperative, we don't know that. In their response, |
| 24 | they never address any of this information that |
| 25 | Mr. Rankin has submitted here. |
| | |

1 If you look at their response, they go 2 a lot into -- we had to respond to their argument on injunctive relief. It probably has something to do 3 4 with it here. I mean, we're talking about a stay. 5 We're asking for a stay and suspension and said what we're doing. And yes, a lot of this evidence is going 6 7 to come in in September. 8 But to the extent that they're -- we 9 didn't file this motion just for the frivolity of it 10 and trying to be argumentative. I mean, what we saw 11 is based upon information that we had. So if 12 Mr. Rankin has C-115s in his pocket somewhere, then 13 those should've been produced to show in the response 14 that our allegations were misplaced. 15 So I don't know. We can go argue all 16 day long on this thing, but I think Mr. Rubin's 17 analysis is correct is that somehow there has to be an 18 accounting, and ought to come before September. 19 The issue here is over injection. It's 20 not the merits of whether there's ROZ in the San 21 Andres or correlative rights. We're talking about 22 existing orders that we see are being over 23 injection -- where there's over injection. Α 24 systematic practice that should be addressed by the 25 commission.

| 1 | And I think the accounting should be |
|----|--|
| 2 | coming. I mean, that's an order that the commission |
| 3 | can issue at this point. |
| 4 | MR. RAZATOS: Thank you. Just to make |
| 5 | sure just so we could have questions for Goodnight. |
| 6 | I know Dr. Ampomah, you seem to have some questions as |
| 7 | well. Commissioner Bloom, you may also. So go ahead, |
| 8 | Dr. Ampomah. |
| 9 | MR. BLOOM: I want to Mr. Chair, if |
| 10 | I could quickly. |
| 11 | Mr. Rankin, if you're doing sharing |
| 12 | your screen, you could perhaps pull that down. |
| 13 | MR. RAZATOS: There we go. Thank you, |
| 14 | Mr. Rankin. |
| 15 | DR. AMPOMAH: No, I really wanted that |
| 16 | screen. I want the representation up. So if you can |
| 17 | bring it up where you have the pressure? Sorry about |
| 18 | that. So the next one, the one that had the pressure. |
| 19 | So Mr. Padilla, I do have a quick |
| 20 | question for you and the same for OCD as well. So as |
| 21 | you look at this data, is Empire challenging this data |
| 22 | based on the information you have? |
| 23 | MR. PADILLA: We can't challenge it |
| 24 | today. We've got to look at it. It certainly would |
| 25 | have been helpful to have had it in the response. But |
| | |
| | Page 51 |

1 we didn't get it in the response. So I haven't 2 seen -- we got nothing in the response in terms of 3 refuting any of the allegations that we had. If you take all six wells that we cited in our motion, there 4 5 was no answer to those allegations. 6 Seems like maybe the answer to your 7 question on pressures is addressed by that slide 8 on -- and if that's true, I don't know. I don't know 9 what their pressures that were reported -- that's not backed by anything other than a graph that somebody 10 11 wrote. 12 I think to be clear, if I MS. HARDY: may just add to what Mr. Padilla has said, none of 13 this information is evidence on the record. This is 14 15 the first time we are seeing it here today. And 16 Goodnight has failed to produce the C-115s in response 17 to discovery request after discovery request. That's the first time we heard today that those exist. So I 18 19 think that's our issue with the presentation. We 20 haven't seen this before. 21 MR. RUBIN: Commissioner Ampomah, 22 members of the commission, I think it's -- I think Ms. Hardy's correct. I do ask that we kind of limit 23 the argument to one lawyer per party. I don't want 24 to -- we don't want to double team Mr. Rankin here. 25

| 1 | But regardless, that point is taken. |
|----|--|
| 2 | Mr. Rankin, members of the commission, |
| 3 | has provided a lot of substance here, but nonetheless, |
| 4 | it is still just a lawyer talking. And he is not |
| 5 | pretending otherwise. There is no evidence before |
| 6 | this commission. |
| 7 | And I know Dr. Ampomah, you want to get |
| 8 | at the truth. But it would be unfair to either side |
| 9 | to get at the truth based upon what lawyers have said |
| 10 | today. |
| 11 | DR. AMPOMAH: Okay. Okay. Then I rest |
| 12 | my case. |
| 13 | MR. RUBIN: Which is why I am advising |
| 14 | that the motion need to be held in advance or perhaps |
| 15 | it could be denied without prejudice, but we do need |
| 16 | the hearing officer, I think to, as part of its |
| 17 | findings, decide make a recommendation to this |
| 18 | commission as to whether the permit has been violated. |
| 19 | Mr. Rankin, go ahead. |
| 20 | MR. RANKIN: Thank you. I just want to |
| 21 | address another allegation that was made. Empire did |
| 22 | not ask for the C-115s to be produced. And the C-115s |
| 23 | only would show monthly volumes; okay? What they |
| 24 | asked for were the daily volumes. And they asked for |
| 25 | the daily pressures. So we gave them more than what |
| | |

1 would be discernable from the monthly volumes 2 themselves. 3 So if you were to look simply at the monthly volumes, you may not, as I said because the 4 5 monthly average injection rates are around 14,000 6 barrels per day, they may not have discerned that 7 there was ever an over injection; okay? 8 So we gave them all this data including 9 the pressures. And I can't tell you exactly the date it was up to, but it was up to around the end of 2023. 10 11 So they have all the pressures. They have all the 12 rates of the timeframe. We're going to supplement up 13 to the end of July so they have all that as well. And I just want to make very clear that 14 15 actually they did have all this and they made more 16 than what the division would've had had it been filed 17 publicly. Thank you, Mr. Rankin. 18 MR. RAZATOS: 19 Commissioner Bloom, I wanted to give 20 you an opportunity to as well. I mean, in light of what Mr. Rubin said, did you have any questions? 21 MR. BLOOM: Yes. Thank you, Mr. Chair. 22 23 So just sort of to recap. I opened 24 this can of worms by wanting to make sure that OCD would fundamentally be okay with an order potentially 25 Page 54

coming from the commission, and essentially bringing this issue now into this case. You know, we heard that the OCD is okay with that not wanting to explore these issues during litigation as we heard from Mr. Moander. So I heard that. I just note that, I guess, now every allegation between parties will become part of the case.

8 I'm wondering -- maybe some questions 9 for Mr. Rubin. We heard from Mr. Rankin about Tenneco 10 may have some bearing here. And I'm also wondering if 11 an order at this point from the commission not to over 12 inject would serve a purpose, and that all companies 13 need to obey their permits and state laws and regs. And also, Mr. Rubin, would an order be seen as 14 15 prejudicial? Or become prejudicial in some way? 16 MR. RUBIN: Commissioner Bloom, members 17 of the commission, an order as I recommended that would simply state that all over injections in 18 19 violation of the permit cease would not be 20 prejudicial. It is simply restating what should be 21 already understood by all operators licensed by the

22 commission or the division.

23 So from what Mr. Rankin has presented, 24 Commissioner Bloom, there might even be some dispute 25 as to what the permit says that they can do as to what

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the limitations are, whether it's daily, monthly, what 1 2 the exceedances -- how to calculate exceedances. So 3 that's why I would simply want it to be sort of a conclusory order from the commission today stating, 4 5 "Do not violate your permit." And as to what that is, we will find 6 7 out after the hearing in September. But it is 8 important that we get to the bottom of whether there 9 was a violation, and we want a recommendation from a hearing officer on that. 10 11 As you can see, Commissioner Bloom, it 12 is a rich tapestry as to whether what the permit says and whether it's been violated. 13 14 MR. RAZATOS: Thank you, Mr. Rubin. 15 Commissioner Bloom, anything else? 16 MR. BLOOM: That's it. Thank you. 17 MR. RAZATOS: Excellent. 18 Dr. Ampomah? 19 No, I'm okay. DR. AMPOMAH: 20 MR. RAZATOS: Okay. So I'm sorry. 21 There is the OCD, please. 22 MR. MOANDER: As a matter of record because I do believe these things are important and 23 this is related to the motion, but not the substance. 24 And I didn't get to mention it, because things got 25 Page 56

1 right into the fist fight early this morning. 2 OCD's going to withdraw its section 2 3 of its response. It turned out there was a major IT problem with email. And I, as the attorney, made an 4 5 allegation that turns out to be a little incorrect, and so I wanted to withdraw that on the record and 6 7 make that clear so there's no confusion. 8 MR. RAZATOS: Okay. Thank you. 9 Appreciate that. 10 DR. AMPOMAH: So Counsel, we are not 11 really admitting what Mr. Rankin showed us today as 12 part of the proceedings; right? 13 MR. RUBIN: Commissioner Ampomah, that 14 is correct. We are not deciding anything. We are not 15 admitting -- there was nothing to admit in terms of 16 evidence. Again, lawyers can -- as right as the grass 17 may be, and Mr. Rankin may be, he's just still a 18 lawyer. And so we are not admitting anything today. And I mean that -- I'm not -- don't mean that 19 20 pejoratively, Mr. -- you're a better lawyer than I. 21 But nonetheless -- so all I suggest that we commit to today is, if it wishes, it can order 22 today that the permit be adhered to, be -- any over 23 24 injections cease as defined by the permit, whatever that is, and to direct the hearing officer to include 25

1 in his recommendations whether the permit has been 2 violated, and to hold in obeyance any further action on the motion not decided today. So that's what I 3 recommend the motion be. Can I get a so moved? 4 5 MR. RAZATOS: Well, I move it. 6 MR. RUBIN: Okay. Do I have a second? 7 DR. AMPOMAH: I second. 8 MR. RAZATOS: It is ordered. 9 MR. RUBIN: We will need a roll call. MR. RAZATOS: We need a roll call. 10 11 Okay. 12 Dr. Ampomah. 13 DR. AMPOMAH: Approved. MR. RAZATOS: Commissioner Bloom. 14 15 MR. BLOOM: Nay, and I would like to 16 say I don't know that an order is necessary at this 17 point, so I am not voting in favor. 18 MR. RAZATOS: Okay. And I approve. 19 MR. RUBIN: Okay. Motion passes two to 20 I will draft up an order for the chair's one. 21 signature later today. And so with that, any other 22 matters on this agenda item from the parties? 23 MR. PADILLA: Mr. Rubin, we do 24 have -- we need some clarification. And maybe it's 25 already in some form. But we were -- counsel and I Page 58

1 were talking yesterday about the hearing examiner. 2 Will the -- and we were wondering if the commission was going to be present during the September hearing 3 or just the hearing to the hearing examiner? 4 5 MR. RUBIN: Mr. Padilla, I do not know the answer to that myself. I think it is at the 6 pleasure and discretion of the commission to delegate 7 8 to what extent it wishes to the hearing officer -- examiner. 9 MR. PADILLA: And would there be a 10 11 report from the hearing officer recommending a 12 decision one way or the other? Do you know or that's 13 not decided yet? MR. RUBIN: Mr. Padilla, it is my -- it 14 15 was my understanding that the hearing officer, 16 Mr. Harwood, would provide a recommendation, proposed 17 findings, and conclusions to the commission. Is there some rule you're aware of that would preclude that? 18 19 MR. PADILLA: No, no, no. I was just 20 wondering whether we were going to submit requests of 21 findings and conclusions and that kind of thing. 22 MR. RUBIN: Yes. Mr. Padilla, the hearing officers -- with all administrative 23 24 adjudication --25 MR. RAZATOS: Mr. Rubin, I'm just going Page 59

| 1 | to interrupt this again. There must be some IT glitch |
|----|--|
| 2 | on our end, on Teams. We're still streaming. So I |
| 3 | can see us on Teams. So we are proceeding. Sorry. |
| 4 | MR. RUBIN: Just open meetings and |
| 5 | compliance, are those |
| 6 | are people able to hear us, members |
| 7 | of the public |
| 8 | MR. RAZATOS: Commissioner Bloom, can |
| 9 | you hear us? |
| 10 | MR. BLOOM: Yes. There's been no |
| 11 | interruption on my end. |
| 12 | MR. RAZATOS: Okay. And can you see us? |
| 13 | MR. BLOOM: Yes, I can see the |
| 14 | MR. RAZATOS: Okay. Good. |
| 15 | MR. BLOOM: right now. |
| 16 | MR. RAZATOS: Oh, there we go. |
| 17 | MR. RUBIN: There we go. |
| 18 | So to Mr. Padilla's point, hearing |
| 19 | examiners sometimes will ask for the parties to submit |
| 20 | proposed finding and conclusions before concocting |
| 21 | their own. That's up to him. We would expect a |
| 22 | report from him that this commission would then be |
| 23 | able to digest. |
| 24 | MR. PADILLA: And finally, we were also |
| 25 | wondering if how we're going to split up time, you |
| | Page 60 |

1 know, on who goes first, that kind of thing. That's 2 probably something we need to talk to Mr. Rankin about, time limitations per witness and time 3 limitations on cross-examination. 4 5 MR. RUBIN: Yes, Mr. Padilla. We are 6 delegating those procedural matters to Mr. Harwood, but I'm sure he would welcome some consensus from the 7 8 parties on those procedures. 9 MR. PADILLA: So if we had some concerns about that, we would with Mr. Harwood? 10 11 MR. RUBIN: Correct, Mr. Padilla. 12 MR. PADILLA: Okay. 13 MR. BLOOM: And Mr. Chair, Mr. Rubin, 14 to my knowledge, I believe the commission has 15 typically sat through the discussions and made 16 questions, asked questions during hearings where there 17 is a hearing officer. That would be my preference. 18 But I just wanted to put that out there. I don't know 19 if there's a consensus among the commission or how 20 we'll handle that. 21 MR. RUBIN: If I may -- thank you, 22 Commissioner Bloom. All I would ask is that the 23 commission can be polled separated from today if a 24 quorum of the commission wishes to be present for the 25 hearing, we do need to comply with the Open Meetings

1 Act. that is the only constraint that I am concerned 2 about. DR. AMPOMAH: Yeah, Mr. Rubin, I 3 remember -- when we're setting the date, I remember 4 5 the commissioners were going to be present, so -- and 6 that was my understanding too. 7 MR. RUBIN: Very well. 8 DR. AMPOMAH: Okay. 9 MR. RAZATOS: Okay. Any other points on this particular matter? 10 11 MR. RANKIN: I'll just say that, you 12 know, counsel for Empire raised this question with me 13 this morning. I think it's appropriate to confer 14 among the parties and then coordinate with the hearing 15 examiner outside of the commission's meeting. I think 16 we can do that and should be able to reason to come to 17 agreement on how to manage the procedure. MR. MOANDER: And OCD joins in that and 18 19 agrees as well. 20 MR. RAZATOS: Okay. Mr. Padilla. 21 MR. PADILLA: That's fine. 22 MR. RAZATOS: Okay. 23 MR. SUAZO: Mr. Chair. 24 MR. RAZATOS: Yes. 25 MR. SUAZO: May I be heard briefly? Page 62

1 MR. RAZATOS: Please. 2 MR. SUAZO: I'm Miquel Suazo, and I'm 3 representing Pilot Water in a matter that is impacted by the matters that are before the commission today. 4 5 And since we're talking this procedural grounds, I 6 just wanted to flag for the commission that Pilot 7 Water would like to participate in the hearing in 8 September. The nature of that participation is going 9 to be limited in scope. 10 But essentially what I wanted to flag 11 for the commission is that Empire has filed essentially similar, you know, complaints against 12 13 Pilot as it has against Goodnight. Specifically, they're challenging order SWD-1750 and an order 14 15 R-23254, which was issued on June 26th. 16 They essentially state Pilot -- it's a 17 matter pending the outcome of these proceedings today and the hearing in September. And so Pilot would just 18 like to ask to be included with the discussions with 19 20 the parties and the hearing examiner so that they can participate in September, potentially furnish a 21 22 witness, although no decision has been made. 23 But most certainly to impart testimony to the effect or at least a statement to the effect 24 that they are supportive generally of Pilot's position 25

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1 in terms of its take on the impact to the EMSU in the San Andres in this proceeding, which stands to impact 2 Pilot's interests in the San Andres outside of the 3 4 EMSU. 5 MR. RUBIN: If I may? MR. RAZATOS: Please share, Mr. Rubin. 6 7 MR. RUBIN: Mr. Suazo, I don't have the rules in front of me, but has there been a formal 8 9 intervention by Pilot? MR. SUAZO: Well, I would need to go 10 11 back and look at the filings for this particular case. 12 I know that Goodnight has intervened in our case and 13 there was testimony from -- before the division about the fact that these matters are related. 14 15 I don't think that they've been 16 formally consolidated, but they are, nevertheless 17 interrelated, which is why they were stayed. So if 18 that is a procedural matter that needs to be 19 undertaken, I suppose we should discuss that and 20 decide if that something that for purposes of 21 recordkeeping, the commission and counsel would like 22 to see just with those new issues once the hearing 23 date is actually upon us. 24 Yes, Mr. Suazo. I think MR. RUBIN: you'd be well advised to consult the procedures on 25 Page 64

| 1 | this and the rules as to what you can do and cannot do |
|----|--|
| 2 | with that intervening. I'm sure that the other |
| 3 | parties may have opposition to you participating |
| 4 | without something formal from your client. Thank you. |
| 5 | MR. SUAZO: Thank you. |
| 6 | MR. RAZATOS: Excellent. Anything else |
| 7 | on this matter? |
| 8 | Okay. |
| 9 | MR. BECK: Commissioners, this is Matt |
| 10 | Beck on behalf of Rice Operating Company and Permian |
| 11 | Line Service, LLC. We stand in a similar position to |
| 12 | Pilot. We have intervened in this matter, and so |
| 13 | we're in the exact same position. Empire filed |
| 14 | applications, they moved to dismiss them, but because |
| 15 | of the commission's stay, they haven't been dismissed. |
| 16 | So we'll participate in a I would |
| 17 | think in parallel manner with Pilot and the like |
| 18 | manner and make sure that we're cleared in those |
| 19 | discussions as well. |
| 20 | MR. RAZATOS: Right. Thank you, |
| 21 | Mr. Beck. I think what Mr. Rubin said applies to you |
| 22 | as well. So |
| 23 | MR. BECK: Certainly. |
| 24 | MR. RAZATOS: Excellent. Okay. So |
| 25 | this matter is complete. |
| | |

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| 1 | MR. RUBIN: Yes, Mr. Chair, I would |
|----|--|
| 2 | advise that we move on to the next agenda item. |
| 3 | MR. RAZATOS: I think we also need a |
| 4 | little break, so how about we take a break? Let's |
| 5 | take a ten-minute break. Thank you everyone. |
| 6 | (Off the record.) |
| 7 | MR. RAZATOS: Our next case is case |
| 8 | number 24683, application of Western Environmental Law |
| 9 | Center, Citizens Caring for the Future, Conservation |
| 10 | Voters of New Mexico Education Fund, the Dine |
| 11 | C.A.R.E., Earthworks, Naeva, New Mexico Interfaith |
| 12 | Power and Light, San Juan Citizens Alliance, and |
| 13 | Sierra Club to amend 19.15.2, 19.15.5, 19.15.8, |
| 14 | 19.15.9, and 19.15.25 NMAC. |
| 15 | Are all the parties present for this |
| 16 | particular case? Excellent. Great. |
| 17 | Mr. Rubin. |
| 18 | MR. CLOUTIER: Mr. Chair, this is |
| 19 | Andrew Cloutier. I'm here on Teams, not present. |
| 20 | MR. RAZATOS: Excellent. Thank you, |
| 21 | sir. |
| 22 | MR. RUBIN: Mr. Chair, members of the |
| 23 | commission, at this point, it would be appropriate to |
| 24 | have the petitioner, the parties seeking to have the |
| 25 | commission initiate this proposed rulemaking to |
| | |
| | Page 66 |

1 address the commission and make a presentation, 2 mindful, of course, that they should not be too 3 substantive in nature as ultimately a hearing would resolve that -- a public hearing. Thank you. 4 5 MR. RAZATOS: Excellent. Thank you, 6 Mr. Rubin. So who would like to start off? 7 8 I can barely see you. Sorry. Sure. 9 There you go. MS. BEASLEY: 10 There you go. Good 11 morning, and thank you all. I'm Ally Beasley, counsel 12 for Applicant. And here with me today are my 13 cocounsel, Kyle Tisdel, Morgan O'Grady, and Tannis Fox 14 over there. 15 So as you all sort of outlined, we are 16 seeking to amend 19.15.2, 5, 8, 9, and 25 NMAC 17 governing definitions, enforcement, and compliance, 18 certain financial assurance provisions, well operative 19 provisions, and well plugging and abandonment. 20 New Mexico needs an effective 21 regulatory scheme in order to facilitate plugging and 22 abandonment of wells when they reach the end of their useful lives, and to ensure that the state and its 23 24 taxpayers don't bear the cost of orphan wells. And currently, the commission rules allow operators to 25

1 post financial assurances that fall short of the 2 actual costs of plugging and cleanup. And when wells reach the end of their 3 useful lives, those wells needs to be sort of properly 4 5 plugged and abandoned. And this discounting of that cost creates a significant gap between total estimated 6 cost for the State to plug all of its oil and gas 7 8 wells, and what actually is available for that purpose 9 in funds held by the State for financial assurances. 10 And the current rules also allow 11 operators to keep wells in temporary abandonment 12 status indefinitely. And this creates risks for the State and its taxpayers and our communities, 13 environment and financial risks when these wells can 14 15 sort of linger in temporary abandonment and are at 16 increased risks of becoming orphaned without any demonstration that the wells will return to beneficial 17 18 use. 19 So this proposal, these proposed 20 amendments seek to address these regulatory gaps and 21 the attendant health and environment and financial 22 risks. 23 We, in preparing this, we consulted with staff from both the Oil Conservation Division and 24 the State Land Office about our scope and language of 25 Page 68

| 1 | our proposal. And we really appreciate the |
|----|--|
| 2 | willingness to meet and the input. |
| 3 | And likewise, prior to filing the |
| 4 | petition, we met with representatives from NMOGA, |
| 5 | IPANM, the Permian Basin Petroleum Association to give |
| 6 | them notice of our filing. And we look forward to |
| 7 | continuing conversations with all parties here, and |
| 8 | hope work with the parties prior to hearing if hearing |
| 9 | is granted to try to find common ground and narrow the |
| 10 | scope of the issues further. |
| 11 | Today, we respectfully request that the |
| 12 | commission schedule a hybrid hearing on this matter |
| 13 | beginning April 7, 2025, and continuing after as |
| 14 | necessary. We anticipate needing about a week for the |
| 15 | hearing, but of course, that's up to the commission, |
| 16 | and it could go longer. |
| 17 | We had originally requested a hearing |
| 18 | date in October, and then when we moved this meeting |
| 19 | forward from July to August, we're looking at |
| 20 | December. But in order to accommodate other Oil |
| 21 | Conservation Division hearings coming up this year, |
| 22 | commission hearings, and the upcoming legislative |
| 23 | session during which the commission typically does not |
| 24 | meet, we have proposed to move that date to April 7th |
| 25 | for the start date for the hearing, and filed an |
| | |

amended proposed notice to that effect earlier this
 week.

| 3 | And we also request that the commission |
|----|--|
| 4 | issue an order appointing a hearing officer in this |
| 5 | matter and requiring that the parties file each |
| 6 | witness's full direct testimony and exhibits by |
| 7 | January 31, 2025. So that would be two months in |
| 8 | advance of the April date if that were to be April. |
| 9 | And then each witness's full rebuttal testimony a |
| 10 | month in advance of hearing date, which for an April |
| 11 | 7th hearing would be March 7, 2025. |
| 12 | And we request that full direct and |
| 13 | rebuttal testimony rather than the concise statement |
| 14 | of testimony as contemplated in the rules at |
| 15 | 19.15.3.11(b)(2), so that the party and the commission |
| 16 | have a full understanding of the evidence prior to |
| 17 | hearing, and we can present a more fulsome record for |
| 18 | decision at hearing. |
| 19 | This is something that we have seen in |
| 20 | the Water Quality Control Commission, Environmental |
| 21 | Improvement Board, and PRC hearings, and so we are |
| 22 | proposing the same here. And it's my understanding |
| 23 | that a similar process is happening before the |
| 24 | commission in the PFAS hearing later this fall, so |
| 25 | Yeah. Thank you for considering our |
| | |

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1 request for hearing, and I'd be happy to answer any 2 questions. 3 MR. RAZATOS: Excellent. Thank you. 4 MR. RUBIN: Ms. Beasley, I apologize. 5 I'm having some issues with my laptop. Do you have a 6 hard copy of the strikethrough, redlined version of 7 the proposed rules? An extra copy? 8 MS. BEASLEY: Would you like --9 MR. RUBIN: Yeah. MS. BEASLEY: It's not in red, but it 10 11 does have the strikethrough. So it's starting here. 12 Oh, it's -- I can extract it. You have one? Oh. 13 MR. RUBIN: Mr. Chair, members of the commission, I just would advise that we hear from 14 15 anyone else, any other interested parties before we 16 hear from the commission. 17 MR. RAZATOS: We'll just go down the table from --18 MR. RUBIN: Looks like that's what 19 20 we're going to do. 21 MR. RAZATOS: Okay. Awesome. 22 Thank you, Mr. Chair. MR. SUAZO: Good morning commissioners. My name is Miguel Suazo. 23 I'm 24 with the Santa Fe of Beatty & Wozniak, joined today by 25 my colleague, Kaitlyn Luck. And we're here today Page 71

1 representing the New Mexico Oil and Gas Association, 2 also known as NMOGA, which consists of over 200 member 3 companies operating in New Mexico who help support our 4 state schools, including producing almost \$14 billion 5 in 2023 alone.

I'm pleased to be here today on behalf of NMOGA. And I'm here because NMOGA's position on this rulemaking and the need for a hearing is clear. NMOGA opposes a hearing on these proposed rules. And the reason why is because these rules as drafted do not fit the needs of the industry. These rules demand additional clarity and flexibility.

Good rules must establish clear, cost effective, and performance-based standards. These rules do not achieve that. Rules must provide flexibility for operators and for the commission and the division. They should allow for operational flexibility without imposing rigid constraints. These grids do not achieve that purpose.

20 Rules should also not overburden those 21 who are required to abide by them. NMOGA opposes 22 generally rules that are overly burdensome, 23 duplicative, redundant, impractical, and ineffective. 24 That is what these rules are.

25

Now, it's important for the commission

1 to understand that these rules with impact industry 2 differently, especially smaller oil and gas businesses. And these are businesses that generate 3 value for our state's economy that are impacted. 4 5 There's a financial burden associated 6 with these rules. They'll force companies, large and 7 small, to bear significant costs, not only to ensure 8 compliance, but also to navigate their own risks and 9 expensive requirements. 10 These rules will create compliance and 11 operational challenges. And that's because these 12 rules are unclear and impractical. And because they 13 are impractical, they'll also be difficult for this commission and OCD to implement them. 14 15 So bottom line here, broadly, which is 16 what you've requested today, these rules need drastic 17 To be practical and meaningful, the rules refinement. need substantial revisions to align with industry 18 19 realities and avoid unnecessary strain on New Mexico's 20 businesses. 21 And finally, as you heard the 22 applicant's counsel say, they let NMOGA and IPANM know 23 that these rules were coming, but they didn't 24 collaborate with the industry to make sure that these rules made sense from an industry perspective. 25 So

this rulemaking, unfortunately, arises under
 unfortunate circumstances.

The initiation of this rulemaking could've been more effective if it were approached with greater collaboration. This rulemaking was pursued without industry engagement. There was no consultation with NMOGA, the state's largest oil and gas trade association.

9 So this is really a missed chance for 10 partnership with the application, and a valuable 11 opportunity that was missed to work together. And as 12 a result, these rules, as anybody who's worked in this 13 industry for any number of years can see that these 14 regulations reflect a lack of industry perspective and 15 expertise.

You know, NMOGA is dedicated to industry improvement, and anyone who's worked in this industry knows that oil and gas operations have functioned better in recent decades than they did in decades prior.

21 NMOGA would've preferred a cooperative 22 approach in this rulemaking, but instead, because it 23 requires so much work to make these rules make sense 24 for the industry itself, NMOGA has to oppose this 25 rulemaking and opposes any hearing on these rules.

1 And if any rules are passed, industry should be 2 involved from their inception before they are filed. Instead, today, NMOGA's here in a 3 reactive position formulating -- is placed in a 4 5 reactive position that's neither productive or conducive to the industry's growth, and it taxes the 6 7 resources of the agency's charge with regulating 8 NMOGA's oil and gas industry. And because of that, 9 NMOGA opposes these rules, opposes this rulemaking, 10 and opposes any further hearing on these rules. Thank 11 you. 12 MR. RAZATOS: Thank you, Mr. Suazo. 13 Appreciate it. 14 Mr. Tremaine. 15 MR. TREMAINE: Thank you, Mr. Chair. 16 My name's Jesse Tremaine. I am the legal director for the Oil Conservation Division. And the OCD is here 17 18 today to, as a general matter, to support the amendment of the referenced rules. We do agree that 19 20 there may likely be necessary changes and 21 modifications to the proposals as the parties work 22 through this process to refine the rule. But we do see that as a matter of refinement and logical 23 24 outgrowth rather than going back to the drawing board. 25 I do, unfortunately, have to disagree

1 with Mr. Suazo. In my opinion, this has been a highly 2 collaborative process, not the draft of this particular rule, but all of the parties present were 3 party to probably something like a six-month 4 5 stakeholder engagement process related to proposed 6 amendments starting in 2023 to the Oil and Gas Act. 7 Now, you will see that there are, if 8 you review the legislative proposals as opposed to 9 WELC's petition to amend these rules, you will see that they are somewhat different, and that is the 10 11 necessary nature of taking the critical aspects of 12 what were proposed and discussed over a period of 13 months between all of those parties of that 14 stakeholder engagement, and applying it to the current 15 existing statutory authority. 16 So we're inherently dealing with a 17 different proposal because we're talking about 18 modifying rules under the existing statute as opposed to modifying the statute. 19 20 But additional changes to transfer requirements, modifications to financial assurance, 21 22 inactive well plugging, these are all issues that the State and the Oil Conservation Division have numerous 23 24 public presentations regarding, and our position has 25 been clear and guite detailed regarding the inactive

well and financial assurance liability posed to the
 State and the demands placed upon the current
 reclamation fund and available BIL funds.

4 So we do support some form of the 5 current proposal, and we'll eagerly work with all of 6 the parties present in the case. We support this going forward. OCD has reviewed the draft notice 7 8 presented by Western Environmental Law Center, and 9 provided some initial, like, technical wording feedback. And we've also recently received some 10 11 proposed edits and comments on that in a comment 12 form -- in a redline form. But that is helpful from 13 IPANM.

14 So given that there is some additional 15 feedback on that proposed notice, I am proposing to 16 the commission that it might appropriate to allow the 17 parties to consider that input, provide a deadline by which the parties can submit a stipulated -- either a 18 stipulated notice or a stipulated prehearing order 19 20 such as we did during, you know, the last ruling that is currently underway, PFAS rulemaking, that is at the 21 22 pleasure or direction of the commission.

But I think those are alternatives that will allow the parties to work through some of the procedural questions that were presented in the filing

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this morning IPANM. And I think that could be
 processed relatively quickly.

And the last thing that I will comment 3 on is just as a procedural matter, OCD has proposed in 4 5 discussion with all of the parties -- after discussion 6 with all of the parties, we had proposed April as a 7 potential rulemaking date, April 7th, or frankly 8 anytime in April works for the division because of our 9 witness and legal resource availability after session, we think that that would work. We do have some 10 11 limitations in terms of May to push that out. 12 Critical staff will be out during that period of time. 13 So in summary, we think that there is a lot of record and a lot of history and a lot of 14 15 engagement here. It is critical, absent some change 16 during the legislative change, to address the 17 liability presented by the State of matters on the ground in New Mexico and the current language of the 18 19 rules, and we support this rulemaking petition going 20 to hearing in April. 21 MR. RAZATOS: Excellent. Thank you, 22 Mr. Tremaine. 23 Mr. Feldewert. 24 MR. FELDEWERT: Good morning, Mr. Chair, members of the Commission. 25 Michael Page 78

1 Feldewert representing the offices of Holland & Hart 2 on behalf of OXY USA, Inc. OXY does not take a position on whether you should hold a hearing or not. 3 I do have some comments, I guess, on the filing by 4 5 WELC on the proposed notice of hearing. 6 One would be a request that if we're 7 going spend your time and our time and all this money 8 on any rulemaking, that if you're going to present a technical witness, the technical witness be here so 9 that you can have more effective examination of that 10 11 witness. So that would be my first proposed 12 suggestion. 13 Secondly, to avoid any surprise if we do have a hearing, that not only technical testimony 14 15 and exhibits, but any exhibits that would be 16 considered nontechnical, whatever that necessarily 17 means, that those exhibits be filed in advance of the hearing, not on the day of the hearing. 18 19 We don't know what those exhibits would 20 be. Nobody wants to surprised. It's not too big of a 21 burden to ask someone who wants to present 22 nontechnical exhibits at the hearing to file them 23 ahead of time. We did that in the procedural order 24 for the PFAS rulemaking. I think it makes a lot of 25 sense.

| 1 | So if you're going to have a hearing, |
|----|---|
| 2 | those would be the two changes that I would suggest. |
| 3 | One, technical witnesses be here. I'm not talking |
| 4 | about nontechnical, I'm not talking about public |
| 5 | comment. I'm talking about technical witnesses, that |
| 6 | they be here for effective cross-examination. |
| 7 | And then secondly, that any exhibits |
| 8 | that you're going to people want to file, that they |
| 9 | be filed ahead of time with the parties and the |
| 10 | Commission so we have no surprise. |
| 11 | MR. RAZATOS: Thank you, Mr. Feldewert. |
| 12 | And Mr and I don't remember how you |
| 13 | pronounce it. Mr. Cloutier or Cloutier? |
| 14 | MR. CLOUTIER: Cloutier, but I've been |
| 15 | called worse, so |
| 16 | MR. RAZATOS: Okay. I apologize. |
| 17 | MR. CLOUTIER: No problem at all. |
| 18 | Good morning, Mr. Chair and members of |
| 19 | the Commission. Andrew Cloutier of the Hinkle Shanor |
| 20 | firm, representing the Independent Petroleum |
| 21 | Association of New Mexico. Like NMOGA, IPANM strongly |
| 22 | opposes the rule making on three primary bases. |
| 23 | First, I'm not going to repeat |
| 24 | Mr. Suazo's comments about the needs for refinement |
| 25 | and more collaboration, but I fully agree with and |
| | Page 80 |
| | rage ou |

1 IPANM adopts Mr. Suazo's comments by way of 2 supplementation. 3 My client was notified of the proposed rulemaking about a week before the filing, and we 4 5 believe a true collaborative process should not be under the gun of a upcoming hearing date, and the 6 commission should direct the parties to collaborate 7 8 some more before there's a filing. 9 We also oppose on public policy grounds, and thirdly, because the commission lacks 10 11 statutory authority to enact many of these proposals. 12 That said, I'd like to make some 13 Mr. Tremaine correctly states that I filed comments. this morning, based on receiving on the evening of 14 15 April 12th the amendments to the proposed notice of 16 hearing. I'd like to make some comments about those 17 suggestions because I -- as indicated in the filing, I would make my comments here. 18 19 Mr. Tremaine identifies correctly that 20 there was house bill 133 before the recent legislative 21 session which had the strong backing of the 22 administration, it did not pass. While IPANM believes 23 that its failure to be enacted into law combined with 24 the administrative's efforts to get that bill enacted into law is highly instructive on the issue of the 25

| 1 | commission's authority to enact the proposed |
|----|--|
| 2 | rulemaking. I'd like to raise it for a more practical |
| 3 | issue, which is the hearing date. |
| 4 | As Mr. Tremaine alludes, and IPANM |
| 5 | hears there's rumors that some version of house bill |
| 6 | 133 may be submitted in the upcoming legislative |
| 7 | session. I'm going to briefly share a screen with |
| 8 | you. This is the calendar of session dates on the |
| 9 | legislative session. |
| LO | And on April 11th is the last day for |
| L1 | the governor to or I guess April 10 is her last day |
| L2 | to act on legislation. April 11th is the date that |
| L3 | unacted upon bills become pocket vetoed. So the |
| L4 | proposed hearing date is prior to what we will know |
| L5 | about the ultimate results of the upcoming 60-day |
| L6 | legislative session, and the 20-day period there is |
| L7 | constitutional under Article 4, Section 22 of the |
| L8 | constitution. |
| L9 | So assuming the legislature's website |
| 20 | is correct about the dates of the session, that is the |
| 21 | date for the so-called pocket veto, therefore, if the |
| 22 | commission is going to move forward with the public |
| 23 | hearing, which again, IPANM disagrees with, but if it |
| 24 | does, the hearing should occur sometime after we all |
| 25 | know what we're dealing with in terms of legislative |
| | |

history.

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I don't have a crystal ball, but it's very obvious -- or very easy to imagine a scenario where there is a reintroduction of some version of house bill 133 in the next session that some form of that bill passes with amendments.

And given a bill that presents her with some but not all of what she asks for or contains provisions that she may not have wanted, there's no guarantee we're going to know by April 7th what the governor has done with any bill that may alter the Oil and Gas Act. So we submit that some later date at the convenience of the parties would be more appropriate.

We think that the notice of hearing, and I provide specific language in my filing, ought to contain a provision for concerning motions because as IPANM believes, and I think NMOGA's also suggested, there's arguments about the Commission's authority to enact some or all of the proposed rulemaking.

20 We take issue with the legal authority 21 section and think it should be amended. In 22 particular, it currently that the proposed rule is 23 authorized, et cetera. We believe that it ought to 24 state "Applicants contend that the proposed amendments 25 are authorized," because this commission has not made

| 1 | any finding that it has the authority to enact these |
|----|--|
| 2 | rules, and that issue will be disputed. |
| 3 | I agree with Mr. Feldewert's comments |
| 4 | about the testimony section. IPANM is also |
| 5 | considering expert testimony, and so we wanted to make |
| 6 | clear that technical testimony includes expert witness |
| 7 | testimony. And we believe that there should be a |
| 8 | provision also that in the event especially in the |
| 9 | event of some developments in the 2025 legislative |
| 10 | session, for good caution, written testimony could be |
| 11 | revised, supplemented, or new testimony offered. |
| 12 | Finally, Ms. Beasley, I think, |
| 13 | articulates sensible and prudential reasons for |
| 14 | submitting nontechnical, nonexpert testimony in |
| 15 | writing, and IPANM agrees with this proposal. For |
| 16 | that reason, IPANM contends there is no good reason |
| 17 | for the oral comments section as written by the |
| 18 | applicants, which they're proposing that anyone who |
| 19 | essentially shows up at the hearing can offer |
| 20 | testimony to the Commission. |
| 21 | Parties ought to be made to intervene |
| 22 | and present their written nontechnical testimony in |
| 23 | advance. The Commission should not get itself bogged |
| 24 | down with surprise testimony, which none of us may |
| 25 | anticipate. |
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1 Additionally, I point that both on the 2 applicants' side and at least two of the intervener's 3 sides, we've got membership driven organizations. Ι don't think the commission ought to be inviting us all 4 5 to engage in the game of having our members, their 6 employees, their friends, whatever, show up with 7 surprise testimony at the last minute, and therefore, 8 IPANM has suggested a completely different oral 9 comments, which we'd be limited to traditional public comment that is usual for this Commission and more 10 11 appropriate for a public body. 12 With that, thank you for considering 13 IPANM's comments, and we look forward to hopefully working the parties on the rule before the commission 14 15 considers any proposal. Thank you. 16 MR. RAZATOS: Thank you, sir. 17 Appreciate it. Any other questions? 18 19 Dr. Ampomah, any questions? 20 MR. RUBIN: Just one point of 21 housekeeping, Mr. Chair. 22 MR. RAZATOS: Yes. 23 MR. RUBIN: Are there any other --24 MR. RAZATOS: Sorry. Yes. 25 MR. RUBIN: -- persons entering today Page 85

| 1 | that wish to offer comment on the proposed rulemaking? |
|----|--|
| 2 | Okay. Hearing none. |
| 3 | Mr. Chair, members of the commission, |
| 4 | if I may, briefly try to advise the commission on what |
| 5 | we've heard here. Yes, certainly the commission, this |
| 6 | is a proposed rulemaking. And Mr. Tremaine has |
| 7 | accurately stated the concept that what is proposed |
| 8 | today, what is put out for notice, does not |
| 9 | necessarily need to be what is the final after a |
| 10 | hearing. |
| 11 | The test is a logical outgrowth. So if |
| 12 | you decide that what is being what is in the |
| 13 | petition is at least, as OCD has said, could be |
| 14 | tweaked, it could still go out for notice as is. |
| 15 | Now, the second point is if the |
| 16 | commission does deem it prudent to initiate |
| 17 | rulemaking, I do suggest that pursuant to the rules |
| 18 | that we do have a hearing officer, and that would |
| 19 | certainly make for a much more orderly procession of |
| 20 | this proceeding. |
| 21 | Now, as to the notice, there are a lot |
| 22 | of things we can put in a proposed notice, such as |
| 23 | those issues of who can appear in person, who needs to |
| 24 | appear who can appear virtually. That could be |
| 25 | covered in the notice as well as what testimony needs |
| | Page 86 |

1 to be filed or not filed ahead of time. 2 I am mindful of the Open Meetings Act, but more importantly, the public comment provisions of 3 the State Rules Act. And as I'm sure all the 4 attorneys here would acknowledge, it is a gray area, 5 what is public comment versus what is even 6 nontechnical testimony. This came up in the PFAS as 7 8 well. 9 And so we do have to be careful. Limiting people to pre-filings when they just want to 10 11 get up and say something might be an -- might be a 12 State Rules Act issue. But again, this could all be, 13 in what I'm hoping would be a consensus notice or at 14 least some consensus in a proposed notice that could 15 be presented to the commission at its next meeting. 16 Especially the hearing date, at least, of April 7th 17 meets some consensus by all the concerned parties. As to the concern about timing this 18 19 with the legislature, certainly if there's legislative 20 action that would obviate the need for any of this, 21 that would be a wonderful problem to have. And this isn't legal advice, but waiting for a legislator to do 22 something or not do something is a waiting-for-Godot 23 24 proposition, often waiting for a pocket veto, we do know that our Governor Grisham does have deep pockets 25

1 in that respect. But again, that is still 2 speculative. So I did not hear from any of the 3 parties here opposing the initiation of any specifics 4 5 as directed to the specifics rather of the strike 6 lines or proposed additions to the text. I supposed 7 those will be tackled as part of the hearing if the 8 commission sees fit. So the notice otherwise meets 9 the requirements about the State Rules Act and the commission rules. 10 11 And again, I want to remind the 12 commissioners, you may have questions about this, 13 about the substance. I would strongly advise against getting too much into substance as there could be some 14 15 argument of prejudgment. I think there are folks who 16 would want to show up for a hearing in April who would 17 want to hear everything the commission has to say about this. 18 So with that, I stand for any questions 19 20 by the commission. And of course, the commission can 21 ask questions of those parties appearing today. 22 DR. AMPOMAH: So I do have a guestion 23 for NMOGA and then IPANM. 24 So you are opposing the commission setting up a hearing for this, but so were you invited 25 Page 88

1 to the table or you were not invited at all? 2 MR. SUAZO: Thank you for the question, Commissioner Ampomah. Well, I would need to confer 3 with my client on the exact timing. I guess what I 4 5 will say is that I do take exception with OCD and 6 Mr. Tremaine's characterization that we were involved 7 in the development of the language of these specific 8 rules as proposed. 9 And I am aware that HB-33 has been I am aware 10 looming out there. It failed to pass. 11 that these issues -- that the issues that the rules 12 concern are issues that the industry has been dealing 13 with for years. But what I will say is that when it 14 15 comes to the actual text that was submitted to the 16 commission, that is not something that we feel that 17 NMOGA was involved in as much as is practical and prudent, and, in our mind, essential so that the rules 18 19 that are ultimately adopted ultimately make sense for 20 the industry that actually has to abide by them. 21 And I think that if you put rules in front of the commission that needs significant 22 modification, ultimately that leads to a poorer 23 24 outcome rather than a positive outcome because at the end of the day, we have to abide by the rules, and the 25

commission and the division have to enforce those
 rules.

So the better they are, the more that we ensure that they make sense upon submission, that they make sense for the industry, the better product you're going to have. And that was not done here, which is why there are problems and reservations with these rules.

9 You know, there's no magic with 10 adopting these rules on the timeframe proposed by the 11 applicant. It is highly likely that a version of some 12 of these rules will be adopted by statute after the 13 legislative session next year.

And so what the commission faces is the 14 15 prospect, and what the industry faces as a prospect, 16 and what the applicant faces as a prospect is if there 17 are statutes that are passed by the legislature next year, everybody's going to have to scramble to adjust 18 19 their reasons and expectations and the nuance of those 20 rules in the face of those adoptions when, in 21 hindsight, we'll have been working on this very 22 rulemaking may, in part, have been addressed through 23 the statutes.

And so I think it is prudent for the commission to proceed carefully and slowly, and work

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with and engage with industry so that we can do this
 effectively and well, and not create additional issues
 for ourselves just for the sake of passing
 regulations.

5 And I would remind this commission that 6 many of these issues were addressed back in 2018. 7 There's plenty of testimony on stripper wells and 8 things of that nature and the impact economically. 9 There was a robust record of the commission assessing 10 these very issues.

11 This is just another bite of the apple 12 by the applicant, and they took that bite then, they 13 took that bite at the last legislative session, they're going to take as many bites at the apple as 14 15 they can in this upcoming legislative session. And 16 for purposes of this rulemaking, we're going to have 17 to deal with the fallout of whatever results, if anything, but it's possible that something will. 18

And so if we have to scramble a month roughly ahead of our hearing to adjust to what the legislature has done, that kind of is a problem for everybody, and that's a waste of time, resources, effort, and energy, all of which are limited. So please keep that in mind. Thank you. MR. CLOUTIER: Mr. Commissioner, the

question was also directed at me. Again, I will not repeat Mr. Suazo's comments. IPANM was approached by the applicants via email on June the 15th of this year about the proposed rulemaking, and I believe it was filed about a week later.

6 There was no substantive interaction 7 between IPANM and the applicants. We were presented 8 with rulemaking and told it was going to be filed, and 9 we were graciously welcomed to provide them with comments, but it was not -- we were not part of the 10 11 process of developing the rules presented to us as a 12 package, and filed very shortly after it was presented 13 to us.

DR. AMPOMAH: Then I'll follow up to the applicant, and then NMOCD. So they approached the applicant, and then NMOCD taken to make sure that the key stakeholders, those are the companies that needs to abide by these rules, more or less, you know, allowed to participate, you know, in the craft for this rulemaking?

MS. BEASLEY: Thank you, Commissioner. So our intent in reaching out was not for that to be the sort of one and only opportunity to refine the rules, to work together, to discuss the proposals. We were hoping that would be the start of such a process.

1 And I'm not aware of any requirements that we work to -- you know -- with any particular other parties to 2 3 craft the language prior to filing. But it was very much our intent that we 4 5 would continue to do so and continue to refine these 6 provisions and work together to try to find common 7 ground, narrow the issues, all of that, you know, 8 between filing and a hearing. 9 And in particular, given that a hearing would be now in the spring of 2025, if granted, that 10 11 was fully our intent from the start was that that 12 would just be initiation of what we hope would be a 13 more collaborative process, and not sort of foreclosing anything further. 14 15 MR. TREMAINE: Commissioners, Jesse 16 Tremaine for OCD. So first, a clarification. I may 17 have misspoke or I may have just simply been misunderstood. I'm not sure which. But I was not 18 19 intending to imply at any point that I had knowledge 20 of NMOGA participating in the crafting of this 21 particular language proposal. What I said or what I intended to say 22 was that NMOGA was deeply and regularly involved in 23 24 the stakeholder process, and that the proposal presented by WELC represents a proposal which is 25

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1 squarely within the content and the substance of those 2 discussions from that stakeholder process that gave rise to the legislative proposal. 3 So I am not aware of OCD having 4 5 provided substantive comment on the current proposal 6 in advance of its filing. But we were all part of 7 that process starting in August or September of last 8 year, I believe, running all the way through the 9 spring. So that was my comment. 10 And in terms of the stakeholder 11 engagement, I would say that I do agree that this is 12 simply the initiation of what OCD identifies as a very 13 necessary and critical update to the referenced rules, 14 and we will endeavor -- early in the process to 15 continue to engage in that stakeholder engagement. 16 So I anticipate many meetings between 17 all of the parties, exchange of additional red lines. OCD, in response to the petition, is already preparing 18 19 to recommend revisions to the proposal, which we've 20 shared with all parties. And we're pretty much, in my 21 opinion, an open book as far as that goes. 22 We did not participate in drafting the petition, so we haven't had those substantive meetings 23 24 with the industry stakeholders yet. We will have 25 them.

1 MR. SUAZO: Mr. Chair, may I be heard 2 briefly? Sorry. MR. RAZATOS: Who asked? 3 MR. SUAZO: Miguel Suazo. 4 5 MR. RAZATOS: Oh. I'm trying to look. 6 I apologize. Yes. 7 MR. SUAZO: No problem. Just to kind 8 of harmonize what the applicant and OCD has said, and 9 specifically, I'd like to focus on the applicant. You know, their purpose after filing is not to encourage 10 11 refinement and engagement, and so on and so forth, 12 modification of what they've proposed. 13 And the problem with that, and let me 14 just take one example. Applicant uses the term 15 "beneficial use" in their application. Beneficial use 16 is the rock upon which their application is built. 17 And as an environmental and more importantly a water 18 law attorney, that creates problems. The term "beneficial use" is used in the Oil and Gas Act and 19 20 the rules, but nowhere is it defined. And as we know from the oil and gas 21 22 context, terms of art are critical in any field of And protection of correlative rights, prevention 23 law. 24 of waste, those have a long body of case law behind them. Well, so does beneficial use. And beneficial 25

use in the context of oil and gas is a very broad
 term. It's a very vague term. And it runs the risk
 of conflating two very clear and important sectors of
 energy and environmental law.

5 And so if the applicant was truly concerned about ensuring engagement and refinement, at 6 7 the very least, they could have brought industry to 8 the table on the language of these rules so that we're 9 not all faced with the next six, seven, eight months of trying to hash this out and make sure that the 10 11 lines that currently drawn within the body of extent 12 law are not conflated and convoluted and confused.

So I can go on and on down the list, but I've been asked not to go into depth by commission counsel. But again, these rules are half baked at best and problematic at worst. Not just now, but for the long term.

18 And that is why NMOGA urges this commission to reject these rules, encourage applicants 19 20 to come to the table with a serious proposal after we've had the benefit of seeing if the legislature is 21 going to pass something that alters the contents of 22 23 these rules by statute so that we can actually come 24 back and have an actual product rulemaking. So for those reasons, I encourage the Commission to reject 25

the rulemaking at the very least at this time. Thank
 you.

3 DR. AMPOMAH: Listening to all the arguments, I still believe NMOGA still do have the 4 5 opportunity to provide input to this order or this 6 rulemaking. So you still have the opportunity. Other than just saying we should more or less deny entirely 7 8 the application, you still have opportunity to make 9 sure your members' concerns are more or less addressed in the final draft. 10

11 MR. SUAZO: And we're not saying we 12 don't have the opportunity. We're just saying the 13 opportunity is now in front of us and not something 14 that we're actually helping to put together 15 constructively. And I think that does make a 16 difference when you're facing procedural schedules, 17 lining up witnesses, navigating what the legislature's 18 doing.

You know, everybody has commitments.
And so I think it's problematic under the
circumstances was my point, not that we don't have the
opportunity to participate in the process,
Dr. Ampomah.
MR. RUBIN: Mr. Chair, members of the
commission, this isn't strictly legal advice again,

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1 but in my experience, lawyers respond well to 2 deadlines, lawyers respond well to hearing dates, and 3 so to the extent we want to spur the parties to get together and work out what they can work out, or 4 5 really it's what they can't, as Dr. Ampomah, you have said, there is ample opportunity between now and April 6 7 to do that. 8 And I have not heard anything -- it 9 seems like there has been some reaching out prior to 10 this petition. Again, so it is a long process, and as 11 long as the final rule is a logical outgrowth of what 12 is in the notice, the state law is satisfied. 13 DR. AMPOMAH: So let me ask. What prevent us more or less set in the ruling date after 14 15 the legislative session? More like, let's say setting 16 the date after? 17 MR. RUBIN: Commissioner Ampomah and members of the commission, there is nothing that would 18 19 preclude you from giving more notice, more time 20 through this rulemaking to proceed. The law only gives constraints as to how little time. You know, 30 21 22 days typically is what the --23 So what you are proposing is certainly 24 well within the commission's ability to do. If you want -- if you feel like it is prudent for this 25

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1 hearing to be set several months after the end of the 2 legislative session, that is certainly your 3 prerogative, and that is certainly well within your discretion. 4 5 DR. AMPOMAH: Will that be a problem 6 for the applicant? 7 MS. BEASLEY: We would prefer an April 8 hearing, but are of course amenable to whatever the 9 commission ultimately decides about the timing. Just given that we have already sort of moved this forward 10 11 to accommodate other things, we would of course prefer 12 April and feel that that is still ample time for the refinement and collaboration that we've discussed. 13 14 But, of course, we defer to whatever the commission 15 decides. 16 MR. RAZATOS: And I'm just going to 17 interrupt. I apologize. There was concern that, well, the governor has the pocket veto authority for 18 19 that particular week, which -- okay, whatever, she has 20 authority to be able to do that and that's her job. 21 Could we postpone it by a week and 22 start the 15th instead of the 7th? But would the parties be amicable to something like that? 23 24 MR. RUBIN: Again, Mr. Chair, I think 25 the parties would probably want to get together and Page 99

1 propose a notice. 2 MR. RAZATOS: Sure. 3 MR. RUBIN: And everything would be wrapped into what they would have in front of us for a 4 5 proposed notice including the hearing date, the procedures for witnesses, for pre-filings. It could 6 7 all be something we could see at our next meeting --8 MR. RAZATOS: Okay. So --9 MR. RUBIN: -- in the form of a notice. MR. RAZATOS: Just to make sure I'm 10 11 understanding, your advice is let's just say yay or 12 nay whether we want to have the hearing, and then they 13 can bring all that stuff to us? 14 MR. RUBIN: Mr. Chair, yes. What I am 15 saying is that you could vote today to initiate 16 rulemaking subject to the parties -- subject to 17 approval of a notice at the next meeting. 18 MR. RAZATOS: Okay. 19 MR. RUBIN: I would strongly suggest we 20 get a notice out in some form by this commission after 21 the next meeting, but we would give the interested 22 parties opportunity to present that at the next 23 meeting. 24 MR. RAZATOS: Okay. I just want to 25 make sure that we also capture Commissioner Bloom. Page 100

1 Were there any questions that you may 2 have had Commissioner? Thank you, Mr. Chair. 3 MR. BLOOM: No, I too was interested in these questions around an 4 5 appropriate date and could something that happens in the session realistically affect what might happen in 6 this chamber. 7 8 Ms. Beasley, I don't know if you want 9 to -- if you have any other thoughts on that, I'd be glad to hear them. We've heard from, I think, NMOGA 10 11 and IPANM on that. But if you have anything you'd 12 like to add? 13 I would say given MS. BEASLEY: Sure. the sort of speculative nature of exactly what will 14 15 even come up in session and even more so the 16 speculative nature of what will actually get passed, 17 even to these concerns about sort of having to scramble or be prepared, I would think it better to 18 19 give ourselves deadlines, give ourselves these parameters and to be preparing in advance in the 20 21 instance that something isn't passed legislatively so 22 that we are not then scrambling to sort of come up 23 with something and work out all of these procedural 24 details if something isn't passed that changes these 25 drastically while still leaving room for amendment

should something get through.

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2 But in terms of that sort of causing a 3 scramble to prepare should something pass, I think that one could argue that there would be a scramble if 4 5 it didn't as well, and, if anything, I think that this 6 would allow the parties to prepare more thoroughly for whatever may happen, and then adjust as needed if, 7 8 say, the scope gets significantly narrowed by 9 something that were to come through the legislature. It's unlikely that something would go 10 11 through that would broaden the scope significantly. 12 MR. RAZATOS: Thank you. Any other 13 question, Commissioner Bloom? 14 MR. BLOOM: No, that's it. Thank you. 15 MR. RAZATOS: Okay. So Commissioners, 16 I guess it's the question do we want to proceed with a 17 rulemaking? MR. BLOOM: Mr. Chair, I believe we 18 19 should proceed with rulemaking, and I like Mr. Rubin's 20 suggestion that we entertain specific dates potentially at our next meeting, but sometime in the 21 22 future. 23 Okay. Thank you. MR. RAZATOS: MR. RUBIN: So as I understand it from 24 25 Commissioner Bloom, a motion is to initiate rulemaking Page 102

1 and to approve a proposed notice at the next meeting 2 that would encompass the concerns. 3 MR. RAZATOS: Okay. So that was the 4 motion. Do we have a second? 5 MR. RUBIN: Mr. Chair, did you make the motion? 6 7 MR. RAZATOS: Oh, I'm sorry. Well, I 8 thought you were making the motion. 9 MR. RUBIN: Oh, I can't make it. 10 MR. RAZATOS: Well, I was -- that's why 11 I was wondering. I was like, "Oh." 12 MR. RUBIN: No, I state the motion, and 13 then I hope that one of my clients says, "So moved." 14 MR. RAZATOS: Okay. So moved. 15 DR. AMPOMAH: Yeah, so moved. 16 MR. BLOOM: I'll second. 17 MR. RUBIN: And can we have a roll call 18 vote, please? 19 MR. RAZATOS: Okay. Commissioner 20 Bloom? 21 MR. BLOOM: Approve. 22 MR. RAZATOS: Dr. Ampomah? 23 DR. AMPOMAH: Approved. 24 MR. RAZATOS: And I approve as well. 25 MR. RUBIN: Okay. Anything further Page 103

1 from the parties? 2 MS. BEASLEY: No, thank you, and we 3 look forward to following up about the notice. 4 MR. RUBIN: Thank you. 5 MR. SUAZO: Nothing further. Thank 6 you. 7 MR. RUBIN: Mr. Chair, do you want a brief break, or should we move right to item three, 8 9 which is, I believe, a hearing? MR. RAZATOS: I was thinking maybe we 10 11 take a ten-minute, and we can go from there, 12 so -- thank you, everybody. 13 (Off the record.) 14 MR. RAZATOS: Our next case is case 15 number 24594, application of Targa Midstream Services, 16 LLC for authorization to inject in Lea County, New 17 Mexico. Are all the parties present? MS. HARDY: Yes, I believe so. 18 19 MS. SENINGEN: Yes. 20 MR. RAZATOS: Excellent. Great. So 21 Ms. Hardy, we will start with you. 22 MS. HARDY: Thank you. I'm Dana Hardy with Hinkle Shanor on behalf of Targa Midstream 23 24 Services, LLC. 25 MS. SENINGEN: Hi, my name is Anna Page 104

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| 1 | Seningen, and I'm representing the Oil Conservation |
| 2 | Division today along with Jesse Tremaine, the OCD |
| 3 | legal director, who's here to help me if I need it. |
| 4 | MR. RAZATOS: Excellent. Ms. Seningen, |
| 5 | thank you. You'll do good. |
| 6 | MS. HARDY: And Commissioners, would |
| 7 | you like me to provide a brief opening? |
| 8 | MR. RAZATOS: Please, go ahead, |
| 9 | Ms. Hardy. |
| 10 | MS. HARDY: Well, thank you all for |
| 11 | your time. In this case, Targa seeks authorization to |
| 12 | inject treated acid gas, which we will refer to |
| 13 | periodically as TAG, from its Copperhead gas |
| 14 | processing plant into the proposed Copperhead AGI |
| 15 | number one well. That well will be located in section |
| 16 | 13, township 24 south, range 32 east in Lea County. |
| 17 | The well is in an underground injection |
| 18 | control class 2 well. The well will be a vertical |
| 19 | well. We've provided the footages and the location in |
| 20 | our exhibits. It will inject TAG into the Devonian 31 |
| 21 | Upper Silurian Wristen and Lower Silurian Fusselman |
| 22 | formations at a depth of approximately 17,299 feet to |
| 23 | 18,689 feet. |
| 24 | The well's proposed maximum daily |
| 25 | injection rate is 26 million standard cubic feet per |
| | Page 105 |

1 day, and the proposed maximum surface injection 2 pressure will be approximately 3,460 pounds per square inch. 3 As we will show in our testimony and 4 5 our exhibits, the well, as proposed in the C-108, will 6 not cause waste, impair correlative rights, or harm public health or the environment, including through 7 the risk of induced seismicity. And in addition, the 8 9 well will facilitate the sequestration of TAG and CO2, which is in the public interest. 10 11 And I will add that OCD has proposed 12 permit conditions here. And as Mr. Eales will 13 explain, Targa has agreed to those proposed permit 14 conditions. So Targa's application for the well is 15 reasonable, comports with the requirements of the Oil 16 and Gas Act, and we would ask that it be approved. 17 MR. RAZATOS: Thank you. 18 Ms. Seningen. 19 MS. SENINGEN: Yes. May we make an 20 opening statement? 21 MR. RAZATOS: Please. 22 MS. SENINGEN: Good morning, Mr. Chair and commissioners. My name is Anna Seningen, as I 23 24 have previously introduced myself, and I am here with Jesse Tremaine, the OCD legal director, and he's going 25 Page 106

| 1 | to help me as necessary. I would like to briefly |
|----|--|
| 2 | summarize the OCD's case today. |
| 3 | Division will present one witness, |
| 4 | Mr. Million Gebremichael. In addition, the division |
| 5 | will present two exhibits. One will be the conditions |
| 6 | of approval, and the other will be the resume of |
| 7 | Mr. Gebremichael. |
| 8 | The division supports the approval of |
| 9 | the well subject to the inclusion of the permit |
| 10 | conditions identified in Exhibit 1, and the |
| 11 | incorporation by reference the contents of the C-108 |
| 12 | form application submitted by Targa for this case. |
| 13 | The division's purpose is to conserve |
| 14 | oil and gas, prevent waste, protect correlative |
| 15 | rights, protect public health and the environment, and |
| 16 | protect sources of drinking water. Thank you. |
| 17 | MR. RAZATOS: Excellent. Thank you, |
| 18 | Ms. Seningen. |
| 19 | So Ms. Hardy. |
| 20 | MS. HARDY: Thank you. Targa's first |
| 21 | witness is Mr. Matthew Eales. |
| 22 | MR. RAZATOS: And we need to swear him |
| 23 | in; correct? |
| 24 | MR. RUBIN: Sure. I will swear in the |
| 25 | witness. |
| | |
| | Page 107 |

| 1 | MR. RAZATOS: Okay. |
|----|--|
| 2 | MR. RUBIN: Mr. Eales, you've raised |
| 3 | your right hand. |
| 4 | WHEREUPON, |
| 5 | ROBERT MATTHEW EALES, |
| 6 | Called as a witness, and having been first duly sworn |
| 7 | to tell the truth, the whole truth and nothing but the |
| 8 | truth, was examined and testified as follows: |
| 9 | MR. RUBIN: You are so duly sworn. |
| 10 | Proceed, Ms. Hardy. |
| 11 | MS. HARDY: Thank you. |
| 12 | VOIR DIRE EXAMINATION |
| 13 | BY MS. HARDY: |
| 14 | Q Can you please state your full name for the |
| 15 | record? Can you turn on your microphone? |
| 16 | A There we go. Robert Matthew Eales. |
| 17 | Q Mr. Eales, by whom are you employed and in |
| 18 | what capacity? |
| 19 | A Targa Resources as the vice president of |
| 20 | regulatory affairs. |
| 21 | Q What are your responsibilities in that |
| 22 | position? |
| 23 | A I'm responsible for the permitting of and |
| 24 | compliance with AGIs. |
| 25 | Q Have you previously testified at a |
| | Page 108 |
| I | Veritext Legal Solutions |

| 1 | commission hearing? |
|----|--|
| 2 | A Yes. |
| 3 | Q Can you please briefly summarize your |
| 4 | education and professional experience? |
| 5 | A Yes. I have a master's degree in |
| 6 | environmental engineering from University of Kansas, |
| 7 | 26 years of oil and gas experience in international |
| 8 | and domestic roles, primarily in environment and |
| 9 | health and safety, and most recently five years |
| 10 | working the state of New Mexico and our operations and |
| 11 | midstream operations. |
| 12 | MS. HARDY: Based on Mr. Eales' |
| 13 | qualifications, I would request that he be qualified |
| 14 | as an expert in environmental engineering. |
| 15 | MR. RAZATOS: If there's any concerns? |
| 16 | None? Okay. |
| 17 | MS. SENINGEN: No objection. |
| 18 | MR. RAZATOS: Excellent. Thank you. |
| 19 | MS. HARDY: Thank you. |
| 20 | INATION |
| 21 | BY MS. HARDY: |
| 22 | Q I would like to share our hearing exhibits |
| 23 | so we can go through them. So let me share my screen. |
| 24 | Mr. Eales, can you see the screen that's in front of |
| 25 | you? Is that turned on? |
| | Page 109 |

| 1 | A No. Just showing the same images. |
|----|--|
| 2 | Q Okay. |
| 3 | A Yeah. |
| 4 | Q Can you see the exhibits now? |
| 5 | A Yes. |
| 6 | Q Okay. Mr. Eales, can you please let me |
| 7 | just get to it identify the document that is marked |
| 8 | as Targa Exhibit A? |
| 9 | (Targa Exhibit A was marked for |
| 10 | identification.) |
| 11 | A That is our C-108 application and the |
| 12 | hearing exhibits. |
| 13 | Q And are these document true and correct |
| 14 | copies? |
| 15 | A Yes. |
| 16 | Q And let me just go to the C-108. Did Targa |
| 17 | retain New Mexico Institute of Mining and Technology, |
| 18 | which I'll refer to as New Mexico Tech, to prepare its |
| 19 | C-108 application? |
| 20 | A Yes, we did. |
| 21 | Q And were you involved in that preparation? |
| 22 | A Yes. |
| 23 | Q And will other witnesses testify here today |
| 24 | regarding the content of the C-108? |
| 25 | A Yes. |
| | Page 110 |

1 MS. HARDY: Commissioners, just so I 2 don't forget later, I'd like to move the admission of Targa Exhibit A, which is the hearing application, and 3 the attached C-108. 4 5 MR. RAZATOS: Any objections? 6 MS. SENINGEN: No objection. 7 MR. RAZATOS: Submitted. 8 MS. HARDY: Thank you. 9 (Targa Exhibit A was received into evidence.) 10 11 BY MS. HARDY: 12 Let's next go to Targa's hearing 0 13 presentation, which hopefully this isn't making people dizzy. I'm almost there. Okay. Can you see that, 14 15 Mr. Eales? 16 (Targa Exhibit B was marked for 17 identification.) 18 А Yes, I can. 19 Okay. Okay. And can you please identify 0 20 this document? 21 Yes. That is our hearing presentation for Α 22 today. 23 And were these slides prepared by you or Q 24 under your supervision? 25 А Yes, they were. Page 111

1 Okay. And here on slide 2, this is 0 2 outlining Targa's presentation and witnesses today; 3 correct? 4 А That is correct. 5 0 Okay. So you will provide the overall 6 introduction, and then Mr. El-Kaseeh will provide the site geology and hydrogeology and the dynamic 7 8 reservoir simulations, and Mr. Ragsdale will provide 9 the wellbore design? 10 А Correct. 11 Okay. Thank you. 0 12 Let's first look at the overview of the 13 Copperhead area and slide number 4. Let me just shrink this down a little bit. Can you please 14 15 summarize or describe the information provided on that 16 slide? 17 Α Yes. This slide is demonstrating the -- the 18 growth that we have seen to date and anticipated 19 growth for gas and oil volumes, to the right being the 20 qas. You'll see that we've seen a 17 percent 21 cumulative annual growth rate. Can expect that to 22 continue growing at least at 6 percent from -- from 23 here. 24 So basically, it's just showing what -- what most know, and that the oil and gas production 25 Page 112

| 1 | |
|----|--|
| 1 | is is growing in southeast New Mexico. |
| 2 | Q And does this slide support Targa's need for |
| 3 | this well? |
| 4 | A Yes. |
| 5 | Q Look at the next slide, slide 5. Can you |
| 6 | describe generally the well location? |
| 7 | A Yep. So the proposed well that we're |
| 8 | calling Copperhead AGI is located about 25 miles west |
| 9 | of Jal, New Mexico. Again, in the southeast New |
| 10 | Mexico corner. |
| 11 | Q And is additional natural gas treatment |
| 12 | capacity necessary in this area? |
| 13 | A Yes, it is. |
| 14 | Q Can you describe the information shown on |
| 15 | slide 6, which involves the Copperhead gathering and |
| 16 | processing needs? |
| 17 | A Yes. So the the image on the left shows |
| 18 | the gathering system that exists for Targa. You'll |
| 19 | see Roadrunner and Carlsbad, Red Hills plant, and then |
| 20 | Copperhead about 5 miles west of Red Hills, down into |
| 21 | plants in Texas on Bull Moose and Wildcat. So it's |
| 22 | just showing this particular area and the growth we |
| 23 | anticipate. And you'll see the gathering lines are |
| 24 | not as prevalent around Copperhead, but will be |
| 25 | growing. |
| | |

And then to the right is our expectation for growth and takeaway need for TAG specifically related to this well that we're requesting. We're expecting to see 10 million cubic foot per day within the first year of plant operations and stabilizing with potential growth at the upside with the -- the brown dotted line.

Q And does Targa require additional injection
9 capacity to meet these --

10

A Yes, it does.

11 Q With respect to the environmental benefits 12 of TAG injection, can you please summarize those?

A Yep. Yeah, so the advent of TAG injection came from protecting the environment where historically sour gas, it's a mix of H2S and CO2, was flared at sites, which creates a -- a large amount of sulfur dioxide, and it's something that -- of course one of the critical air pollutants with EPA.

So there was a conversion to injection of this TAG 15, 20 years ago and maybe a little bit beyond that in other countries, where you're taking that from the atmosphere and injecting it into the formations to eliminate that flaring and creation of SO2.

24 Q And without an AGI well, how would oil and 25 gas operators treat their sour gas in the field?

| 1 | A Yeah, it would be flaring. |
|----|--|
| 2 | Q Does the injection of TAG eliminate |
| 3 | flaring eliminate or reduce flaring at the plant as |
| 4 | a control for sulfur derived from the processing of |
| 5 | sour gas? |
| 6 | A Yes, it does. |
| 7 | Q And does injection into an AGI well reduce |
| 8 | the need to vent CO2? |
| 9 | A Yes, it does. |
| 10 | Q Will the injection of TAG here minimize CO2 |
| 11 | emissions from the plant? |
| 12 | A Yes, it will. |
| 13 | Q In your opinion, will there be environmental |
| 14 | benefits if Targa is authorized to inject TAG into the |
| 15 | Copperhead AGI number one well? |
| 16 | A Yes, certainly. |
| 17 | Q Will Targa complete an H2S contingency plan |
| 18 | before commencing injection? |
| 19 | A Yes, we will. |
| 20 | Q And in your opinion, will Targa's H2S |
| 21 | contingency plan comply with all of the requirements |
| 22 | set out in part 11 of 19.15 NMAC? |
| 23 | A Yes, it will. |
| 24 | Q Okay. Mr. Eales, have you reviewed OCD's |
| 25 | proposed permit conditions? |
| | Page 115 |

1 Yes, I have. Α 2 And I'm going to pull those up. And I 0 believe they are Exhibit 1, and they are attached to 3 OCD's prehearing statement. 4 (OCD Exhibit 1 was marked for 5 identification.) 6 7 You've reviewed those conditions? Yes, I have. Yes. 8 Α 9 0 Okay. And does Targa accept those conditions? 10 11 Yes, Targa accepts those conditions. Α 12 Okay. Thank you. Go back momentarily 0 13 to -- trying to get my screen to go back to my exhibits, but it's -- there we go. 14 15 Okay. So Mr. Eales, let's go next to our 16 notice information that we provided in this case. Can you please identify Targa Exhibit C? 17 (Targa Exhibit C was marked for 18 identification.) 19 20 Α Yes. These are the notices that we provided for the regulation. 21 22 And did those include our hearing notice 0 letter, the certified mail receipts, and a chart 23 24 listing the parties? 25 That's correct. А Page 116

| 1 | Q And was notice of this hearing provided to |
|----|---|
| 2 | all effected parties? |
| 3 | A Yes, it was. |
| 4 | Q In conclusion, Mr. Eales, in your opinion, |
| 5 | will the ability to inject treated acid gas into the |
| 6 | well result in more efficient operation of the plant? |
| 7 | A Yes. |
| 8 | Q And in your opinion, will Targa's proposed |
| 9 | method of disposing of TAG protect public health and |
| 10 | the environment? |
| 11 | A Yes, it will. |
| 12 | Q And will it prevent waste and protect |
| 13 | correlative rights? |
| 14 | A Yes. |
| 15 | Q Thank you. |
| 16 | MS. HARDY: Commissioners, I would move |
| 17 | the admission of Targa Exhibits B and C because I |
| 18 | don't believe I did that previously. |
| 19 | MR. RAZATOS: Any objections? |
| 20 | MS. SENINGEN: No objection. |
| 21 | (Targa Exhibit B and Targa Exhibit C |
| 22 | were received into evidence.) |
| 23 | MR. RAZATOS: They're so submitted. |
| 24 | MS. HARDY: Thank you. I have no |
| 25 | further questions for Mr. Eales. He's available for |
| | Page 117 |

| , | |
|----|--|
| 1 | cross-examination or questions from the commission. |
| 2 | MR. RAZATOS: Good training |
| 3 | opportunity, so we'll just give them a second. |
| 4 | MS. SENINGEN: One moment, please. |
| 5 | MR. RAZATOS: No problem, Ms. Seningen. |
| 6 | CROSS-EXAMINATION |
| 7 | BY MS. SENINGEN: |
| 8 | Q Sorry about that. Okay. So I would like |
| 9 | to you mentioned OCD Exhibit 1. I would like to |
| 10 | direct your attention that, on number 18, it requires |
| 11 | a redundant well. We were wondering about your |
| 12 | operational plan and intent of the redundant well. |
| 13 | A Yeah, we do intend to meet the requirements |
| 14 | of number 18 to permit a redundant well. That would |
| 15 | allow us, if there was a need for the redundant well, |
| 16 | to drill quickly. |
| 17 | Q As you sit here today, do you have an |
| 18 | intended depth for that well? |
| 19 | A No. The thought, very early thought right |
| 20 | now, would be a DMG well to be able to be in the |
| 21 | similar property, stay within our property boundaries, |
| 22 | 'cause we do have state land to the north, and it's |
| 23 | best just to stay there. So if that were to be |
| 24 | drilled, we would have the Siluro-Devonian, and then a |
| 25 | stacked DMG. |
| | Dage 118 |

1 MS. SENINGEN: No further questions. 2 Thank you. MR. RAZATOS: Thank you, Ms. Seningen. 3 4 MR. RUBIN: If I may, any redirect, 5 Ms. Hardy? No, thank you. 6 MS. HARDY: 7 MR. RUBIN: Okay. 8 Dr. Ampomah? 9 DR. AMPOMAH: Thank you. 10 Mr. Eales, so I'm just following up 11 with the redundant well. You said it's going to be in 12 the DMG and then the Devonian. So can you really 13 clarify, are you still in the preparation mode? 14 THE WITNESS: Yeah, I probably didn't 15 state it clearly. This one -- this AGI number one 16 that we're applying for is for the Siluro-Devonian. 17 The redundant well that we intend to permit as part of 18 number 18, at this point, it's looking like a DMG for that well would be the -- the intent. 19 20 DR. AMPOMAH: Yeah, because I was 21 wondering if you are going to go back to the Devonian, 22 then my question is how far would your redundant well be away from let's say the injection well? 23 But --24 THE WITNESS: It's a good question. It's a little early at this stage, but we're looking 25

1 at -- this well is on the east side of the property, 2 number one. The second would be on the west side of 3 the property. That's about 1600 foot to the west of this existing well. Or this -- this well that we're 4 5 here for. 6 DR. AMPOMAH: Okay. So can you tell 7 the commission the current gas production more like 8 the TAG coming from the Copperhead facility right now? 9 THE WITNESS: Right now, it's all a 10 envisioned facility. It's a facility that is 11 currently a large compressor station that will be 12 growing into a larger plant. So we do expect to see 13 on the slide that I covered, I think the TAG is 14 12 -- 12 million. Let me look at that real quick. 15 DR. AMPOMAH: Page 6? 16 THE WITNESS: And that's within the 17 first three years with potential of 25 million, but 12 million for what we foresee in the future for the 18 19 first three years. 20 DR. AMPOMAH: Okay. 21 This -- this well is THE WITNESS: 22 intended to be permitted and -- and drilled proactively to be well in advance of bringing the gas 23 24 to the plant that's also would be built at the same 25 time. Or enlarged was the proper word.

1 DR. AMPOMAH: So if your initial 2 estimate is about 12,000 MCF today for a period of 3 about three years, then why is Targa requesting 26,000 4 MCF? 5 THE WITNESS: Then it would be to 6 anticipate the growth that we expect to see in that 7 area. 8 DR. AMPOMAH: Thank you. 9 THE WITNESS: Yes. MR. RAZATOS: Commissioner Bloom, did 10 11 you have any questions? 12 No questions. Thank you. MR. BLOOM: 13 MR. RUBIN: Mr. Chair, I ask that 14 this -- unless there's anything further from the 15 division? One last question? 16 MS. SENINGEN: No, thank you. 17 MR. RUBIN: I ask that this witness be excused. 18 19 MR. RAZATOS: So excused. 20 Thank you, Mr. Eales. 21 MS. HARDY: Thank you. 22 Targa's next witness is George 23 El-Kaseeh. 24 MR. RUBIN: Mr. El-Kaseeh, could you 25 raise your right hand, please? Page 121

1 WHEREUPON, 2 GEORGE EL-KASEEH, Called as a witness, and having been first duly sworn 3 to tell the truth, the whole truth and nothing but the 4 5 truth, was examined and testified as follows: 6 MR. RUBIN: You are duly sworn. 7 Proceed, Ms. Hardy. 8 MS. HARDY: Thank you. 9 VOIR DIRE EXAMINATION BY MS. HARDY: 10 11 Can you please state your full name for the 0 12 record? 13 My name is George El-Kaseeh. Α 14 And is your microphone turned on? Q 15 Yeah. Is this better? Α 16 Q That's better. 17 MS. HARDY: There's --MR. RAZATOS: Ms. Hardy, there's some 18 feedback as well. Can we just have the members on 19 20 Teams please to mute themselves? Thank you. 21 Go ahead, Ms. Hardy. 22 BY MS. HARDY: 23 Can you state your full name again, Q 24 please --25 My -- my full name is Khadir George Α Page 122

| 1 | El-Kaseeh. |
|----|--|
| 2 | Q And by whom are you employed and in what |
| 3 | capacity? |
| 4 | A I'm employed by New Mexico Tech Petroleum |
| 5 | Recovery Research Center. |
| 6 | Q What are your responsibilities in your |
| 7 | position? |
| 8 | A My I am as a research engineer. As |
| 9 | well, I'm a section head for the industry service. I |
| 10 | lead the technical team to support the industry and |
| 11 | the challenges and anything that that require. |
| 12 | Q Have you previously testified at a |
| 13 | commission hearing? |
| 14 | A No. |
| 15 | Q Can you please briefly summarize your |
| 16 | educational and professional background? |
| 17 | A I have bachelor's degree in electrical |
| 18 | engineering. I spent 20 years in the industry with |
| 19 | Schlumberger. I started offshore, working offshore in |
| 20 | the Gulf of Mexico, Caribbean, and South America where |
| 21 | I was a team lead on in on data processing, |
| 22 | seismic data processing, and and quality control. |
| 23 | I spent like I said, I spent 20 years |
| 24 | Schlumberger. My last position was with |
| 25 | Schlumberger carbon services as the global monitor and |
| | Page 123 |
| | |

| 1 | seismic manager for Schlumberger carbon services. I |
|----|---|
| 2 | left in 2017, and I joined in New Mexico Tech's |
| 3 | Petroleum Recovery Research Center in November of |
| 4 | 2017, and I've been there since then. |
| 5 | Q Thank you. |
| 6 | MS. HARDY: Based on Mr. El-Kaseeh's |
| 7 | education and experience, I move that he be qualified |
| 8 | as an expert in geophysics and subsurface project |
| 9 | management. |
| 10 | MS. SENINGEN: No objection. |
| 11 | MR. RAZATOS: He is so entered. |
| 12 | MS. HARDY: Thank you. |
| 13 | DIRECT EXAMINATION |
| 14 | BY MS. HARDY: |
| 15 | Q Mr. El-Kaseeh, let's look at your slides. |
| 16 | And so we'll start with the site geology review. Can |
| 17 | you please explain what is shown on slide 8? |
| 18 | A Yes. So |
| 19 | Q If you can you speak a little bit slowly |
| 20 | for the court reporter? |
| 21 | A Sure. Yes, so typically when we when we |
| 22 | make the geological model, we always always examine |
| 23 | the wells offsets wells around us. And this and |
| 24 | this slide shows the well within two-mile radius. And |
| 25 | the small circle if a half a mile radius that the |
| | Page 124 |
| | |

| 1 | table and the top table shows the two wells that |
|----|---|
| 2 | are within the half a mile radius. |
| 3 | One of them is is actually SWD well that |
| 4 | was permitted but not drilled. And the according |
| 5 | to all our research, the the permit has expired. |
| 6 | The second well is was drilled in 1957 for |
| 7 | production, however, it was plugged the same year. |
| 8 | And you can see within the with the |
| 9 | mile one-mile radius, you have several or so |
| 10 | well gas oil and gas wells. And in the in |
| 11 | the two-miles radius, there's some more wells there. |
| 12 | We we just take the that into account when we |
| 13 | build our model. |
| 14 | Q So is it correct that no wells produce from |
| 15 | the proposed injection zone anywhere within the |
| 16 | two-mile radius? |
| 17 | A That is correct. |
| 18 | Q Okay. Look at your next slide. Can you |
| 19 | explain what's shown here in slide 9? |
| 20 | A Yes. This is this is actually the the |
| 21 | Copperhead is is in the Delaware Basin, which is in |
| 22 | the Greater Permian Basin. The units were divided |
| 23 | with the Tobosa Basin. The geological model is based, |
| 24 | of course we we used the available well logs |
| 25 | from the area as well as we licensed some 3D seismic |
| | |
| | Page 125 |

1 that covered that area, and that's how we built the 2 model based on the geology and based on the well logs 3 and the seismic data.

4 Q Can you please explain what's shown on slide 5 10, paleography and depositional environments?

A Yeah. So again, this is the -- basically
what -- what we were looking at. It's -- it's
described as -- the -- the Copperhead area is
described as a shallow water, high energy carbonate
platform.

11 And what is shown on this slide, slide 11? 0 12 Okay. This is -- this is consists of Α the -- we -- where we -- where we can see we were 13 14 trying -- we -- this defines basically the confining 15 zone as well as the injection -- injection zone. Our 16 injection zone is consists of the Siluro-Devonian, which is -- Siluro-Devonian is -- is the -- the 17 18 Thirtyone, as well as the Wristen. And also it includes the Fusselman, which is about 1380 feet in 19 20 thickness.

And we have the confining zone, which is our primary -- our primary cap -- caprock or -- or seal is -- is the Woodford Shale, which is approximately 480 feet -- I'm sorry, 180 -- 140 to 180 feet. Then also we have this -- our secondary -- secondary

1 caprock or -- or seal, which is -- which is the 2 Barnett Shale as well as the Mississippian Limestone. 3 The total caprock we have or the seal is about 780 feet. 4 5 0 And based on your analysis, is this an 6 appropriate injection zone for the AGI? 7 А Yes, because of the -- the -- yes, 8 the -- because of the porosity and permeability, the 9 caprock has very negligible porosity and permeability, which constitutes a good caprock. 10 11 And can you explain what slide 12 shows, 0 12 please? 13 Okay. So we obtained -- we obtained wells Α from the area, of course. And this shows, again, 14 15 shows how the thickness of the injection zone, which 16 is about 1380 feet, that include the Thirtyone and the Wristen, as -- as well as the Fusselman. 17 And the confining of, like I said, the 780 18 19 feet. The -- you see on the -- on the graph, you see 20 the -- the AGI one well. To the left of it is -- is 21 the gamma ray curve. Then to the right of it is the 22 porosity curves that we -- from five wells. And this 23 is what we used to -- to derive our porosities. 24 0 And what it shown on slide 13 regarding the petrophysical properties? 25 Page 127

| , | |
|----|---|
| 1 | A Okay. So again, this is the the closest |
| 2 | well we can find with deep blocks that we can use was |
| 3 | about 4.4 miles, the Cyclone Federal. So the majority |
| 4 | of the porosity as you see, it's it's highlighted |
| 5 | in yellow. And it could be fractured here. |
| 6 | Basically it it's that's where |
| 7 | that the the secondary porosity comes from. |
| 8 | Maximum maximum porosity in in the injection |
| 9 | zone is is 10 percent. The Woodford Mississippians |
| 10 | have other confining zone, and they have negligible |
| 11 | porosity. |
| 12 | Q And what is shown on slide 14, please? |
| 13 | A This actually represent the boundaries for |
| 14 | the seismic data we've we've licensed to to |
| 15 | build to help us build our model. |
| 16 | Q And can you explain the seismic |
| 17 | interpretation shown on slide 15? |
| 18 | A Okay. Yes. So these are this |
| 19 | interpret we interpreted different different |
| 20 | horizons. This represent the top so that the |
| 21 | Fusselman, of course, and you see the Siluro-Devonian |
| 22 | over there as well as as the Barnett Shale, which |
| 23 | is part of the caprock. |
| 24 | And this this was interpreted, of course, |
| 25 | using the well logs and and the 3D seismic that we |
| | Page 128 |

1 licensed from that area. And again, the thickness of 2 the -- of our injection zone is approximately 1380 3 feet. And our -- our caprock is about 780 feet with 4 low porosities and permeability.

5 Q And let's look at slide 16. Can you explain 6 what that slide shows regarding faults?

A Okay. So what we -- when we build the model and we -- we look at the well location and we explore around the well, of course, to identify any faults within the area. Based on our -- based on our interpretation from the seismic, we identified two -- two faults with minor -- with minor displacement.

They passed through our -- basically in the area where we are -- we are looking at. And I don't think -- the well -- there's a well to the northeast. It's about 4.88 miles to -- from our well. The one to the southwest is, what, 1.55 miles to the -- to the southwest of us.

20 Q Do these faults create and concerns 21 regarding the proposed injection into the Copperhead 22 AGI?

A Based on our analysis, no, and we -- as you can see in the -- in the coming slides, we have done some analysis. But based on our analysis, no.

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1 What is shown on slide 17, please? Q 2 Again, this is -- this is we Α 3 interpreted -- we interpreted, of course, for the tops here, split until we can have a better view. And we 4 5 overlaid our -- we overlaid the two faults. If you see the one on the north -- basically north to 6 northeast, and the one in south -- south west, we want 7 8 to see how they are represented on the tops of 9 our -- of the confining zone. This is basically the confining zone. 10 As 11 you see on the bottom righthand side, it's the 12 Woodford Shale. And then you have the Mississippian 13 Limestone and the Barnett Shale. Again, they combine to be about 780 feet in thickness. 14 15 And will these confining layers act as a 0 16 geologic seal that prevents the migration of TAG 17 outside of the injection interval? Based -- based on -- on the values of 18 Α Yes. 19 the porosity and the permeability, yes, they do what 20 constitutes a good seal and good caprock. 21 0 And what is shown on slide 18, please? 22 The -- again, this is -- this is Α interpretation of our injection zone. And you 23 24 can -- you can see the Siluro-Devonian, and you can see also the Fusselman formations. Basically, this is 25 Page 130

1 the top. We just want to show them separately. 2 And what is shown on slide 19? 0 3 Okay. So one of the things we -- we Α consider also is what we call micro seismicities, or 4 5 induced seismicity in the area. This -- this slide 6 shows the -- the -- what we -- what we like to call 7 stations. They're -- they're seismometers or -- or 8 geophones that were installed and maintained by New 9 Mexico Tech Seismology Observatory. And this is within 10 -- this is 10 and 20 10 11 miles, I believe. Yes. The stations -- and these 12 stations are monitored in real time, and the data is 13 freely available. Historical data and actual real time data is -- is available. 14 15 And looking at slide 20, can you describe 0 16 the seismicity within 20 miles of the Copperhead AGI 17 site? Yes. So we look -- we looked at some 18 Α historical data to see if -- if any induced 19 20 seismicity, you know, happened within -- within the past few years. And what we find out the 21 22 closest -- the closest event was about magnitude of 2. 23 Closest to AGI well was magnitude of 2. It's 24 about -- about -- over -- little bit over 8 miles away 25 from us.

1 But if you can see that most -- most of the 2 events are clustered in the southwest part of the -- of this -- of the graph. And that's about 20 3 4 miles away from where our well is. And they are 5 three -- and they are three -- magnitude of 3 and 6 below. 7 Do these findings create any concern 0 8 regarding injection into the proposed well? 9 Α No. Not based on our analysis. Were these slides that we've just discussed 10 0 11 prepared by your under your direct supervision? 12 Α Yes. 13 And are they true and accurate? Q 14 Yes. Α 15 Let's look next at your reservoir dynamic 0 16 simulation. In looking at slide 22, is this a summary 17 really of what -- of the requirements that apply to Targa as well and how it will meet them? 18 19 А Yes. Well, going back to what the -- I 20 mentioned earlier, this is that -- that -- of course, 21 this is -- we -- we do on the study and make sure that 22 we comply with the New Mexico rules. And -- and 23 we -- to prevent waste, of course, and will protect 24 the correlative rights. And also, we -- we prevent any harm to environment and we protect the source of 25 Page 132

drinking water. Yeah.

1

| 2 | Now, specifically what we wanted to prove |
|----|---|
| 3 | here is the Siluro-Devonian, what our injection zone |
| 4 | can take the 26,000 the 26 figure that we are |
| 5 | asking for or requesting, and keep it in in the |
| 6 | ground safely. And also, we want to make sure that we |
| 7 | are operating at or below the maximum surface |
| 8 | injection pressure that's approved by the commission. |
| 9 | And our injection aim, of course, to we |
| 10 | want to get rid of the waste to protect the |
| 11 | environment. |
| 12 | Q And were you involved in preparing the |
| 13 | reservoir dynamic simulation for this well? |
| 14 | A Yes. |
| 15 | Q Okay. Can you please describe the model? |
| 16 | A Okay. So when when we do the simulation, |
| 17 | the simulation aims to to identify the behavior of |
| 18 | the of the TAG, prove if you like. And for for |
| 19 | us to build the model, we take into we take into |
| 20 | account, of course, the the composition of of |
| 21 | our TAG. |
| 22 | In this case, we have 70 percent of CO2 and |
| 23 | 30 percent of of H2S in this case. And also, we |
| 24 | want we we are going with simulated for 60 |
| 25 | years, starting 2025 till 2028 85. And that |
| | |

| 1 | includes 30 years of injection and 30 years |
|----|--|
| 2 | post post of injection. Okay. |
| 3 | Again, we want to make sure that we are |
| 4 | performing the the 26 SFD is is we're |
| 5 | keeping we're staying within the maximum injection |
| б | pressure at the one head. And the injection zone, |
| 7 | again here, is about 1380 feet. This is we this |
| 8 | is and you can see the confining zone overlay the |
| 9 | Woodford and the Barnett at about 780. |
| 10 | Q In looking at slide 24, what are the |
| 11 | petrophysical parameters of the model? |
| 12 | A Okay. So these are the the porosity and |
| 13 | permeability are derived either from the literature or |
| 14 | the literature and the core core reports. In |
| 15 | our in this case, we wanted to show that the |
| 16 | maximum permeability here for our injection zone |
| 17 | is is the percent, of course. |
| 18 | And we want to show that we're showing |
| 19 | here that the the low permeability and porosity for |
| 20 | our confining zone, which constitute a good caprock. |
| 21 | And as you see on the righthand side, the bottom |
| 22 | righthand side where it identify which formation is |
| 23 | seal and which formation is our injection zone, and |
| 24 | the corresponding permeability and porosity. |
| 25 | Q Mr. El-Kaseeh, can you please explain what's |
| | Page 134 |
| | raye 137 |

shown on slide 25?

1

A Yes. So this -- when we -- when we do the simulation, we build the certain model. And our -- this is basically the model dimensions. So our model dimensions here is about -- the model is close to 10 square miles. And the number says, as you see on -- on this, is over a million cells. And the cell size is 100 feet by 100 feet.

9 Q Okay. Then looking at slide 26, model 10 initialization, can you please describe what's shown 11 there?

12 Okay. So there is -- when -- when we Α 13 do -- when you do the -- the simulation, you take into consideration two things. One of the things 14 15 you -- you take, of course, is -- is the bottom hole 16 pressure. And this well head pressure. And also, you 17 take the temperature. And the temperature here, 18 we -- we obtained the temperature, of course, from the -- from the literature. 19

Also, we assume -- in our -- in our simulation, we assume in the reservoir that we have -- we have completely 100 percent brine. That's why you see the value of number 1, which is saturated water. Then we have the saturated water, which is we call SWI, and what they call -- refer to as a

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| 1 | reducible. This basically means that we have 45 |
|----|--|
| 2 | percent of that space to inject the TAG. |
| 3 | Q And what is shown regarding the model |
| 4 | initialization on slide 27? |
| 5 | A This is also another parameter that we put |
| 6 | in our in our simulation, and which is the |
| 7 | salinity in the area. So what we did is we looked |
| 8 | around, we took about we took 11 miles radius |
| 9 | around us, and we identified three different wells. |
| 10 | And we took the salinity from each well. And we |
| 11 | averaged it out. That was an input to the model. One |
| 12 | of the inputs into the model. |
| 13 | Q And then what were the simulated injection |
| 14 | parameters as shown on slide 28? |
| 15 | A Yeah. So the simulation injection |
| 16 | parameter, this is this represent actually |
| 17 | the the calculation for the maximum well head |
| 18 | pressure. And it it was calculated based on |
| 19 | point 0.2 gradient. |
| 20 | And also this also the calculation for |
| 21 | the for the maximum bottom hole pressure, and which |
| 22 | is calculated decimal point six 0.65 gradient. We |
| 23 | need to keep the pressure the bottom hole pressure |
| 24 | at 90 percent of the formation fracture pressure. |
| 25 | Q And what's shown on slide 29? |
| | |

1 This is actually the results of -- of our Α 2 simulation. So these graphs represents the -- the 3 green graph represent the -- the well head pressure. 4 And we -- we want to make sure we are at or below it. 5 And this graph shows that based on our 6 simulation, it stayed within that. Same thing as 7 the -- the bottom -- the bottom hole pressure. Ιt 8 stayed within the -- the maximum allowable. And also, 9 you can see that the pressure stayed steady for 10 through the injection period till we reached 11 the -- till we reached 155. 12 Mr. El-Kaseeh, if you could probably slow 0 13 down a little bit more, I'm sure it would help our 14 court reporter. 15 Α Okay. 16 0 I know it's difficult. Could you please describe what's shown on slide 30 regarding the TAG 17 plume? 18 19 Okay. So this is the -- the TAG. There you Α 20 can see AGI well in the -- in the middle of the 21 circle. This circle represent the development and the 22 movement of the -- of the TAG plume over and 23 for -- and on -- on five years increment. And you can see it's from 2030 to 2060. 24 25 And also, this is the -- the largest extent Page 137

| 1 | of the TAG plume that we find here. It's just a |
|----|--|
| 2 | little bit over one mile with injection rate of the 26 |
| 3 | that we are applying for. |
| 4 | Q And then what does slide 31 show regarding |
| 5 | the plume? |
| 6 | A This yes. This is, again, showing the |
| 7 | plume, but also here, we are displaying the the |
| 8 | vertical extent of the plume within the formation with |
| 9 | injection formations. |
| 10 | Q And let's turn to fault slip potential. Can |
| 11 | you explain what's shown on slide 32? |
| 12 | A Yeah. So since we the we think |
| 13 | that we identify the two faults, so we decided to |
| 14 | go ahead and and try to to study the effect of |
| 15 | the of our injection on that. But here, what's |
| 16 | shown showing the distances for these for these |
| 17 | faults from our from our injection well. |
| 18 | Q And what is shown on slide 33 regarding the |
| 19 | plume? |
| 20 | A This is the this is the plume, the TAG |
| 21 | plume in relation to the to the faults. You can |
| 22 | see the one to the northeast and the one in the |
| 23 | southwest. And this is a five-year increment, of |
| 24 | course. |
| 25 | Q So the plume doesn't reach the faults? |
| | Page 138 |

1 The fault -- the plume does not. According Α 2 to our analysis, no, it does not reach the fault. And then what does slide 34 show about the 3 0 4 CO2 plume? This is similar to the slides before. 5 Α It's a little -- except a little bit more powerful, of 6 7 This is -- this came out -- an output from course. 8 our simulation software. But it's pretty much an 9 identify -- it identifies where the faults are in 10 relation to the plume, to the TAG plume. 11 And then what are the fault slip potential 0 12 inputs? 13 Α Okay. So fault -- fault slip potential 14 software developed by -- by Stanford actually, and 15 it's used in the industry. These -- this table 16 actually -- this place the parameters that 17 were -- were input in the -- in the software to -- to calculate the fault slip potential in -- in that area. 18 It takes -- the -- the software takes into 19 20 account the azimuth and the dip of the faults as well 21 as the regional stress. 22 And -- shown on slide 36, what is the 0 pressure change needed to activate the fault? 23 24 Α Okav. So we -- we -- when -- from the fault slip potential software, the output you get 25 Page 139

1 is how much -- what is the pressure required to 2 activate a slip in fault. And this picture -- this picture is showing actually where the faults are, and 3 it's -- it's displaying also the -- the TAG plume 4 5 development and the pressure front from that plume 6 development. 7 0 And does this show that there's no fault 8 slip potential risk after a 30-year injection period? 9 А That is correct. The next slide will show actually the values that we calculated. 10 11 Okay. And then can you describe what's 0 12 shown here in slide 37? 13 Yes. So there -- there are four -- four Α different values. The faults that you see in the 14 15 northwest -- in the northeast and the southwest, these 16 are the faults we took into consideration when we ran 17 our program. The seven -- the -- under -- I start with the northwest -- with the northeast one. 18 19 The northeast fault, as you see, 1787 PSI is 20 what represents the -- the pressure that came out or 21 the output from our fault slip potential software. 22 And the 250 PSI is what came out of our simulation 23 software, which when we -- when we examined the 24 development of the plume. And you -- as you can see, it's much, much less than what it needs to activate 25 Page 140

that -- that fault.

1

| 2 | And similarly on the southwest, as you can |
|----|--|
| 3 | see, the 2849 came out of the software from the fault |
| 4 | slippage software. And it it's a 2849 compared to |
| 5 | 250 PSI that came out of the output from from our |
| б | simulation software. And you can see it's much, much |
| 7 | less than what what's required to activate that |
| 8 | specific fault. |
| 9 | Q So is it correct that injection into this |
| 10 | AGI as proposed will not be sufficient to activate the |
| 11 | faults? |
| 12 | A Yes. That's accurate. |
| 13 | Q Okay. Okay. And Mr. El-Kaseeh, based on |
| 14 | your geophysical evaluation, is it your opinion that |
| 15 | the Devonian, Upper Silurian Wristen, and Lower |
| 16 | Silurian Fusselman formations are appropriate to |
| 17 | accept the injection of TAG at the location of the |
| 18 | Copperhead AGI? |
| 19 | A Yes. |
| 20 | Q Is it your opinion that TAG will safely be |
| 21 | contained within the injection interval? |
| 22 | A Yes. |
| 23 | Q In your opinion, will the injection of TAG |
| 24 | into the Copperhead AGI result in any increased risk |
| 25 | of induced seismicity? |
| | Page 141 |

| 1 | A No. |
|----|---|
| 2 | Q Based on your analysis, will injection into |
| 3 | the well prevent waste, protect correlative rights, |
| 4 | and protect public health and the environment? |
| 5 | A Yes. |
| 6 | MS. HARDY: Thank you. I have no |
| 7 | further questions for Mr. El-Kaseeh. |
| 8 | MS. SENINGEN: The division has a few |
| 9 | questions. |
| 10 | CROSS-EXAMINATION |
| 11 | BY MS. SENINGEN: |
| 12 | Q Mr. El-Kaseeh, we'd like to clarify the |
| 13 | units that you've used. You have referenced to |
| 14 | thousands regarding the injection rate, but the |
| 15 | exhibits are labeled as millions. Can you please |
| 16 | clarify for the commission how you are |
| 17 | referencing referring to the units in the |
| 18 | presentation? |
| 19 | A Twenty-six million standard cubic feet per |
| 20 | day. |
| 21 | Q Okay. Thank you. I have a few more |
| 22 | questions to ask. |
| 23 | For your reservoir simulation calculation, |
| 24 | you estimated the bottom hole temperature to be 225 |
| 25 | degrees Fahrenheit, which is close to 230 degrees |
| | |
| | Page 142 |

| 1 | Fahrenheit, that could cause strength retrogression. |
|----|--|
| 2 | Do you think the well will reach to that bottom hole |
| 3 | temperature in a dynamic state? |
| 4 | A I don't believe so. That that |
| 5 | temperature actually, the 225, was the derived from |
| 6 | literature. It's it's regional in that area, and |
| 7 | what's what we used for our modeling. |
| 8 | Q I apologize. Can you please explain for the |
| 9 | commission what strength retrogression is? |
| 10 | A This I have to get you that answer during |
| 11 | a break. I don't have that answer right now. But I |
| 12 | will get it for you in during a break. |
| 13 | Q One moment, please. |
| 14 | So is it your testimony that the temperature |
| 15 | will not exceed 225 degrees Fahrenheit? |
| 16 | A Yes. |
| 17 | Q Okay. I have a few more questions. What |
| 18 | convinced you to apply the 0.3 Poisson ration? |
| 19 | Ration, excuse me. |
| 20 | A That's that's the actual this |
| 21 | question's better suited to be answered by Mr. Paul |
| 22 | Ragsdale. This is something that has to do with the |
| 23 | drilling. |
| 24 | Q Okay. That's fine. Thank you. |
| 25 | Okay. I have one more question. Have you |
| | Page 143 |

1 compared the fracture gradient acquired using Eaton's 2 formula with the fracture gradient acquired via 3 step-rate tests for other AGI wells? 4 Α I'm sorry. Are -- are you talking about 5 the -- the fracture or the fault slippage? 6 The fracture gradient. 0 7 А The fracture gradient. No. The fracture gradient is -- we -- we use that -- we use 8 9 0.65 -- 0.65 PSI per foot, which is pretty much standard. 10 11 MS. SENINGEN: Okay. Thank you. No 12 further questions. 13 MR. RUBIN: Any redirect by Ms. Hardy? 14 MS. HARDY: I do not have redirect. 15 I don't think you're done yet, though. 16 THE WITNESS: Sorry. 17 MR. RUBIN: Any questions by the 18 commissioners? We'll start with Dr. Ampomah. 19 Okay. Yeah, thank you. DR. AMPOMAH: 20 I do have a couple. 21 So let's start with slide number 8, if 22 we can go to slide number 8. 23 MS. HARDY: I think I'm there. 24 DR. AMPOMAH: Okay. Slide number 8 is 25 up. So I do see the star, which is the proposed AGI Page 144

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1 well. Now, you've shown that there are two wells that 2 are very close. One was drilled in the '50s, but was 3 quickly abandoned. And then the other one was not even drilled at all. But within less a couple of 4 5 radius -- couple of miles radius, are there any production wells in the shale -- sessions that are 6 7 looking -- in yet? 8 THE WITNESS: Are you asking production 9 wells within the two-mile radius? 10 DR. AMPOMAH: Yeah. 11 THE WITNESS: Okay. Okay. I -- I have 12 some answer here, but -- within -- within one -- one 13 mile, there are eight active wells, gas and wells, and one SWD well within the one mile. Then within two 14 15 miles radius, there are two active SWD wells and one 16 plugged. 17 DR. AMPOMAH: I do see -- so there are essentially multiple wells, though? So you do have 18 two circles. So the first circle is one -- what would 19 20 the first circle be? THE WITNESS: Half a mile, a mile, and 21 22 two. 23 Okay. So if I look at DR. AMPOMAH: 24 your legend, there are a lot of active oil wells in there. Now, my -- and even there is one active gas 25 Page 145

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1 well I see within the 0.5 mile radius. 2 So I think probably this question would 3 be more suited for Mr. Ragsdale with regards to how that well location was selected, because if you are 4 5 very close to, let's say, a production well, you're going to have a lot of problems when you are drilling, 6 especially if -- taken significant amount of gas from 7 8 this well. 9 So that is a question pending, though. 10 So you don't necessarily have to answer that, but I 11 want to know what analysis was done to choose that 12 well location to avoid any potential issues when 13 you're drilling this particular well. Because you 14 might end up not being able to drill that well. You 15 have gas that's coming up --16 So I want to know how that well 17 location was selected and then if there any mitigation plans available to deal with this particular problem 18 19 if just in case it comes up? So you don't necessarily have to answer that. 20 21 Now, let me ask how many wells have 22 porosity and permeability? Now we're entering to the 23 modeling. 24 THE WITNESS: The deepest well we have of porosity and permeability was the -- the one I 25 Page 146

1 mentioned, the SWD well that was about 4.4 miles from 2 us. 3 DR. AMPOMAH: So that will essentially 4 be only one well available to do the entire 5 petrophysics? 6 THE WITNESS: We -- that's the only 7 deep -- deep well that goes into our -- our formation. 8 Yes. But there are other wells that we use, but 9 they're -- they're not as deep. DR. AMPOMAH: Well, I want to stress on 10 11 So let's go to slide number 24. So from that that. 12 deep well, then you got all these porosity and 13 permeability data that went into the modeling? 14 THE WITNESS: Of course. 15 We -- the -- we use that well as -- as one of 16 the -- as one of our data points. Yes. However, 17 we -- we also use the literature and we have some 18 core -- core reports that we -- for that. 19 So then my question back DR. AMPOMAH: 20 again, how many wells had porosity and permeability 21 that went into the modeling? 22 THE WITNESS: Five. On the -- and we have one gamma ray. So there's -- there's five -- if 23 24 you go back to the slide where they show the graphs. 25 MS. HARDY: The one we were looking Page 147

1 at -- this one, or --2 THE WITNESS: No. It's -- it shows the -- the -- and that --3 4 DR. AMPOMAH: That'll be slide 5 number -- slide number 12. MS. HARDY: 6 Twelve. 7 DR. AMPOMAH: Yeah. 8 THE WITNESS: Yeah, this one. So as 9 you see on the -- on the lefthand side, we have the 10 gamma ray, and on the righthand side, we have -- we 11 have data from five wells that we used. 12 DR. AMPOMAH: But what are those? 13 Like, on your righthand side, what are those? Are 14 they still not gamma ray logs? Because you are doing 15 correlation, so you're just telling us how the 16 structure was being developed, but not porosity or 17 permeability except some of these well logs that I'm 18 seeing is a porosity log. 19 Right. So like -- like I THE WITNESS: mentioned, we -- we have on the -- from the 20 21 literature, mainly the we -- the -- we -- we derived 22 the porosity and the permeability -- the permeability 23 actually was also derived using the core -- core 24 reports that we have from there. And the heat well is 25 what we use mainly. Yes.

| 1 | DR. AMPOMAH: Well, I don't so my |
|----|---|
| 2 | question is still not answered, though. Like, so we |
| | |
| 3 | go to slide number 13. You know, slide number 12 is |
| 4 | not porosity logs. And it's just a gamma ray log |
| 5 | trying to show the subsurfacing. |
| 6 | So definitely on this particular slide, |
| 7 | number 13, you are showing where you go into porosity |
| 8 | from. So my question is was this based on this single |
| 9 | well that the petrophysics was derived from? The |
| 10 | reason why I'm asking that is I want to know is your |
| 11 | model that you are using to more or less suggest to |
| 12 | the commission that you want 26 million, is that a |
| 13 | heterogenous model or is a homogenous model? |
| 14 | THE WITNESS: Okay. Yeah. So we have |
| 15 | some lateral variation within that, and also we we |
| 16 | looked at the seismic from that area. And I now I |
| 17 | understand what you are asking. I apologize. I |
| 18 | didn't understand. |
| 19 | Yes, the the model is is |
| 20 | definitely has some variation laterally and variation |
| 21 | horizontally, but is not because of the the data |
| 22 | that we have, the the available data we have, we |
| 23 | had to make some assumptions. And so it's not I |
| 24 | wouldn't say it's 100 percent heterogenous, but also |
| 25 | it's not 100 percent homogenous. |
| | |

1 We had to make some assumptions 2 to -- to come -- to come to a point in between that 3 will give us the answer we -- we are looking for. DR. AMPOMAH: On slide number 25. Let 4 5 me see if we can get to the bottom of this. So slide 6 number 25. Would you say that this one is an 7 inversion-derived porosity? 8 THE WITNESS: We -- to be -- I -- I 9 cannot recall, but I -- I believe -- I believe we have done some -- some inversion in this area. 10 Yes. 11 DR. AMPOMAH: Well, let's go back to 12 slide number 12. I think that needs to be clarified 13 though in terms of how many -- like -- let's say how many well logs were utilized in the construction of 14 15 the geological model? That is not clear in your 16 presentation. Definitely the slide number 12 is not. 17 So I just want to be sure that we do have that information that were utilized to be able to 18 19 build the geological model. 20 THE WITNESS: I -- I can get you that 21 answer. 22 DR. AMPOMAH: Okay. I appreciate that. 23 Let's go to slide number 16. Now, the 24 faults that you picked, at least you've shown us the fault slip analysis that was done. But let me ask in 25 Page 150

| 1 | the hydrodynamic simulation itself, how did you handle |
|----|--|
| 2 | the fault? In the simulation itself, how did you |
| 3 | handle the faults? |
| 4 | THE WITNESS: In in what way? They |
| 5 | were input with the they were input to the to |
| б | the simulation, but I'm sorry. I don't understand |
| 7 | that question. |
| 8 | DR. AMPOMAH: Okay. Let me help a |
| 9 | little bit. So you have the fault, and okay. Then |
| 10 | let me put it this way. Is this faults closed or open |
| 11 | faults? |
| 12 | THE WITNESS: Oh, I see I see the |
| 13 | question now. How did we input it in the simulation? |
| 14 | DR. AMPOMAH: Yes. |
| 15 | THE WITNESS: If it's closed or open |
| 16 | faults. I believe we haven't I I have to give |
| 17 | you the correct answer, but I believe we we treated |
| 18 | them as open faults, but I will give you the |
| 19 | answer the correct answer in during the break. |
| 20 | DR. AMPOMAH: I will need that answer. |
| 21 | And then I want to know the specification as to how |
| 22 | you chose whether it's a closed or open. So normally, |
| 23 | you don't have the data, you know, for this unless you |
| 24 | drill through. So normally you have two scenarios |
| 25 | where one will be open and then one will be closed to |
| | |

1 show the commission that even if it is open or closed, 2 maybe I'm still able to put in the volume, the required volume. 3 4 So I want to know is it open or sealed 5 faults, and what is the specification for that? You know, how were you able to do that or come up with 6 that number? Especially when you didn't do the 7 8 sensitivity analysis. 9 The fault slip analysis is good, but the simulation itself -- you know -- the simulation 10 11 itself, where you get the information to put into the 12 fault slip analysis also has to be correct as well. 13 So yeah, if you can provide that information, that would be wonderful. 14 15 THE WITNESS: Yes. Definitely I will. 16 DR. AMPOMAH: And you're saying that 17 these faults will not have an impact. I've seen the 18 pressures. You know, you've done a fault slip 19 analysis, you know the amount of pressure buildup that 20 needs to cause any potential, let's say, reactivation 21 of these faults depending on your put it. 22 But this fault is going all the way past the Barnett. So what about brine migration? You 23 24 are pushing the brine away from the injection well. So what about brine migration? 25

| 1 | THE WITNESS: We yes. I don't |
|----|---|
| 2 | think I don't think the brine the brine will |
| 3 | reach that point based on our analysis. And I I |
| 4 | see your concern about maybe potential leakage, but |
| 5 | based on our analysis, I don't think we will reach |
| 6 | that point. |
| 7 | DR. AMPOMAH: I will politely disagree |
| 8 | on that. I mean, you have a fault. That is a so |
| 9 | let's the same slide that is on. You have less |
| 10 | than a mile away from, let's say, the fault. Less |
| 11 | than a mile away from the fault. So I don't know how |
| 12 | much you can do in such a way that 45 percent of the |
| 13 | space that will be available to contain the CO2. You |
| 14 | are not going to have impact. You're not going to |
| 15 | displace the brine to that particular fault. |
| 16 | If you look at the volume of your |
| 17 | CO2 what is the footprint? You have that |
| 18 | somewhere? The total distance for the plume was 1.04 |
| 19 | miles of TAG plume. Assuming those miles more or less |
| 20 | moving to the south, you know, that is, like, 33 or |
| 21 | 34. How is it I mean, definitely there is going to |
| 22 | be a brine migration. So maybe something to look |
| 23 | into. |
| 24 | And also for and NMOCD as well. |
| 25 | Especially when you are coming back, let's say, after |
| | Page 153 |

1 five years to give an update. So something for us to 2 keep an eye on. 3 How was the fracture pressure 4 calculated? 5 THE WITNESS: Fracture pressure, 6 how -- how it's calculated? 7 DR. AMPOMAH: Yeah. How was it calculated in your model? And let's say what is the 8 9 source of that information? THE WITNESS: We use -- we use 10 11 the -- the dips then multiply by 0.65 PSI per foot. 12 DR. AMPOMAH: So the 0.65 is the one 13 that I'm talking about. 14 THE WITNESS: Yes. 15 How was it -- how did you DR. AMPOMAH: 16 come up with that number? 17 THE WITNESS: That is -- I -- I believe that's -- that's from the regional, and that -- that's 18 what we -- we attained from the literature. 19 20 DR. AMPOMAH: So then that goes to the 21 fact that once the well is drilled, you're going to do a step-rate test. So definitely you're going to have 22 your actual number, and that would determine whether 23 24 you get 26 million standard cubic feet of injection or not. So I think we can take it -- we can take it like 25

| 1 | that. That is good enough. |
|----|--|
| 2 | THE WITNESS: Yeah. |
| 3 | DR. AMPOMAH: Now, on your slide 24. |
| 4 | On your slide number 24, I'll be very brief, so |
| 5 | Now, when I look at these |
| 6 | parameters slide number 24. When I look at these |
| 7 | parameters, so you've highlighted your caprock and |
| 8 | then the reservoir zone. I mean, you have a caprock |
| 9 | with a porosity of, like, 1 percent, 1.5 percent, and |
| 10 | your actual injection zone have a porosity of, like, 2 |
| 11 | percent. So I'm wondering is it really a caprock? |
| 12 | And I would be surprised I would be |
| 13 | surprised to see that comparison how your plume did |
| 14 | not really move up the caprock. So can you I mean, |
| 15 | can you respond to how you look at the difference |
| 16 | between the properties for your caprock that you use |
| 17 | for the modeling, and then tell me how you feel like, |
| 18 | let's say, just between a difference of 1.2 becomes a |
| 19 | reservoir? Unless it becomes, let's say, a caprock? |
| 20 | THE WITNESS: Okay. So based on our |
| 21 | analysis, the maximum the maximum porosity in in |
| 22 | our in our injection zone is about 10 percent. The |
| 23 | primary porosity comes from the from the limestone. |
| 24 | The secondary porosity, what we believe is is, like |
| 25 | to from what our our analysis is, is fractured |
| | |
| | Page 155 |

| 1 | zone; right? And that's where you your secondary |
|----|--|
| 2 | porosity I'm mean porosity comes from. |
| 3 | And we believe it it's much higher |
| 4 | than than, of course, than the caprock. And you |
| 5 | have also secondary caprock on the top. Over there, |
| б | that actually guarantees that there's no leak that's |
| 7 | going to be there. But yeah, I see your point here. |
| 8 | DR. AMPOMAH: So how did |
| 9 | we definitely we do know that Woodford Shale is a |
| 10 | shale. So definitely it's a good caprock. But I'm |
| 11 | wondering the type of porosity and then the |
| 12 | permeability that you are showing here really, really, |
| 13 | really |
| 14 | I mean, I can guarantee you that if you |
| 15 | do a modeling with a caprock of 0.1 milli you're |
| 16 | going to have CO2 moving. So I don't know whether you |
| 17 | guys had that situation or not. |
| 18 | THE WITNESS: Okay. I I think I |
| 19 | have an answer for you on this. Okay. So the |
| 20 | porosity that that you see in the caprock is |
| 21 | what what's called micro microporosity. And |
| 22 | this this actually 'cause it looks higher than |
| 23 | it is because it's it's water bound to to the |
| 24 | formation. And that's why your porosity shows much |
| 25 | higher here. But this is actual microporosity in |
| | |

1 the -- in the caprock. 2 DR. AMPOMAH: Let me ask about 3 salinity. So you have three wells that you collected data from. So I think it was within 11 miles. 4 So 5 does this well more or less go through your injection 6 zone? 7 THE WITNESS: Yes. 8 DR. AMPOMAH: It goes through your 9 injection zone? THE WITNESS: Yes, those wells, I 10 11 believe so. I need to confirm that, but I believe so. 12 DR. AMPOMAH: Okay. 13 THE WITNESS: And we averaged them out 14 as you see. 15 DR. AMPOMAH: Yeah, so I think I do 16 have some outstanding questions that probably if you 17 can concur with your team and probably respond to that later. One is how many wells that were used for the 18 19 property modeling. How the fault was modeled within 20 the model? Is it a closed or open fault? 21 And since you didn't do -- or -- to 22 your analysis on that, how did you come up with, let's 23 say, whether it's closed or open. And the fault 24 transmissibility. Yeah. So what fault transmissibility was used in the simulation model? 25 Page 157

1 Now, let's talk about the temperature 2 The temperature issue. So you said -- how did issue. 3 you calculate the temperature, though? THE WITNESS: This is from the 4 5 literature. Yeah, when you say "from 6 DR. AMPOMAH: 7 the literature," what was from the literature, though? 8 Like, what was the -- what was the information you got 9 from the literature? 10 THE WITNESS: We -- we looked at -- in 11 the -- in the regional area, and we -- we decided that 12 225 was an acceptable value in this area. But I can 13 also confirm if we used any other wells from that 14 area. 15 DR. AMPOMAH: So definitely then you 16 are looking at the temperature gradient. You got the 17 temperature gradient from the literature. And then 18 you tried to use that to calculate what is the 19 ultimate temperature within your zone. 20 The question was asked how is that 21 temperature changing when you are putting in the CO2? 22 Did you look at the potential temperature changes? 23 You know, how it impacts your well bore? I think that 24 was a question that was asked. 25 And hopefully you can concur and then Page 158

1 come back and tell us, you know, in regards to, let's say, how the temperature is going to change over time. 2 3 And does it have an impact on the, let's say, the wellbore or not. I think that was the question that 4 5 was asked. And I'm interested in that too, so --THE WITNESS: Okay. I'll look into 6 7 that. 8 DR. AMPOMAH: But I'm going to stop 9 here. Thank you. MS. SENINGEN: Could I recommend a 10 11 lunch break just considering that for time, we still 12 have -- they want to concur with each other about 13 something and we have a witness as well. 14 MR. RAZATOS: I was going to recommend 15 a lunch break. I was just waiting for the doctor to 16 finish his questions. So yeah, why don't we take -- if everybody's okay with it, let's take an 17 hour lunch and we'll be back here at 1:45. 18 19 MS. SENINGEN: Thank you. 20 MS. HARDY: Thank you. 21 (Off the record.) 22 MR. RAZATOS: Okay. Good afternoon to It's 1:45. We'll reconvene our hearing. 23 everyone. 24 We were in the process of hearing case number 24594, the application of Targa Midstream Services for 25 Page 159

1 authorization to inject in Lea County, New Mexico. We had finished with -- did we do rebuttal, cross-exam? 2 Where did we finish off? Oh, the doctor's 3 questionings. Okay. Awesome. 4 5 Commissioner Bloom, did you have any 6 questions for our witness? 7 MR. BLOOM: I do not. Dr. Ampomah 8 asked all my questions and more, so thank you. 9 MR. RAZATOS: Awesome. Ms. Hardy, we'll turn it back to you. 10 11 MS. HARDY: Yes, thank you. 12 REDIRECT EXAMINATION 13 BY MS. HARDY: So Mr. El-Kaseeh, before we took our break, 14 Q 15 Dr. Ampomah asked you several questions. And I wanted 16 to go through those so you can provide the answers. 17 I believe the first question was regarding the number of wells that were used in the model. 18 19 Α Okay. So for -- for the geological model, 20 we used three wells, the existing wells there. And 21 also what we did, we used more than three existing 22 wells that -- that went deep, as deep as our 23 reservoir, and even deeper. And we used additional wells that are 24 shallower. We tied them to -- to those wells, and we 25 Page 160

tied them also -- we converted them with the seismic.
Q Thank you. And then I know there was a
question about whether the faults were modeled as open
or closed and the reason. And can you answer that
question?

A Yes. The faults -- as I mentioned earlier, the faults were modeled open because our -- our reasoning for that is to go with the worst case scenario. And we could've definitely with the model closed, but we thought we need to go with open model -- open faults.

12 Q Thank you. And Dr. Ampomah had some 13 questions about whether the brine could reach the 14 faults, and can you answer -- provide the information 15 he requested?

16 Α Yes. So if you -- if you look at the -- at 17 the pressure front close to the faults, it's about 150 18 to 250 PSI. For the brine to migrate up, you need 19 much more higher pressure for the brine to migrate up 20 there. We had calculated the critical pressure, and 21 we found out that it's not going to be any danger of the brine migrating up into the -- the drinking water. 22

Q Thank you. And then I believe there was a question on slide 25. Let's get there. Yeah, I was there -- regarding the porosity and whether the model

1 was homogenous or heterogenous? 2 Δ Yes. 3 Can you answer -- provide that information, 0 4 please? 5 Α Yes. So I apologize. I -- I was under the impression we inverted here. We did not invert. 6 We used five wells in this area to -- and we rigged those 7 8 wells to come up with the -- with the heterogenous 9 porosity in the area, and we run through -- of course, we compared it to the seismic. 10 11 MS. HARDY: I believe those were all 12 the questions I intended to ask him in redirect, but I 13 don't know if -- I wanted to make sure we answered 14 Dr. Ampomah's questions. 15 Yeah, but -- so with DR. AMPOMAH: 16 regards to the heterogeneity of the model, you know, 17 if you look at -- so let's look at slide number 31. Slide number 31. And I think this one -- and NMOCD 18 19 will take care of it because you definitely do the 20 step-rate test. And that will infer whether you get a 21 26 million or not. 22 When I look at this model, I mean -- go up, 31. So if you look at this model, the well is 23 24 right within the middle. And then your plume is more or less equally distributed. So this is more like 25 Page 162

1 close to a homogenous model.

You know, so if you use this model to make a strong case that you can put in 26 million standard cubic feet of gas per day -- I think that is why the step-rate test is there. So I -- I still -- I cannot argue that much, you know, because the step-rate test is still going to help. I'm always concerned about the 26

9 million request. You know, it's really on the higher 10 side. And I feel like the model -- there's no way the 11 model is going to support that because you have only 12 three wells. Or five wells populating through the 13 entire boundaries of the model. That is of the 14 concerning. But I think still NMOCD will take care of 15 that. So it's not a big problem.

Now, with regards to the faults, I'm surprised that you say that the open fault is the worst case scenario. If you put a closed fault, you see that the direction of the flow is going to be impeded. Like, you're going to build up pressure.

If you have open, you are more or less releasing the pressure. So you are not building the pressure. So your open fault scenario is not really the worst case scenario, especially if you want to see where the plume is going or let's say how much

1 pressure you are building up. So it can work both 2 ways. So definitely during your five-year 3 period, definitely you might want to consider 4 5 including that scenario as well. 6 THE WITNESS: We will. Definitely. 7 Thank you. 8 DR. AMPOMAH: And thank you for taking 9 time to go back and then get some clarification. 10 Thank you. 11 MR. RAZATOS: Excellent. Anything 12 else? 13 MS. SENINGEN: No, we have nothing 14 else. 15 MR. RAZATOS: Awesome. 16 MS. HARDY: I don't have any further 17 questions for Mr. El-Kaseeh. 18 MR. RAZATOS: Okay. Can we excuse this witness? 19 20 You are excused. Now you can get up. 21 THE WITNESS: I wanted to stand up 22 for --23 MR. RAZATOS: Yeah, now you can do it. 24 Thank you, sir. 25 Ms. Hardy. Page 164

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| MS. HARDY: Thank you. Targa's next |
|--|
| witness is Mr. Paul Ragsdale. |
| MR. RUBIN: Mr. Ragsdale, please raise |
| your right hand. |
| WHEREUPON, |
| PAUL RAGSDALE, |
| Called as a witness, and having been first duly sworn |
| to tell the truth, the whole truth and nothing but the |
| truth, was examined and testified as follows: |
| MR. RUBIN: So duly sworn. |
| VOIR DIRE EXAMINATION |
| BY MS. HARDY: |
| Q Mr. Ragsdale, can you please state your full |
| name for the record? |
| A Luther Paul Ragsdale. |
| Q By whom are you employed and in what |
| capacity? |
| A I'm employed by Targa Midstream as a |
| engineering consultant. |
| Q And what do you do as an engineering |
| consultant? |
| A I I help them with the design and |
| construction and operation of the acid gas wells. |
| Q Have you previously testified at a |
| commission hearing? |
| Page 165 |
| |

| 1 | A Yes. |
|----|---|
| 2 | Q Can you please briefly summarize your |
| 3 | educational and professional background? |
| 4 | A I graduated from New Mexico State in 1977, |
| 5 | went to work for Halliburton in 1977 in Hobbs, New |
| 6 | Mexico. Worked for Halliburton for about five years. |
| 7 | Then I've worked family-owned independent oil |
| 8 | companies. |
| 9 | I ended up with Yates Petroleum in 1995, and |
| 10 | worked for well, 1990. Worked for them for about |
| 11 | 21 years, retired, and in the last five five or six |
| 12 | years I've done consulting. |
| 13 | MS. HARDY: Based on Mr. Ragsdale's |
| 14 | education and professional experience, I request that |
| 15 | he be qualified as an expert in drilling and |
| 16 | completion engineering. |
| 17 | MR. RAZATOS: Any objections? |
| 18 | MS. SENINGEN: No objection. |
| 19 | MR. RAZATOS: He has been entered. |
| 20 | MS. HARDY: Thank you. |
| 21 | DIRECT EXAMINATION |
| 22 | BY MS. HARDY: |
| 23 | Q Mr. Ragsdale, let's look at slide 39 of the |
| 24 | presentation. Can you please explain what's shown |
| 25 | there? |
| | Page 166 |

1 This is the C-102 that was attached to the Α 2 C-108 that we submitted. On the lefthand side, it shows the name of the well, the fact that we're a AGI 3 well, a Devonian, and the legal location 132432. The 4 5 righthand side is the surveyor's plot. 6 And can you please explain the wellbore 0 7 schematic that's shown on page 40? 8 А So this is a wellbore schematic that we've 9 done. And this is a very deep well, and so we kind of split the schematic in half. This actually shows the 10 11 surface casing, the intermediate casing, and the 12 second intermediate that we would run. 13 And then what's shown on slide 41? 0 14 So this is the bottom half. And in it, you Α 15 can see the production casing, which is the 7-inch 16 casing that will be set in the top of the Devonian. 17 The open hole that we will drill the Devonian hole from 17,299 to 18,699. And then the tubing that would 18 be run into the well. The packer would be set at 19 20 17,250. One thing I wanted to add, it's 3.5-inch G3, 21 22 which is a nickel alloy, a special alloy. It's very 23 noncorrosive, very resistant to H2S and CO2. And in it, we -- you know -- we put packer fluid, diesel plus 24 additives. Those additives are biocides and corrosion 25

1 inhibitors that we run. And that's just in case you 2 have a leak, you -- you -- if you have water behind it, it would -- it would corrode. 3 You can see the little green dashed line on 4 5 there. That's a fiber optic line that is going to be run behind the 7-inch provided that our hole 6 7 conditions permit that -- that we can do that. We 8 don't show -- and -- and we will have a fiber optic 9 DTS line attached to the 3.5-inch tubing that will be 10 attached to the packer. And I'll -- and I'll go into 11 that further. 12 What's shown on slide 22? 0 13 So this is our casing and our tubing design. Α Shows you that the conductor will set 100 foot of 14 15 28-inch conductor basically just to get the rig on. 16 And then we'll set 1208 feet of 20-inch -- and that's 17 set at -- into the top of the rustler that protects 18 your water zone. Then 5,034 feet of 13 3/8, that's set to the 19 20 top of the Delaware through the Lamar line. And I 21 think there was a question as to the DMG well 22 that -- the second DMG well. That's the top of the DMG, and -- you know -- you probably have a couple 23 24 thousand feet, maybe five to seven thousand foot for your DMG. 25

1 The intermediate is a 9 5/8 set to 12250. 2 That's to the top of the Wolfcamp. And then you'd set the 7-inch down at 17,299 feet. 3 And what's shown on slide 43? 4 0 5 Α These are the casing specs for each one of 6 those casing. And you can see under the long string. The long string has both P110, and it's going to have 7 8 some special alloy pipe in it too. It also shows the 9 connections that we have. The tubing, it shows 9.2 10 Vantop G3. 11 And what is the cement design? 0 12 And the -- and the cement design -- you Α 13 know -- I think the main thing is, is that all of these strings will be circulated, cement will be 14 15 circulated to the surface. You can see in the -- the 16 9 5/8 intermediate number two, that's 12,250. 17 It lists three stages of cement, and in that, 18 we'll run -- stage 2 would be some CorrosaCem, a very 19 corrosion resistant cement, resistant to H2S. And 20 then down to the -- and that -- that'll be placed 21 across the DMG. So it would protect it from future 22 injection, protect our pipe. 23 And then the production string, we -- we're 2.4 going to use a WellLock resin cement as -- as our 25 shoe. And then, you know, we'll run a class H cement. Page 169

1 I think there was a question about high temperatures, 2 and -- and does -- does that high temperature cause 3 cement degradation? This is a class H cement. I talked to 4 5 Halliburton, that's who's going to do our cement. 6 They'll some high temperature additives and -- and 7 some retarder, so you can get the cement in place. 8 We did look and we found one log -- we -- we 9 looked at lunch, and we found one log that had -- close to the well, had 220 degrees on the log 10 11 as bottom hole temperature. And then we found another 12 one that was over that. Was, like, 230 or 240, 13 something like that. What's shown on slide 45? 14 0 15 So this is our drilling fluid design, AKA, Α 16 this is the mud. And so you'll -- you'll drill your 17 20-inch with fresh water and get it set. The -- the 17.5-inch hole, you're going to drill through the salt 18 19 section and land in the top of the Delaware Mountain 20 Group. And so you'll use brine. It'll be saturated 21 brine in there. 22 We'll then drill down to the Wolfcamp using a cut brine system with about 9 pounds. Pretty 23 24 viscous. We shouldn't have a lot of problems, but I think there was some questions about maybe lost 25

1 circulations because of offset producing wells. There 2 are some producing wells in the Bone Springs out 3 there. So -- so we'll be prepared for that. Then when we -- after we set pipe into the 4 5 Wolfcamp, from the Wolfcamp to the top of the 6 Devonian, you're going to drill the Wolfcamp, and 7 there are Wolfcamp producing wells out there. 8 They're -- they're high pressure gas. And so 9 we'll drill with this oil-based mud. We plan to use -- actually, from the time we 10 11 drill out from below the Delaware all the way to TD, 12 we'll have a managed pressure drilling system out 13 there. And so -- you know -- if we take kicks, we can 14 hold pressure and hold back pressure and -- and try to 15 hold that gas back. 16 And then -- and then once we get pipes set 17 into the top of the Devonian, we basically will drill 18 the open hole in the Devonian with fresh water and 19 some viscosity there. But a lot of times when you 20 drill the Devonian, you -- you'll lose circulation in 21 there, which is what you're looking for in an 22 injection well. 23 And then what about logging and testing, Q which is discussed on slide 46? 24 25 So -- so we -- we plan -- we've discussed Α Page 171

this with OCD, we -- we're going to try to find a bond log for the 20-inch. It's -- it's -- sometimes it's hard to find it. So I listed a four-arm caliper log. I don't plan on any cased hole logs, but we might -- if we can find the bond log, we -- we will get one. They're hard to find. In the intermediate is -- is your neutron

7 In the intermediate is -- is your neutron 8 density and -- and resistivity logs, gamma ray and 9 forearm caliper, cased hole, cement bond logs, gamma 10 ray. The intermediate pretty much the same sweep of 11 logs.

12 Then when you get down in the production 13 casing, pretty much the same sweep logs, but we also 14 plan on running an FMI, which is a formation 15 microimager log, and a sonic log. And so a big part 16 of that is, is to look at the -- at our seal zones, 17 the Woodford and the zones above that, and -- and just 18 look -- where you're looking for fracturing.

19 And then, of course, when you go to the open 20 hole, we're going to run the gamma ray caliper, an 21 FMI, a sonic, a porosity log, a density log, 22 resistivity log. We'll run lots of logs in the open

23 hole.

24 Q Okay. And then you describe the additional 25 coring and monitoring which is --

| 1 | A Yes. The coring, we we plan to do to |
|----|--|
| 2 | core the Woodford, and take an 80-foot section of core |
| 3 | on the Woodford. And then once we get into the open |
| 4 | hole, I think George had a slide that showed that |
| 5 | there's three porosity zones that we anticipate. And |
| 6 | we'll try to take a core of each one of those porosity |
| 7 | zones in the Devonian and I think in the Fusselman. |
| 8 | The fiber optics the fiber optic |
| 9 | will will be attached behind the 7-inch casing to |
| 10 | enable monitoring of temperature and the acoustics in |
| 11 | the formation. Again, this is dependent upon hole |
| 12 | conditions. You know it that's a very it's |
| 13 | an 8.5-inch hole, 7-inch, and running that fiber. |
| 14 | If we're having issues, we we may not be |
| 15 | able to run that. But we we plan on it. And that |
| 16 | will that really helps us to monitor the or to |
| 17 | model the plume if we can do that. |
| 18 | Then we'll have a fiber optic line attached |
| 19 | to the 3.5-inch tubing and to the 7-inch packer at, |
| 20 | like, 17,250 feet. That that fiber optic line |
| 21 | gives us both the bottom hole temperature and pressure |
| 22 | of the of the injection zone. It gives you the |
| 23 | bottom hole temperature and pressure of the casing |
| 24 | anulus. So it's a great way to monitor for leaks. |
| 25 | You also get real time data for pressure and |
| | |

1 temperature. And so if your temperature starts to 2 change, you -- if you start seeing -- and we monitor 3 this daily. If you -- if your temperature starts to change, it -- it could tell you that you have a -- a 4 5 leak. 6 As far as daily monitoring, we -- we inspect 7 those well heads daily. Somebody goes by and checks 8 We -- we have the pressures in our control them. 9 room, and the control people can see them and have 10 We have well head safety values to shut the alarms. 11 pressure down -- I mean shut the well down if we get 12 overpressure. And -- and then we, you know, do a 13 visual inspection daily also. 14 Q And Mr. Ragsdale, will the coring be used to 15 confirm porosity --16 А Yes. 17 Q -- in the caprock --18 Α Yes. 19 -- and underlying rock as well? Q 20 Yes. Α 21 Q Okay. Thank you. 22 Or lack of porosity. Α 23 That's -- yes. Hopefully, yes. Q Yes. And I believe earlier Mr. El-Kaseeh referred 24 25 a question to you on temperature. Page 174

| 1 | A I I think that was about the cement. And |
|----|--|
| 2 | so that it it is. I mean, it's it's very |
| 3 | high temperatures in there down at the bottom. |
| 4 | And and so, you know, we we when we get we |
| 5 | will log when we log, we'll get an accurate |
| 6 | temperature reading, and then we will get with our |
| 7 | cementers, probably Halliburton, and we will, you |
| 8 | know, come up with our cement blend. |
| 9 | In in this case, I have a Halliburton |
| 10 | recommendation, and they have a trademark cement that |
| 11 | they call NeoCem that has proprietary additives to it. |
| 12 | But it but it's those temperature retarders |
| 13 | and and things like that. |
| 14 | And then you'll pump test it. And so you'll |
| 15 | pump test this and you'll you'll get your pump |
| 16 | times, and you get compressive streaks one and two. |
| 17 | Q And Mr. Ragsdale, let me just go back for a |
| 18 | minute to the slide that was presented earlier on the |
| 19 | wells in and around the proposed AGI well. Let's see |
| 20 | if I can find that slide. |
| 21 | And there were questions about a well |
| 22 | located within the here it is within the |
| 23 | half-mile area of review. Do you recall those |
| 24 | A Yes. And so that well you can see on |
| 25 | your table, it's called the McCloy Central. That's |
| | Page 175 |
| | Page 1/5 |

| 1 | really not a well. That well was I mean, that APD |
|----|---|
| 2 | was fired filed and then expired, and so there |
| 3 | really is not a well there. |
| 4 | Q Okay. |
| 5 | A Okay. |
| 6 | Q Okay. And were the slides that you |
| 7 | discussed prepared by you or under your direct |
| 8 | supervision? |
| 9 | A Yes. |
| 10 | Q Okay. And can you please summarize your |
| 11 | conclusions and recommendations? |
| 12 | A Well, this Siluro-Devonian formation can |
| 13 | receive the acid gas, the TAG. We can contain it |
| 14 | safely using good well design and good cementing |
| 15 | properties, and a and a good tubing and packer. |
| 16 | And we can keep this below the maximum surface |
| 17 | injection pressure. |
| 18 | Q And in your opinion, will the well be |
| 19 | designed to ensure the safe injection of TAG? |
| 20 | A Yes. |
| 21 | Q And is this well design appropriate for the |
| 22 | injection of TAG at this location and this reservoir? |
| 23 | A Yes, it is. |
| 24 | Q And in your opinion, will the proposed well |
| 25 | prevent waste to protect correlative rights? |
| | Page 176 |

1 Α Yes, it will. 2 And is it correct that the proposed well 0 3 will not harm public health or the environment? That's correct. 4 Α 5 0 Thank you. 6 MS. HARDY: Those are all of my 7 questions for Mr. Ragsdale. 8 MS. SENINGEN: We have a few questions. 9 MR. RAZATOS: Great. 10 CROSS-EXAMINATION 11 BY MS. SENINGEN: 12 You noted that your method of determination 0 13 of the cement top is a visual inspection. OCD would like you to couple it with CBL to determine the cement 14 15 top except for surface casing, which OCD agreed that 16 visual inspection of the cement top and cement report 17 that includes density is acceptable. Did Targa agree with OCD to couple visual inspection with cement bond 18 loq? 19 20 Α Yes. 21 0 Okay. What is your expected temperature 22 range between surface and 12,250 feet of depth? 23 Well, let's start at the surface. you know, Α your -- usually your -- your ambient 24 25 temperature -- but usually it's 70 degrees is your Page 177

1 surface temperature. And then we think the bottom 2 hole, the static bottom hole temperature in this well will be approximately 225 degrees. And it's a 3 gradient from there down. 4 5 I -- for years, I've always used a 1 degree 6 per 100 feet. So you're at 180 stages, that'd be 180 7 degrees plus 50 or 60 degrees. 230, 220. 8 Do you agree that class C cement may not be 0 9 suitable if the temperature is greater than 170 degrees Fahrenheit? 10 11 Α That -- that is correct. Class H is 12 recommended. 13 What convinced you to apply a 0.3 Poisson Q 14 ration? 15 Ratio? А 16 Q Ratio. Sorry. 17 А You know, I didn't do that, so -- I -- I'll have to look at that see -- I'm not -- I'm not sure 18 19 where that was at. That's in the permit application? 20 Yeah, and that's -- I'm sorry. 21 Q One moment. 22 Would you prefer to have a break to check on 23 that? 24 Α Sure. 25 Okay. We can proceed with questions but Q Page 178

| 1 | we'll go back to that; is that okay? |
|----|--|
| 2 | A Okay. |
| 3 | Q Okay. One moment, please. |
| 4 | MS. SENINGEN: Our remaining questions |
| 5 | depend on the answer to the Poisson's ratio, so we |
| 6 | don't have any more questions at this time. |
| 7 | MR. RAZATOS: Okay. Commissioners? |
| 8 | Dr. Ampomah? |
| 9 | DR. AMPOMAH: Yeah, definitely I do |
| 10 | have a few. |
| 11 | So certainly the Poisson ratio, the |
| 12 | model this has to be able to respond to that. I mean |
| 13 | we would have to be able to respond to that. Those |
| 14 | who did the modeling, they should be able to respond |
| 15 | to that. |
| 16 | THE WITNESS: Thank you |
| 17 | DR. AMPOMAH: And I think that the |
| 18 | range that was given, 0.3, normally is a typical, |
| 19 | like it can be sandstone probably 0.25, so it is |
| 20 | still in a typical range. Mr. Ragsdale why open hole |
| 21 | in the production zone? |
| 22 | THE WITNESS: So so we |
| 23 | found I I've drilled several Devonian disposal |
| 24 | wells, SWDs, and and it's we found that if you |
| 25 | leave the hole open rather than sticking casing down |
| | $D_{2} \sim 170$ |
| | Page 179 |

| 1 | into it first off, you know, you would end up |
|----|--|
| 2 | running a liner into it and and liner tops are |
| 3 | notorious for leaking. |
| 4 | But the other is, is that when you |
| 5 | cement that liner across that porous Devonian |
| 6 | formation, you may damage the formation. And so |
| 7 | by by filling it full cement. And then you have to |
| 8 | perforate it, then you have to acidize it. |
| 9 | And so so when we drill open hole, |
| 10 | if you can get to your depth, you you've left your |
| 11 | hole, you know, basically undamaged, then it you |
| 12 | can increase your injection rate, I think. |
| 13 | DR. AMPOMAH: Interesting. So do you |
| 14 | believe that a typical class 2 well drilled in the |
| 15 | Permian and now you see a lot of class 6 wells |
| 16 | coming into play as well. So do you believe that |
| 17 | within the Permian, at least within that depth that we |
| 18 | did open hole would still suffice for a class 6? |
| 19 | THE WITNESS: Oh, I don't know about |
| 20 | class 6. |
| 21 | DR. AMPOMAH: Well, so that is where my |
| 22 | question is, so and that would be more or less for |
| 23 | the regulator to respond to. In terms of if we have |
| 24 | open holes for class 2 wells, and then we're going and |
| 25 | decide class 6 wells, which probably would have the |
| | |

| 1 | force to put in more, like, a casing |
|----|---|
| 2 | THE WITNESS: A liner. |
| 3 | DR. AMPOMAH: Yeah. In the production |
| 4 | zone, then what are we really preventing? Because we |
| 5 | do have some wells that already open hole, and they |
| 6 | are going to say class 6 has to come up with |
| 7 | the the strict rules. So I think that is something |
| 8 | that NMOCD might have to start thinking about, |
| 9 | especially if we go into permitting. |
| 10 | MR. TREMAINE: Commissioner Ampomah, I |
| 11 | just at a very high level, the OCD will be looking |
| 12 | very closely at that. We do understand that there are |
| 13 | some similarities between class 2 and class 6. It's |
| 14 | the division's position that this is a class 2 well. |
| 15 | And so that those questions will be |
| 16 | answered in detail over a multi-year project |
| 17 | that to answer that. So we're none of our |
| 18 | witnesses or staff or myself are able to answer that |
| 19 | question today, but there's a lot that depends, and |
| 20 | it's something we'll be looking at. |
| 21 | DR. AMPOMAH: Thank you. I appreciate |
| 22 | that. |
| 23 | So with regards to the corrosion |
| 24 | resistance casing, I do see P110 and |
| 25 | THE WITNESS: In the 7-inch. |
| | Page 181 |

1 DR. AMPOMAH: Yeah, in the 7-inch. 2 THE WITNESS: So I think it's listed as P110 and chromium 13. 3 4 DR. AMPOMAH: So be specific on that 5 one. 6 THE WITNESS: So chromium 13 is a 7 corrosion-resistant alloy also. But I think we've 8 decided to run the G3 because it's better. It's in 9 there. I think when -- when this was written, we couldn't find the -- the G3. 10 11 DR. AMPOMAH: So you believe that the 12 G3 will be even higher than that of the chrome --13 THE WITNESS: If we run on the bottom of the --14 15 Can you -- can you go to that table, 16 Dana? It's the tubing and casing. 17 Yeah, so page 42. Slide DR. AMPOMAH: 42. 18 19 THE WITNESS: Yeah, so it's the -- one 20 more. 21 MS. HARDY: This one? 22 THE WITNESS: One more. Let's see. 23 That's it. No. 24 MS. HARDY: Okay. 25 DR. AMPOMAH: So I do see in the table Page 182

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1 for sure, but in some part of your presentation, I do 2 see the P110 chrome --3 THE WITNESS: Chromium 13. DR. AMPOMAH: -- in there. So would 4 5 you -- is it your testimony that Targa is going to use a higher level --6 7 THE WITNESS: We are going to go -- we 8 are going to use the G3. DR. AMPOMAH: But the G3, that is a 9 10 tubing; right? 11 It -- well, above -- you THE WITNESS: 12 can buy it -- you can buy the casing -- 7-inch casing 13 also. 14 DR. AMPOMAH: How about the -- right 15 here, you are not showing the CAD. So how would we 16 stick -- like, how would we hold Targa to that? 17 Because it's not -- like, if you look at the long 18 string -- yeah, the 7-inch, you do have chrome casing 19 and then P110. And even now, you're saying that 20 probably you're going to use G3 corresponding casing, which is not shown here. 21 22 THE WITNESS: It's -- no, it's not. It's -- it is better, it's an upgrade from the chrome. 23 24 It'll be 300 foot of corrosion-resistant pipe on the bottom of the -- the bottom 300 foot from 17,299 25 Page 183

1 to -- what would that be? -- 16,799, of chrome resistant -- I mean of corrosion-resistant alloy pipe 2 3 for your shoot joint. 4 DR. AMPOMAH: So then would you amend 5 your application to make sure that, you know, we are holding Targa to that? 6 7 MS. HARDY: I think it could be 8 included in the commission's order. 9 DR. AMPOMAH: Okay. Okay. 10 MS. HARDY: And it may be in the C-108 11 itself. I haven't been able to confirm that because I 12 don't know where it would be located, but the C-108 is 13 actually the application that we submitted. 14 DR. AMPOMAH: Okay. Okay. Yeah. 15 You know, so you talked a little bit 16 about the plans that you'll do to more or less control 17 the low circulation and even being able to control the 18 well. But is there a written plan? Because I think this is something that NMOCD will have to look at 19 20 carefully because recently there was one well that was 21 drilled where you have gas coming up and then the well 22 needed to be shut down. Pivot to some location. 23 So production wells close by to, let's say, a TAG injection well, there has to be a plan as 24 to how you're going to deal with the production zones. 25 Page 184

1 The Woodford. You have to have a plan, you know, to be able to deal with that. Or I don't know -- from 2 3 you description it sounds to me that you're going to use experience, but is there a written plan? 4 THE WITNESS: 5 There -- there will be. 6 DR. AMPOMAH: There will be. 7 THE WITNESS: Yes, sir. And we can submit that to you. 8 9 DR. AMPOMAH: I think that --10 THE WITNESS: We have a 11 drilling -- we'll -- we'll have a drilling plan and a 12 fluids design plan on -- on both. It'll be -- it'll 13 be very thorough. 14 DR. AMPOMAH: Very --15 THE WITNESS: And -- and we'd be glad 16 to share that with you. 17 DR. AMPOMAH: Okay. Thank you. Ι 18 appreciate that. 19 So NMOCD agreed to ask you about 20 whether you're going to use cement bond logs to 21 identify the top of the cement. So is that your 22 testimony that it's strictly cement bond log, or you 23 intend to also use the fiber optic, which can also do 24 the same? THE WITNESS: No. Just cement bond 25 Page 185

1 log. 2 DR. AMPOMAH: Just the cement bond log? 3 THE WITNESS: Yes. 4 DR. AMPOMAH: Okay. You said the fiber 5 optic measures pressure? 6 THE WITNESS: Uh-huh. It's -- it's 7 attached. 8 DR. AMPOMAH: Okay. 9 THE WITNESS: So it's attached to a gauge that is -- that is in the -- inside -- through 10 11 the -- through the packer so it can sense what the 12 pressure is in the tubing and the gauge on the 13 outside. And it transmits that data to it -- through 14 the fiber optic. 15 Okay. So why the oil DR. AMPOMAH: 16 base --17 Oil base -- that'll keep THE WITNESS: your shales from getting wet and sloughing. There's 18 lots of shales below the Wolfcamp in the Strawn and 19 20 the Atoka and in the Morrow and the Woodford. And so 21 if you can oil-based muds that then you keep those 22 shales from sloughing. It actually increases your 23 penetration rate to --24 DR. AMPOMAH: So has there been, like, 25 a normally mud that is being used when drilling Page 186

1 through those zones? 2 THE WITNESS: Most of the horizontal wells drilled in the Wolfcamp are using oil-based 3 muds. 4 5 DR. AMPOMAH: Okay. Okay. Thank you, 6 sir. 7 Oh, one last question. So you believe 8 the 3.5-inch tubing intake close to, like, a million 9 megatons of CO2 a year? 10 Yes, I do. THE WITNESS: DR. AMPOMAH: 11 Interesting. Okay. 12 Thank you. Thank you, sir. 13 THE WITNESS: You're welcome. MR. RAZATOS: Commissioner Bloom, did 14 15 you have any questions? Just to make sure we catch 16 you as well. 17 MR. BLOOM: No questions. Thank you, 18 Mr. Chair. 19 MR. RAZATOS: Awesome. Mr. Tremaine. 20 MR. TREMAINE: Mr. Chair, if I could 21 interject here real quick? So we kind of left off with a question about the Poisson ratio, and I 22 23 understand that Commissioner Ampomah responded there. 24 So if the commission's satisfied with the answer on 25 the record, we don't have to come back Page 187

1 I can make Mr. Gebremichael available 2 to address any technical questions that they had about that or the reason for the question on direct. But it 3 sounded as if the commission was satisfied. So if 4 5 that -- if my read of that is correct, then I think we can obviate the need to have the witness come back. 6 7 MR. RAZATOS: Dr. Ampomah, did that 8 answer your question? 9 DR. AMPOMAH: Yeah, because all these are all estimations, until they drill the well and get 10 11 a core and go to the lab do the measurement. But I 12 think 0.3, 0.25 is still within the normal range for 13 Poisson's ratio. 14 Okay. Excellent. MR. RAZATOS: 15 Ms. Hardy. 16 MS. HARDY: Then I have no further 17 questions for Mr. Ragsdale. Thank you. 18 MR. RAZATOS: Okay. Mr. Ragsdale will 19 be -- may go. 20 Anyone else, Ms. Hardy? 21 MS. HARDY: Nothing further from Targa. 22 Thank you. 23 Okay. Excellent. Should MR. RAZATOS: 2.4 we take a quick ten-minute break? Yeah. Let's take a ten-minute break, and then we can start with the OCD. 25 Page 188

1 (Off the record.) 2 MR. RAZATOS: Okay. Let's get back on 3 record here. We had just -- we're still on case number 24594. Targa finished with all of its 4 5 witnesses, so now we're turning it over to the NMOCD. 6 Ms. Seningen. 7 MS. SENINGEN: Good afternoon. I would 8 like to call our only witness, Mr. Million 9 Gebremichael, to the stand. 10 MR. RAZATOS: Excellent. 11 WHEREUPON, 12 MILLION GEBREMICHAEL, 13 Called as a witness, and having been first duly sworn to tell the truth, the whole truth and nothing but the 14 15 truth, was examined and testified as follows: 16 MR. RUBIN: Duly sworn. 17 VOIR DIRE EXAMINATION BY MS. SENINGEN: 18 Good afternoon. Could you please state your 19 0 20 name for the record? My name is Million Gebremichael. 21 Α 22 Where do you work? 0 23 I work for the Energy Mineral and Natural Α 24 Resources Department as part of a group responsible 25 for the oversight of the underground injection Page 189

| 1 | control. |
|----|---|
| 2 | Q What is your position? |
| 3 | A Petroleum specialist advanced for the |
| 4 | Underground Injection Control Group. |
| 5 | Q What are the job responsibilities of your |
| 6 | position? |
| 7 | A I review technical aspects of UIC permits, |
| 8 | provide recommendations to district offices regarding |
| 9 | UIC wells, and provide input for the process, design, |
| 10 | and rulemaking. |
| 11 | Q Have you ever testified before the Oil |
| 12 | Conservation Commission before? |
| 13 | A Yes, I have. |
| 14 | Q Have you been recognized as an expert in the |
| 15 | field of petroleum engineering and underground |
| 16 | injection by the commission before? |
| 17 | A Yes, I have. |
| 18 | Q Have you prepared a resume for this hearing? |
| 19 | A Yes. It is Exhibit 2. |
| 20 | Q Could you please summarize your educational |
| 21 | background, training, and experience for the |
| 22 | commission? |
| 23 | A Yes. I have a Bachelor of Petroleum |
| 24 | Engineering degree from the Southern Alberta |
| 25 | Polytechnic in Canada. And also I have 12 years of |
| | Page 190 |

| 1 | working for the exploration and production companies |
|----|---|
| 2 | as well as regulatory agencies. |
| 3 | I I work for Shell International, Encana, |
| 4 | ARC Resources, and also I work for the Alberta Energy |
| 5 | Regulator, which is a component organization to OCD |
| 6 | for three years. And then for the last two years, |
| 7 | I've been working as a UIC engineer with the state of |
| 8 | New Mexico Underground Injection Control Group. |
| 9 | MS. SENINGEN: Mr. Chair, at this time, |
| 10 | I move for the admission of Exhibit 2. |
| 11 | MR. RAZATOS: Any objections? |
| 12 | MS. HARDY: No objection. |
| 13 | MR. RAZATOS: He is so entered. |
| 14 | (OCD Exhibit 2 was marked for |
| 15 | identification and received into |
| 16 | evidence.) |
| 17 | MS. SENINGEN: I also would like to |
| 18 | move for the admission of Mr. Gebremichael as an |
| 19 | expert in the field of petroleum engineering |
| 20 | underground injection control, and acid gas injection |
| 21 | wells. |
| 22 | MR. RAZATOS: Any objections? |
| 23 | MS. HARDY: No objection. |
| 24 | MR. RAZATOS: Okay. He is entered. |
| 25 | // |
| | Page 191 |
| | |

| 1 | DIRECT EXAMINATION |
|----|--|
| 2 | BY MS. SENINGEN: |
| 3 | Q Which standard do you apply when you |
| 4 | evaluate a class 2 underground injection control well |
| 5 | to be approved? |
| 6 | A The standards applies the prevent waste, |
| 7 | protect correlative rights, protect public health and |
| 8 | the environment, including the underground source of |
| 9 | drinking water. |
| 10 | Q Have you reviewed the Copperhead acid gas |
| 11 | injection number one application? |
| 12 | A Yes, I have. |
| 13 | Q And what is your opinion of the application? |
| 14 | A Targa's application to inject the treated |
| 15 | acid gas into the Devonian formation via Copperhead |
| 16 | AGI number one well is designed to ensure the safe and |
| 17 | effective injection. |
| 18 | And then the acquisition of tailored 3D |
| 19 | seismic data of the injection project area addresses |
| 20 | concern regarding presence any presence of any |
| 21 | faults that could impact by injection pressure, and |
| 22 | then lead to induced seismicity. |
| 23 | Additionally, Targa's proposed managed |
| 24 | pressure drilling will significantly reduce a |
| 25 | likelihood of the under/over drilling balances that |
| | Page 192 |

may occur.

1

18

2 Q Were there any concerns that you had with 3 the application and the proposed location and depth of 4 the proposed AGI well?

5 A Yes. Targa has proposed a maximum injection 6 of 26 million cubic foot per day. OCD will reassess 7 this maximum injection rate once Targa completes the 8 step-rate test, which will be a condition of approval 9 outlined in Exhibit 1.

Additionally, Targa plans to install the bottom hole pressure and temperature gauged by the optic -- the fiber optic line. OCD would like -- we would like to ensure that when it goes through the master valves, that it's provides a complete seal or it doesn't impair a complete seal of the well.

16 Q You mentioned conditions of approval. Do 17 you have an exhibit listing those conditions?

A Yes. It's Exhibit 1.

19 Q Has the commission seen this exhibit or 20 something similar to this exhibit before?

21 A Yes, it has.

Q Who was this exhibit prepared by?
A By OCDUIC group, which I'm part of.
Q To the best of your knowledge, is this
exhibit a true and accurate representation of OCD's

1 updated recommendations for AGI conditions of 2 approval? 3 Α Yes. 4 MS. SENINGEN: Mr. Chair, at this time, I move for the admission of Exhibit 1. 5 MR. RAZATOS: Any objections? 6 7 MS. HARDY: No objection. 8 MR. RAZATOS: It so will be admitted. 9 (OCD Exhibit 1 was received into evidence.) 10 11 BY MS. SENINGEN: 12 Did you change this exhibit relative to any 0 13 prior versions provided to the commission in earlier 14 AGI cases? 15 Yes, we did. А 16 Q And why did you change this exhibit? We added item 12 and then item 18 in the 17 А Exhibit 1. Item 12 was added to make sure all seismic 18 events are recorded with seismic monitoring station. 19 20 And item 18 was added to make sure that redundant well 21 is constructed in a timely manner. 22 Did you discuss these changes with Targa? 0 23 Yes, we did. Α Have OCD and Targa agreed to the conditions 24 0 25 that ensure compliance with the standards you Page 194 Veritext Legal Solutions

previously mentioned?

1

| 2 | A There is an overall agreement. And OCD |
|----|---|
| 3 | expects Targa to address the concern mentioned |
| 4 | earlier. OCD reserves the right to reassess |
| 5 | the the proposed maximum injection rate after the |
| б | completion of the step-rate test on the well. |
| 7 | Additionally, the integration of the fiber |
| 8 | optic line into the well construction must be done in |
| 9 | a way that it doesn't impede the complete seal of the |
| 10 | well to prevent an escape of the injectate. |
| 11 | Q So you would agree that Targa agreed to |
| 12 | comply with the conditions listed in the conditions |
| 13 | A Yes. |
| 14 | Q of Exhibit 1? Excuse me. |
| 15 | A Yes. |
| 16 | Q Could you please summarize the conditions |
| 17 | for the commission? |
| 18 | A The conditions outlined in Exhibit 1 |
| 19 | represent OCD's standard approval criteria for |
| 20 | AG for AGI wells. These conditions exceed the |
| 21 | standard approval or requirements for underground |
| 22 | injection wells due to the specific nature of the |
| 23 | injectate, namely treated acid gas. |
| 24 | The AGI wells must be constructed using |
| 25 | corrosion-resistant alloy strings and include |
| | |
| | Page 195 |

1 subsurface safety box and then a packer fluid that 2 contains corrosion inhibited -- inhibitors and biocide 3 additives.

OCD has added two items to the previously approved AGI condition of approval admitted by the commission. Like I mentioned before, these items are item 12 and then 18 in the OCD Exhibit 1.

8 The addition item 12 in the OCD Exhibit 1 is 9 necessitated by the fact that deep wells subject to 10 such high pressure could be subjected to induced 11 seismicity. And then having seismic monitoring 12 stations would provide OCD with necessary data to take 13 appropriate seismic provision protocol in a timely 14 manner.

15 Item 18 was added to ensure that limited 16 time required to initiate the completion of the second 17 well, to have available redundant well in case the 18 primary well is down from various reasons.

19 Q I would like to ask some questions now in 20 response to Targa's witnesses. Are there any other 21 clarifications that you feel are necessary after 22 reviewing Targa's application and cement top 23 methodology?

A Well, with the cement top methodology, it's just we -- we would like to ensure that the 20-inch

1 surface casing, both the -- like he mentioned earlier, 2 CBL and then visual inspection are coupled. Especially in the -- no, no. The 20-inch CBL is 3 exempted, but the visual inspection should be coupled 4 5 with a cement report that includes density of the -- density of the cement. 6 7 Also, as I mentioned in the -- at the 8 12 -- at the 1250 depth, still the cement type is

9 described as a C type. And then as the Targa expert 10 testified earlier, at this depth, the temperature 11 could be about 180 degrees, which exceeds the 170 12 degrees, which makes the C type not suitable. So we 13 would -- OCD would like Targa to utilize a cement type 14 H and above.

15 Q Are there any other clarifications that you16 feel are necessary about strength regression?

A Yes. So the strength -- the strength -- the cement strength retrogression, which is especially at the bottom, that might be -- I think the gentleman already addressed it, but OCD would like to make sure that --

At or about 230 degrees there is going to be a degradation of the cement and then creation of permeability, so OCD would require you to add additives like the -- the, you know, silica flour,

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that would prevent the degradation.

1

2 Q Are there any other clarifications you wish 3 to address about Poisson's ratio?

A Yes. Dr. Ampomah kind of touched it, but we would like to make sure that whether is it a limestone or a sandstone or it's a mix, that triggered you to utilize the 0.3?

8 I mean, usually 0.27 is for limestone, which 9 is mostly the industry accepted standard. And then 10 0.33 is for sandstone. But you pick point -- what was 11 the -- the ratio that you picked is 0.3? Was it 0.3? 12 0 That's correct.

A Yes, 0.3. So we would like you to characterize the exact nature of that formation. Is it a mix between the two that triggered you to put the 0.3? Because those single ratios could make a lot of difference in the simulation in the model.

18 Q Are there any other clarifications you wish 19 to address about the fracture gradient comparison?

A We would like to ask Targa -- they did use the Eaton's formula for theoretical calculation of fracture gradient. Of course, that will be determined by the step-rate test, which is unempirical data.

But we would like to know though your
Eaton -- Eaton's fracture gradient which was utilized

1 for the simulation model, if you have compared it to 2 any other AGI wells in the past, and then what is the 3 value discrepancy between Eaton's driven fracture 4 gradient and then step-rate test driven fracture 5 gradient?

Q Do you have any concerns about the redundantwell being on the Delaware Mountain group?

8 A Yes. That came today. When we were 9 evaluating the Copperhead AGI number one, the Devonian 10 well, we were not aware Targa's intent that they will 11 drill the redundant well in the DMG.

So the intermediate two, which covers the DMG zone, which is the Cherry, the Bell, you know, those -- those are active producing zones. And OCD would like that you utilize a corrosion-resistant cement for that part. Also, when you -- when you build your -- I'm talking about for AGI number one.

The way it's designed right now, there is no corrosion-resistant cement in there. Also, we highly recommend if you could consider corrosion-resistant alloys for that part as well, if you really go ahead with your DMG redundant well.

Q In your opinion, will these conditions and the items that you addressed in your testimony provide adequate assurance that the proposed well will not

1 cause waste or harm correlative rights? 2 Yes, given our concerns are addressed. Α In your opinion, will these conditions and 3 0 items addressed in your testimony protect public 4 5 health and the environment, including underground sources of drinking water? 6 7 Α Yes. 8 MS. SENINGEN: Those are all of the 9 questions that I had for Mr. Gebremichael. 10 MR. RAZATOS: Okay. Ms. Hardy. 11 MS. HARDY: No questions. Thank you. 12 Okay. Commissioners, did MR. RAZATOS: 13 you have any questions? 14 DR. AMPOMAH: No questions. 15 MR. RUBIN: Yes. Yes, I have one 16 question for the witness. 17 The concerns that you cited, sir, with the respect to the class H concrete, the Poisson 18 19 ratio, whether it's a 0.27 or a 0.33, depending on the 20 type of stone we're looking at, and also your concerns about the DMG redundant well, did you -- are you 21 22 advocating those concerns be incorporated into what is 23 now Exhibit 1 as permit conditions? 24 THE WITNESS: Yes. 25 MR. RUBIN: Oh, okay. Are they Page 200

| 1 | currently part of the Exhibit 1? |
|----|--|
| 2 | THE WITNESS: No, they are not, but |
| 3 | they should be incorporated. Those those concerns |
| 4 | should be addressed. Yeah. |
| 5 | MR. RUBIN: Okay. |
| 6 | MR. TREMAINE: If I may, Counselor. I |
| 7 | think the division would advocate or I would |
| 8 | advocate for the division that based on the record |
| 9 | today, that we make sure that those clarifications |
| 10 | made on the record during all of the direct testimony, |
| 11 | that my understanding is all of the parties are |
| 12 | agreeing to would be added into the terms of the |
| 13 | order. |
| 14 | So rather than adding them to the |
| 15 | exhibit, I think the record's adequate to include |
| 16 | those as requirements and incorporate into the order. |
| 17 | MR. RUBIN: Thank you, Mr. Tremaine. |
| 18 | So I guess if the commission were to approve the |
| 19 | application, the parties would submit a new proposed |
| 20 | form of order with those conditions incorporated |
| 21 | therein? |
| 22 | MR. TREMAINE: That would be my |
| 23 | recommendation rather than resubmitting exhibits. |
| 24 | MR. RUBIN: All right. Because you |
| 25 | don't want me to write it. |
| | |

1 MR. RAZATOS: Excellent. Commissioner 2 Bloom, did you have any questions? 3 MR. BLOOM: I do not. Thank you, 4 Mr. Chair. 5 MR. RAZATOS: Okay. Can this witness 6 Everybody okay with that? step down? 7 THE WITNESS: Yes. Thank you. 8 MR. RAZATOS: You're still muted. 9 MR. RUBIN: Anything further from either party before the commission deliberate? 10 11 MS. HARDY: Not from Targa. 12 MS. SENINGEN: No. MR. RUBIN: All right. Commissioners, 13 if you have any deliberations you wish to -- of 14 15 course, we can always go in a closed session, but I 16 understand it's not the wish of the commission. So 17 well, would you like, Counsel, to state a motion at 18 this point? 19 Commissioner Bloom, MR. RAZATOS: 20 Commissioner Ampomah? 21 DR. AMPOMAH: Yeah, so I think if you 22 look at the application very detailed, and I'm very 23 happy with regards to how NMOCD is handling this, 24 especially the rate that they are proposing and then 25 their approach. You know, after the step-rate test, Page 202

| 1 | NMOCD will they have the right they reserve the |
|----|--|
| 2 | right to go back and say, "No, you cannot have the |
| 3 | 26." |
| 4 | So I think that addresses most of my |
| 5 | concerns. But essentially, the application looks |
| 6 | great, and I do not have any concerns. You know, and |
| 7 | I do support this. |
| 8 | MR. RUBIN: Okay. Commissioner Bloom, |
| 9 | do you have any further comment? |
| 10 | MR. BLOOM: No, I concur with |
| 11 | Dr. Ampomah, and would move to approve this. |
| 12 | MR. RUBIN: All right. So then based |
| 13 | upon the sentiments of the commission, will the |
| 14 | commission entertain a motion to approve the |
| 15 | application subject to the permit conditions as |
| 16 | proposed by the department, that Exhibit 1 to be |
| 17 | supplemented by the testimony of the department |
| 18 | witness today? |
| 19 | MR. BLOOM: I so move. |
| 20 | DR. AMPOMAH: I second. |
| 21 | MR. RUBIN: Okay. And we'll take a |
| 22 | roll call vote. Mr. Chair. |
| 23 | MR. RAZATOS: I agree. |
| 24 | MR. RUBIN: Okay. Dr. Ampomah. |
| 25 | DR. AMPOMAH: Approve. |
| | |
| | Page 203 |

1 MR. RUBIN: Mr. Bloom. 2 MR. BLOOM: Approve. 3 MR. RUBIN: All right. The application 4 is so granted. 5 Anything further from the parties on 6 that? 7 MS. HARDY: No. Thank you very much 8 for your time today. 9 MR. RUBIN: Oh, that's okay. 10 MS. SENINGEN: No. Thank you very 11 much. 12 All right. Thank you very MR. RUBIN: 13 much for your presentations. Very professional, and 14 they are very much appreciated. 15 MR. RAZATOS: Excellent. 16 MR. RUBIN: Mr. Chair, I believe 17 that --18 MR. RAZATOS: We've got our next point on our list is any pending litigation. 19 20 Mr. Rubin. 21 MR. RUBIN: Well, could give you the 22 inevitable Atencio lawsuit update. The motion for a -- petition for an interlocutory appeal was granted, 23 24 so the court has now in the realm court of appeals. 25 They will decide the legal issues as presented in our Page 204

1 motion to dismiss this, which we joined in with the 2 other defendants, the legislative defendants had a different motion, but our executive codefendants, 3 which were Ebner, NMBD, and their cabinet secretary. 4 5 So I would anticipate at least six 6 months for the court of appeals to chew on this, and 7 then in the meantime we are mercifully relieved of our 8 duties to respond -- do anything else. In the 9 district court level, everything is stayed. 10 MR. RAZATOS: Great. 11 MR. RUBIN: Yes. So that's all I have 12 at this time. 13 MR. RAZATOS: Thank you for the update. And our next point this afternoon is 14 15 any other business that anyone may have. I do have 16 one point. We had discussed last meeting that in 17 October, I would be out of the country the week that the meeting is held. I believe we did -- we looked at 18 all schedules. 19 20 And Sheila, it was October the 9th; correct? -- that it worked out? 21 22 MS. APODACA: Yes, that's correct. 23 MR. RAZATOS: Excellent. So our 24 October hearing is going to be held on October the 9th 25 for that reason, so --Page 205

1 Any other issues that anybody else may 2 have? DR. AMPOMAH: 3 The next meeting is 4 September 19th, and we do have the long hearing also 5 coming up, so are we going to have two meetings in a 6 month? 7 MR. RUBIN: I was writing that down. 8 Sheila, is it true -- I understood as 9 we discussed before that the hearing on Empire and Goodnight is scheduled for the 23rd? 10 11 MS. APODACA: Yeah, that's right. The 12 23rd through the 27th. 13 Okay. And so to have a MR. RUBIN: 14 meeting on September 19th in addition to that, is that 15 something we can consolidate with the hearing -- with 16 that date, or no? 17 MS. APODACA: Right now, the only thing on the September 19th docket would be the presentation 18 19 of a notice of hearing for the rulemaking that was 20 heard today. 21 MR. RUBIN: Okay. Well, certainly, 22 Commissioners, nothing set in stone yet as to when you wish to meet. Hopefully that notice on the issue we 23 24 just heard this morning, we might be able to deal with that rather quickly, and we could just have one 25 Page 206

| 1 | meeting on beginning on the date of the hearing. |
|----|--|
| 2 | Is that I mean, I think we should probably pin that |
| 3 | down now. |
| 4 | MR. RAZATOS: That works for me. |
| 5 | Commissioner Bloom? |
| 6 | MR. BLOOM: So Mr. Rubin, are you |
| 7 | saying that we would forego meeting on the 19th, and |
| 8 | instead bring up the 19th's business on the 23rd? |
| 9 | MR. RUBIN: Yes, Commissioner Bloom, |
| 10 | that is my suggestion just as a |
| 11 | MR. BLOOM: I think that would make |
| 12 | sense, yeah. Save people some time and driving. |
| 13 | MR. RAZATOS: Dr. Ampomah. |
| 14 | DR. AMPOMAH: Oh, I second that. |
| 15 | MR. RUBIN: All right, then. Okay. |
| 16 | Okay. So you'll make sure that happens with |
| 17 | MR. RAZATOS: Yes. |
| 18 | MR. RUBIN: Okay. |
| 19 | MR. RAZATOS: So Sheila, can we just |
| 20 | document that the 19th's hearing, since we only have |
| 21 | the one topic, we'll hear it on the 23rd at the |
| 22 | beginning before we start with a case? |
| 23 | MS. APODACA: Okay. |
| 24 | MR. RAZATOS: Excellent. Any other |
| 25 | business? Any other issues? Okay. So |
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| | |

1 MR. BLOOM: We can push it out to five 2 o'clock, guys. I beg your pardon? 3 MR. RAZATOS: MR. BLOOM: We can push it out to five 4 o'clock. 5 6 MR. RAZATOS: Is that what you want? 7 You want us to push it out to five? 8 MR. BLOOM: No, we can wrap it up. 9 Let's wrap it up. 10 MR. RUBIN: Yeah, you do not need a 11 motion to adjourn. 12 MR. RAZATOS: So just as mentioned, our 13 next meeting is going to be on the 23rd, and this meeting is adjourned. Thank you, everybody. 14 15 (Whereupon, the meeting concluded at 16 2:55 p.m.) 17 18 19 20 21 22 23 24 25 Page 208

| 1 | CERTIFICATE |
|----|--|
| 2 | I, JAMES COGSWELL, the officer before whom |
| 3 | the foregoing proceedings were taken, do hereby |
| 4 | certify that any witness(es) in the foregoing |
| 5 | proceedings, prior to testifying, were duly sworn; |
| 6 | that the proceedings were recorded by me and |
| 7 | thereafter reduced to typewriting by a qualified |
| 8 | transcriptionist; that said digital audio recording of |
| 9 | said proceedings are a true and accurate record to the |
| 10 | best of my knowledge, skills, and ability; that I am |
| 11 | neither counsel for, related to, nor employed by any |
| 12 | of the parties to the action in which this was taken; |
| 13 | and, further, that I am not a relative or employee of |
| 14 | any counsel or attorney employed by the parties |
| 15 | hereto, nor financially or otherwise interested in the |
| 16 | outcome of this action. |
| | August 29, 2024 |
| 17 | JAMES COGSWELL |
| 18 | Notary Public in and for the |
| 19 | State of New Mexico |
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| 21 | |
| 22 | |
| 23 | |
| 24 | |
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| | Page 209 |

| 1 | CERTIFICATE OF TRANSCRIBER | |
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| 2 | I, MORGAN PALMER, do hereby certify that | |
| 3 | this transcript was prepared from the digital audio | |
| 4 | recording of the foregoing proceeding, that said | |
| 5 | transcript is a true and accurate record of the | |
| 6 | proceedings to the best of my knowledge, skills, and | |
| 7 | ability; that I am neither counsel for, related to, | |
| 8 | nor employed by any of the parties to the action in | |
| 9 | which this was taken; and, further, that I am not a | |
| 10 | relative or employee of any counsel or attorney | |
| 11 | employed by the parties hereto, nor financially or | |
| 12 | otherwise interested in the outcome of this action. | |
| 13 | August 29, 2024 | |
| 14 | Morgan L. 9 | Um |
| 15 | MORGAN PALMER | |
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