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2	STATE OF NEW MEXICO ENERGY, MINERAL AND NATURAL RESOURCES DEPARTMENT
3	OIL CONSERVATION COMMISSION
4	ORIGINAL
5	APPLICATION OF THE NEW MEXICO OIL AND GAS ASSOCIATION FOR AMENDMENT OF CERTAIN PROVISIONS OF
6	TITLE 19, CHAPTER 15 OF THE NEW MEXICO ADMINISTRATIVE CODE CONCERNING PITS, CLOSED-LOOP
7	SYSTEMS, BELOW GRADE TANKS AND SUMPS AND OTHER ALTERNATIVE METHODS RELATED TO THE FORE GOING
8	MATTERS, STATE-WIDE.
9	CASE NO. 14784 AND 14785
10	CASE NO. 14784 AND 14785
11	VOLUME 12
12	
13	September 24, 2012 9:00 a.m.
14	Wendell Chino Building
15	1220 South St. Francis Drive Porter Hall, Room 102
16	Santa Fe, New Mexico
17	
18	THE COMMISSION: $U $
19	JAMI BAILEY, Chairperson
20	GREG BLOOM, Commissioner
21	DR. ROBERT BALCH, Commissioner
22	MARK SMITH, Esq.
23	FLORENE DAVIDSON, COMMISSION CLERK
24	
25	REPORTED BY: Jan Gibson, CCR, RPR, CRR

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1 (Note: In session at 9:00.)

CHAIRWOMAN BAILEY: Good morning. 2 It's 9:05 on Monday, September 24th in Porter Hall in 3 Santa Fe, New Mexico. This is a meeting of the Oil 4 Conservation Commission that has come together for 5 the purpose of deliberating Consolidated Cases 14784 6 7 and 14785, which are the applications of New Mexico Oil and Gas Association and the Independent 8 9 Petroleum Association of New Mexico for amendment of certain provisions of Title 19 Chapter 15 of the New 10 Mexico Administrative Code Concerning Pits, 11 Closed-loop Systems, Below-grade Tanks, Sumps and 12 13 Other Alternative Methods Related to the Foregoing, and Amending Other Rules to Conform with Changes 14 State-wide. 15 16 I am Jami Bailey, Director of the Oil 17 Conservation Division; Greg Bloom is here, who is the designee of the Commissioner of Public Lands; 18 19 and Dr. Balch, who the designee of the Energy, 20 Minerals and Natural Resources Department. All 21 three commissioners are here. We do have a quorum of the Commission. 22 23 We are trying something different if it 24 works for the commissioners. It may or may not be

helpful. We have taken the amended submittal of New

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Page 2412 1 Mexico Oil and Gas Association -- hereafter I will 2 call them NMOGA -- their amended red-line application, consolidated it with the IPANM 3 4 suggested changes, proposed changes, and it is now 5 up on the screen so we can look at what we are 6 discussing and make our changes or not, but to 7 record our decisions there so we can all be aware of what we have done. 8

9 In accordance with Rule 19.15.3.12E1, the 10 Commission will make a decision in open session on 11 the proposed rule changes based on the motion that 12 includes reasons for the decision. So at the end of 13 every section we need to vote on the motion for 14 whatever we have decided and reasons for that 15 decision.

16 Upon the Commission's issuance of the 17 order in these cases, the commission clerk shall 18 post the order on the Division's website and mail or 19 E-mail a copy of the order to each person who 20 presented non-technical testimony at the hearing or 21 who filed a prehearing statement or the person's 22 attorney.

Before we get started, our commission
attorney may have a few words of guidance for us
today.

Page 2413 1 MR. SMITH: Just a couple. This is --2 first of all, let me say this to everyone in the This is deliberation. It is public, but that 3 room. 4 does not mean the public has the opportunity to 5 comment. Regardless of how badly you want to say something, don't. If you don't think that you can 6 7 avoid it, go outside and say it. But you may not interrupt the deliberations of the Commission. 8 9 This is a rule-making, not an 10 adjudication. You all are not only able but I think probably encouraged to take into account your own 11 expertise in judging these matters. 12 That's one of the reasons that you are on the Commission. 13 You 14 have a rule that has been in place now for a while. 15 You have proposed amendments. You have heard evidence on the amendments and you want to look for 16 substantial evidence to back up whatever decision 17 18 you make. Substantial evidence, as I appreciate it, is evidence that would lead a reasonable mind to the 19 20 conclusion to which you have come, taking into 21 account all of the evidence that's been put before 22 you. You can have substantial evidence on both 23 24

24 sides. You can have substantial evidence for A and 25 substantial evidence for not A at the same time.

Page 2414 Okay? That's all I have to say unless you have 1 questions. 2 CHAIRWOMAN BAILEY: Do you have any 3 questions? 4 5 COMMISSIONER BLOOM: I do not. CHAIRWOMAN BAILEY: Commissioner Balch, do 6 7 you have questions? COMMISSIONER BALCH: Not at this time. 8 9 CHAIRWOMAN BAILEY: Okay. The screen will hold the consolidated applications. If this does 10 not seem to be helpful or if it seems to be a 11 12 problem, we are not bound to use it. It was just an idea that could help us in our deliberations. 13 14 COMMISSIONER BLOOM: I think it will be 15 nice. We will be able to literally be on the same 16 page. 17 COMMISSIONER BALCH: I think it's a great idea to track anything that we change. 18 19 CHAIRWOMAN BAILEY: I do, too. Okay. 20 Then why don't we get to it. Let's be sure to speak 21 up for the court reporter so she can hear what we are talking about. If we go section by section, 22 23 then we can take care of this in a reasonably concise way. However, I do expect that there will 24 25 be some back and forth, because what we decide at

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Page 2415 one point may not hold true for what's later on in 1 the rule. 2 COMMISSIONER BALCH: I think I may have 3 4 one question rather than diving straight into the rule. And that is the proposed findings. There are 5 some findings that say we are unable to do this and 6 7 other findings that say we are not -- I guess I would like clarification. 8 9 MR. SMITH: I was messing with my 10 computer. I'm sorry. COMMISSIONER BALCH: If we have opposing 11 findings, if somebody says the hearing is not 12 appropriate to move forward, if that's appropriate. 13 14 MR. SMITH: I think you can move forward. 15 I read them. 16 COMMISSIONER BALCH: So we are fine 17 until --18 MR. SMITH: This is not a trial, not res judicata. 19 20 COMMISSIONER BALCH: That's all I need. Thank you. 21 22 CHAIRWOMAN BAILEY: There may be 23 misrepresentations in several of the submittals. COMMISSIONER BALCH: I understand that. 24 Ι 25 just wanted to make sure that was brought up.

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Page 2416 MR. SMITH: That's right. No, you can 1 move forward. What you have a lot here is argument. 2 3 As I was reading through, what I saw in one is that OCD had supported someone's position in particular. 4 I think it was one of the industry submissions. 5 Ι didn't recall that anyway. My recollection was OCD 6 7 was neutral throughout this. So you're going to see a lot of argument in there. If you are persuaded by 8 9 some of the argument, that's fine. But much of it 10 is argument. Closing arguments are closing 11 arguments. You have to take into account what you 12 know and the evidence that was placed before you. Lawyer argument is not fact unless it's, of course, 13 from me. 14 15 CHAIRWOMAN BAILEY: The first proposed

change is in 19.15.17.5, the effective date. And 16 17 the industry proposal is to change the old date of 18 the current rule to 30 days after publication of the 19 final rule in the New Mexico Registry. Do you have 20 any opinions on that proposal for the effective date? 21 I think that would be 22 COMMISSIONER BLOOM: Seems like it's in line with the effective 23 fine. dates of other new rules to stand as-is. 24

COMMISSIONER BALCH: And there's the

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Page 2417 language in there that if we need a later date than 1 that we can come to that in this rule-making, so I 2 3 think it's flexible enough. CHAIRWOMAN BAILEY: So I move that we 4 5 accept these proposed changes in 19.15.17.5. All in favor? 6 7 COMMISSIONER BLOOM: Aye. 8 COMMISSIONER BALCH: Aye. 9 CHAIRWOMAN BAILEY: All opposed? No one. The next section where there are proposed changes 10 are in 19.15.17.7, Definitions. We have quite a few 11 definitions to discuss. The first one is Portion B 12 13 for below-grade tank. The proposal is "means a vessel with greater than a 500-gallon capacity, 14 excluding sumps and pressurized pipeline drip traps 15 installed within an excavation or buried below the 16 17 surrounding ground surface's elevation. Below-grade 18 tank does not include an above-ground storage tank that is located above or at the surrounding ground 19 20 surface's elevation and is surrounded by berms." Do 21 either of you have an opinion on that definition? 22 COMMISSIONER BLOOM: Madam Chair, just a What was the capacity again that you 23 question. read? 24 25 CHAIRWOMAN BAILEY: The submittal was 500

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1 gallons. The testimony said five barrels.

2 COMMISSIONER BLOOM: Yes. I would be 3 comfortable with five barrels there based on the 4 testimony we heard.

5 COMMISSIONER BALCH: And I remember from 6 discussing this in hearing in direct, that my main 7 concerns were that the rule should address function rather than form, at least to some degree. My notes 8 9 say the tank is for storage, the sump is for fluids that are in transit. You are not going to leave it 10 there for any substantial period of time. It should 11 be a relatively small volume. 12

CHAIRWOMAN BAILEY: So would you like to 13 14 include language to that effect or are you relying 15 on the later discussion concerning below-grade tanks where it talks about de minimis volumes in the tank? 16 17 COMMISSIONER BALCH: Where is that 18 definition? CHAIRWOMAN BAILEY: The de minimis? 19 20 COMMISSIONER BALCH: Was that modified in 21 17.17 where they are talking about sumps? 22 CHAIRWOMAN BAILEY: Section 11. Sump as 23 opposed to below-grade tank. A sump has the de minimis transit but a below-grade tank is a holding 24 25 tank.

Page 2419 COMMISSIONER BALCH: As long as it's clear 1 somewhere else in the rule then I have no problem 2 3 with the modification to the five barrels. 4 CHAIRWOMAN BAILEY: The OCD suggests that the language says "Below-grade tank means a vessel 5 excluding sumps and pressurized pipeline drip traps 6 where a portion of the tank's sidewall is below the 7 surrounding ground surface elevation. Below-grade 8 9 tank does not include an above-ground storage tank that is located above or at the surrounding ground 10 surface's elevation and is surrounded by berms." 11 I would like to use the OCD language but 12 insert the five barrel definition, if that's -- if 13 you both would like to have the five barrel 14 description. 15 16. COMMISSIONER BLOOM: Yeah, I would be in 17 agreement with that. I believe that coincides almost precisely with what NMOGA had except they 18 substituted five barrels. I think that would be 19 20 fine. 21 COMMISSIONER BALCH: Which exhibit is that? 22 23 CHAIRWOMAN BAILEY: OCD Exhibit 2, Page 1. 24 So you would like to have "means a vessel with 25 greater than a five barrel"?

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Page 2420 1 COMMISSIONER BLOOM: Five barrel, correct. 2 CHAIRWOMAN BAILEY: Commissioner Balch, is 3 that what you would like to have? To change the 500 gallon to five barrel? 4 That would be fine. 5 COMMISSIONER BALCH: 6 CHAIRWOMAN BAILEY: And then accept the 7 rest of the language that OCD suggested where it would say, "Below-grade tank means a vessel with 8 9 greater than a five barrel capacity excluding sumps 10 and pressurized pipeline drip traps," is that correct? 11 Okay. COMMISSIONER BALCH: 12 Do we need to wait for this to be on the screen? 13 14 CHAIRWOMAN BAILEY: No, I think they will 15 catch up with us as soon as they can. The next 16 change of definitions is in the definition for 17 closed-loop system where the language "without using below-grade tanks or pits" would be deleted. 18 Do either of you have --19 20 COMMISSIONER BALCH: I think that depends. 21 Without using below-grade tanks or pits is SO if you 22 have a site on a slope you can still use a 23 closed-loop system, whereas possibly the existing language could disallow that. 24 25 CHAIRWOMAN BAILEY: I agree with that. Ι

Page 2421 1 think that it limits the variety of ways the 2 closed-loop system can be used. Do we all agree to delete the language as suggested? 3 COMMISSIONER BALCH: I find that 4 acceptable, yes. 5 6 COMMISSIONER BLOOM: I do as well. 7 CHAIRWOMAN BAILEY: Okay. Confined groundwater is the next proposed language change. 8 I'm sorry, can you go back and 9 MR. SMITH: let Theresa know what you did on that, the new C? 10 CHAIRWOMAN BAILEY: C does delete the last 11 phrase of that definition. Yes. The next question 12 is do we want to have the definition of confined 13 groundwater as part of the rule? The charge to the 14 Oil Conservation Division is to protect waters 15 designated by the State Engineer. It does not make 16 17 a distinction between confined or unconfined. 18 COMMISSIONER BALCH: I think there's some 19 challenge to try to determine whether water is confined or not. 20 CHAIRWOMAN BAILEY: Yes, there is. 21 COMMISSIONER BALCH: You would know it 22 would be -- by this definition you would know it 23 would be confined only if the water came to the 24 25 surface in an Artesian way. But if the head was

Page 2422 such that it rose up ten feet from the aquifer or 1 2 within two feet of the surface, you may not know 3 that necessarily. That condition could change, 4 depending upon other factors, seasonal changes to 5 water flux from rivers. All kinds of things could affect whether the water is confined, so it may not 6 7 be confined in August but it could be in February. So I think it may be a complicating factor to have a 8 separate definition, especially if the State 9 Engineer's Office does not have multiple definitions 10 of groundwater. 11 CHAIRWOMAN BAILEY: They may, but the 12 charge to the OCD is to protect water designated by 13 the State Engineer. It does not make a distinction 14 between confined and unconfined. 15 COMMISSIONER BLOOM: I would coincide with 16 Commissioner Balch. There is, as Dr. Neeper pointed 17 out, an unsupportable distinction or difficulty in 18 19 determining if groundwater is confined or 20 unconfined, so I would not include this new

21 definition in the final rule.

25

22 COMMISSIONER BALCH: As a counterpoint to 23 that, why would we need a definition of confined 24 groundwater?

CHAIRWOMAN BAILEY: There are references

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Page 2423 later in the proposal to distinguish between 1 confined and unconfined as far as some of the 2 proposals are concerned. 3 4 COMMISSIONER BALCH: I think the concept 5 is if you have confined groundwater, which I take to 6 mean you have something isolated and under pressure, 7 is you have little chance of contaminants spreading from that aquifer. But I think the fact or the 8 9 difficulty in discerning whether the water is 10 actually confined is what makes me uncomfortable about having the definition in the rule. 11 12 CHAIRWOMAN BAILEY: All three of us reject the insertion of this definition of confined water; 13 is that correct? 14 COMMISSIONER BLOOM: 15 That's correct. COMMISSIONER BALCH: 16 Yes. CHAIRWOMAN BAILEY: Okay. 17 The next 18 definition is "Continuously flowing watercourse 19 means a river, stream or creek that is named or 20 delineated by a solid blue line on a USGA quadrangle 21 map having a scale factor of one to 24,000 and that typically has water flowing during the majority of 22 23 the days of the year. This does not include 24 ephemeral washes, arroyos and similar depressions 25 that do not have flowing water during the majority

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Page 2424 1 of days during the year." Do either of you have an opinion on 2 3 insertion of that definition? COMMISSIONER BLOOM: I find that 4 5 acceptable. It looks like there's agreement between OCD's definition and NMOGA's proposed definition. 6 7 CHAIRWOMAN BAILEY: I believe so. 8 COMMISSIONER BLOOM: I find that acceptable. 9 10 COMMISSIONER BALCH: I think in practice that's something that could be enforced. 11 12 CHAIRWOMAN BAILEY: I agree with both of 13 you. 14 COMMISSIONER BALCH: It's common mapping 15 terms. You know the exact scale and the definition. 16 CHAIRWOMAN BAILEY: So we will accept this proposed definition and include the definition for 17 18 continuously flowing watercourse. 19 COMMISSIONER BLOOM: Yes. 20 MR. SMITH: Could I just raise an issue 21 here? CHAIRWOMAN BAILEY: Yes. 22 23 MR. SMITH: I think you want to make sure 24 that you have the definition from the legal perspective that's manageable. You might want to 25

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Page 2425 discuss how the determination of flow majority days 1 of the year is going to be determined. 2 3 COMMISSIONER BLOOM: Half a year plus one? 4 COMMISSIONER BALCH: Surface water in New 5 Mexico is a real interesting thing because, you know, I don't think you are going to find something 6 7 that's half plus one that's ephemeral. Generally 8 it's usually flowing or generally not usually 9 flowing. How that enters into the definition I'm not completely clear. 10 11 COMMISSIONER BLOOM: Let me -- so this becomes important in the definition of a 12 13 continuously flowing watercourse when we start looking at setbacks, so I think we could add 14 something in there where you could have the same 15 16 sort of setback for an arroyo that we do for the 17 continuously flowing watercourse or something along those lines. The fact that the arroyo can contain 18 water would be respected. 19 20 COMMISSIONER BALCH: The arroyo can contain water but it would only contain it during 21 the rain event at that location or above. 22 But by that definition, if you were to look at San Antonio, 23 24 New Mexico and look at the Rio Grande it would be an

25 ephemeral stream many parts of the year when it's

Page 2426 1 not flowing at the surface. However, that would be 2 a solid blue line on the USGS map and that example 3 would not fall into the bin. So I think perhaps the 4 question is whether the solid blue line covers all the cases of surface water flow that we want it to. 5 6 The other example I would point out is the 7 Rio Salado, which is at about Mile Marker 165. Ι 8 think that river is a dashed line where it crosses 9 the freeway and you are lucky to see water in there 10 five times a year. 11 MR. SMITH: You guys know this stuff. Ι I'm only worried about your language and the 12 don't. But the way this is drafted, it's a solid blue 13 law. line on the USGS map and having a scale factor and 14 that typically has water flowing during the majority 15 16 of days during the year. It's a conjunction. So 17 the fact that it's a blue line isn't going to get you anywhere. It has to have both of the conditions 18 fulfilled, according to your language. 19 20 CHAIRWOMAN BAILEY: But if we change and and use "or" it would be both what's mapped and --21 22 MR. SMITH: Then it would be either. The 23 question is whether that suits you. 24 COMMISSIONER BLOOM: Let me -- I don't 25 know if this is helpful or not, but wasn't NMOGA's

Page 2427 original intent here to have something which better 1 delineated watercourse because they felt that a 2 playa or just a public water after rain was 3 4 sometimes being seen by inspectors as being a body 5 of water? Wasn't that the issue? 6 CHAIRWOMAN BAILEY: Yes, I believe it was. COMMISSIONER BALCH: 7 Really it would 8 depend on -- basically you want to come up with 9 something in the rule, I think, where if the 10 inspector went out, there wouldn't be an ambiguity whether it was a regular watercourse or something 11 12 ephemeral. The map designation, if you were to scratch everything after the one to 24,000, that 13 14 would be very simple to enforce. 15 CHAIRWOMAN BAILEY: Yes, it would be, relying simply on those maps. 16 17 COMMISSIONER BALCH: The problem is the maps or USGS quadrangles are updated every 20 to 30 18 years and things can change in that amount of time, 19 20 so you do want to leave some flexibility, particularly if someone were to build an irrigation 21 22 ditch. If it didn't show up on the map for 15 years or so, that would be a continuously flowing 23 It would eventually --24 watercourse. 25 COMMISSIONER BLOOM: It would appear on

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1 the USGS.

2 COMMISSIONER BALCH: It would eventually, 3 but it might take some time to do so. So you want 4 something to cover the changes in water flow that 5 could make something that was regular ephemeral or 6 something that was not there at all or ephemeral 7 into a regular flow.

8 CHAIRWOMAN BAILEY: An irrigation ditch 9 wouldn't qualify by the very first words of the 10 definition because it means a river, stream or 11 creek.

12 COMMISSIONER BALCH: To me the simplest 13 definition, the thing most enforceable, is to really 14 strike everything after the one in 24,000, and if we 15 think that leaves too much leeway we may have to add 16 other language somewhere else or come up with other 17 language that better describes the intent.

MR. SMITH: You could make this 18 19 disjunctive, use the word "or," but it doesn't make 20 it less vague with respect to determining the majority of the days, but if you use the "or" it 21 would give you more flexibility in your rule so it 22 could be "river, stream or creek" that USGS... "or a 23 river, stream or creek that typically has water 24 25 flowing through it." At least then you have SOME

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1 flexibility to make the determination.

2 CHAIRWOMAN BAILEY: And gives an unbiased 3 reference out in the field if it's struck completely 4 for the period after one to 24,000 so that there are 5 no questionable calls for enforcement.

MR. SMITH: That's right.

6

7 COMMISSIONER BALCH: You are saying after
8 the one to 24,000 "or has water continually flowing
9 through it"?

10 MR. SMITH: No. Typically -- you could 11 keep the majority of days. The only reason I bring 12 it up is if you put a period after the one in 13 24,000, that's it. There will be no flexibility in 14 making the determination. The issue is do you want 15 flexibility in making that determination?

COMMISSIONER BALCH: 16 It seems to me that the intent of the proposed changes is to remove 17 18 ambiguity and make things more easily enforced, so in my mind that has to be a consideration. 19 If you leave too many things in there ambiguous, then you 20 could have something that would have varying 21 22 judgment of whoever goes out there. If you happen 23 to go out on one of the non-majority days and 24 there's flow, the next week you might go out and 25 have exactly the opposite case.

Page 2430 CHAIRWOMAN BAILEY: That's right. 1 That's a judgment call. 2 MR. SMITH: You 3 are above my pay grade now. 4 COMMISSIONER BLOOM: Just to summarize, I 5 think we are looking at three different things. One 6 is continuously flowing watercourse. Later it comes 7 up when we are looking at setbacks. We are talking about using the definition to help protect water. 8 We are going to make the change to keep companies 9 from being dinged inappropriately. We also want to 10 use it for enforcement, and then the irrigation or 11 canal was interesting because we have some unlined 12 canals that do have contact with groundwater and 13 that can be recharging in different areas. And a 14 lot of irrigated canals don't have water in them 15 more than half a year. 16 17 COMMISSIONER BALCH: Sure. They have them irrigation season. 18 19 COMMISSIONER BLOOM: Exactly. 20 COMMISSIONER BALCH: So I quess the question would be if you were to propose a pit 21 within X distance of perhaps an irrigation canal 22 that Commissioner Bloom mentioned, do you want to 23 write a rule where that's okay in December and not 24 25 okay in July? Or would you like it to be always not

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1 be okay or always be okay?

2 CHAIRWOMAN BAILEY: And that has to be a 3 judgment call.

COMMISSIONER BALCH: I think the intent is 4 5 if there's going to be continuously flowing water at some point in time as a regular watercourse, then 6 7 you want to protect it. Since you are separating out the arroyos and things like that, you can't 8 predict when those are going to have water, but to 9 10 me, that irrigation ditch is going to be a regular watercourse, and I do believe a one in 24,000 11 quadrangle will show us the blue line even if they 12 don't have water in them for one month out of the 13 year. 14

15 So that particular case would be predicted 16 by the one in 24,000 map definition, the blue line. 17 But you want to build in enough flexibility so that 18 if someone builds a new ditch that it would be 19 protected as well. I guess that's the point.

20 MR. SMITH: Remember that you are not 21 stuck with the language being proposed here. You 22 can make whatever adjustments here that you want, 23 including saying "This definition includes 24 irrigation ditches but does not include," and then 25 go on if you have things that you are particularly

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Page 2432 concerned about. 1 COMMISSIONER BALCH: I don't want to make 2 things overly complicated. I wanted to bring up 3 those issues. 4 CHAIRWOMAN BAILEY: They are important 5 6 issues. 7 COMMISSIONER BLOOM: They are important. CHAIRWOMAN BAILEY: We need to look at 8 9 them. 10 COMMISSIONER BLOOM: Yeah. 11 CHAIRWOMAN BAILEY: So what is your 12 proposed language? COMMISSIONER BLOOM: As it stands now, I 13 14 would be concerned that an irrigation canal would 15 not be considered a continuously flowing watercourse and be protected as such, because a continuously 16 flowing watercourse is only a river, stream or creek 17 that is named, delineated, and not an irrigation 18 19 ditch or an acequia. So perhaps we add that in 20 there and we could change the "and" to an "or." 21 Maybe that gets us where we need to go. 22 COMMISSIONER BALCH: You are proposing 23 "means a river, stream, creek or irrigation"? 24 COMMISSIONER BLOOM: Channel, canal. COMMISSIONER BALCH: And put in the "or." 25

Page 2433 1 COMMISSIONER BLOOM: Separate the one in 2 24,000 "or that typically has water flowing during the majority of days of the year." 3 I'm sorry, that's not going to 4 MR. SMITH: 5 get you where you want to go. Unless you might have an irrigation ditch that is a solid blue line on the 6 USGS you're not going to be able to add irrigation 7 ditch at the lead-in. You will have to add it after 8 the "or" if that's what you want to protect. 9 10 COMMISSIONER BLOOM: So it could be --You would have to COMMISSIONER BALCH: 11 12 have a period after one to 24,000. 13 MR. SMITH: No. If you put an "or" there 14 it would be a long sentence but it would be 15 grammatically all right. 16 COMMISSIONER BLOOM: It would be "Having a scale factor of one to 24,000 or that typically has 17 water flowing during the majority of the days of the 18 year or is an irrigation channel." 19 20 COMMISSIONER BALCH: At the risk of 21 complicating things further you could say, "Or typically has water flowing through it for some 22 substantial period of the year." I guess the 23 majority of the days is a little too confined 24 25 because the irrigation ditch is not going to have

Page 2434 water flowing the majority of the days of the year. 1 2 CHAIRWOMAN BAILEY: Until October 1st? COMMISSIONER BALCH: That's the irrigation 3 season, but just because that's the season doesn't 4 5 mean there's water always going to be in the ditch. 6 Sometimes in Socorro it comes in in June or July and 7 if you have a drought like we are having now, it may 8 end early. So it may only have water in it for one 9 or two days in the year when it's most crucial for 10 water. 11 MR. SMITH: You can change it to 12 substantial if you want. But if you want to protect irrigation ditches, put irrigation ditches in there 13 is my advice. 14 CHAIRWOMAN BAILEY: So it can read "on a 15 USGS guadrangle map having a scale factor of one to 16 24,000, an irrigation channel, or." What do you 17 think about that? 18 19 COMMISSIONER BALCH: So replace the "and" with "or an irrigation channel or"? 20 CHAIRWOMAN BAILEY: Put a comma after 21 22 24,000, an irrigation channel, comma, or. 23 MR. SMITH: Then you are putting irrigation channel in there, which is not a river, 24 25 stream or creek, so after your irrigation channel

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Page 2435 or, you are going to have to repeat something that 1 has water flowing during the majority of days, 2 3 modifies. Do you know what I'm saying? 4 CHAIRWOMAN BAILEY: Or a watercourse that 5 typically has water flowing. 6 MR. SMITH: I think that gets you where 7 you want to go. Do you want to keep majority or do 8 you want to go back to substantial? 9 CHAIRWOMAN BAILEY: I like majority. What 10 do you feel? The majority gives us 11 COMMISSIONER BLOOM: 12 at least an understanding that it would be half the year plus one, and substantial could be a little bit 13 more ambiguous. 14 15 COMMISSIONER BALCH: As long as we 16 specifically point out irrigation channels, which I think are probably the most likely gray area that 17 will be left out. 18 19 CHAIRWOMAN BAILEY: So Theresa, could you 20 insert "having a scale factor of one to 24,000 or an 21 irrigation channel." Make a comma after the 24,000. 22 Delete "and" and put "or." 23 COMMISSIONER BALCH: And a comma? 24 CHAIRWOMAN BAILEY: True. A watercourse 25 that typically has water flowing. Does that work

Page 2436 for you? 1 2 COMMISSIONER BLOOM: I think that would work for me, yes. 3 COMMISSIONER BALCH: I'm comfortable with 4 5 that definition. 6 CHAIRWOMAN BAILEY: Then we can go on to 7 the next definition. Let's go to emergency pit. The OCD made a suggestion that emergency pit means a 8 pit that is constructed in an emergency to contain a 9 10 spill in the event of a release. Because a precautionary pit is not an emergency. 11 12 COMMISSIONER BLOOM: How would we change that? 13 14 CHAIRWOMAN BAILEY: It would read, "Emergency pit means a pit constructed in an 15 emergency to contain a spill in the event of a 16 release." If it's not changed, that precautionary 17 pit that's constructed would not have to have the 18 clearances, the site locations. 19 20 COMMISSIONER BALCH: Would it be more clear to say, "An emergency pit means a temporary 21 pit that is constructed in an emergency as a 22 23 precautionary manner"? 24 CHAIRWOMAN BAILEY: Then we run into the 25 problem with the use of the word "temporary pit"

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Page 2437 because that's a drilling or workover pit. 1 COMMISSIONER BLOOM: Madam Chair, I 2 remember we discussed this during the hearing and 3 this definition as you proposed would be sufficient. 4 5 CHAIRWOMAN BAILEY: Commissioner Balch, are you thinking? 6 7 COMMISSIONER BALCH: I don't know about the lawyer words but I'm wondering if you want to 8 say "during an emergency instead" of "in an 9 emergency." 10 11 CHAIRWOMAN BAILEY: I think that's an acceptable change. "Emergency pit means a pit that 12 is constructed during an emergency to contain a 13 spill in the event." 14 COMMISSIONER BLOOM: Do we need 15 "precautionary matter" in there still? 16 17 CHAIRWOMAN BAILEY: No, because that 18 removes it from the realm of the emergency. 19 COMMISSIONER BLOOM: Take that out, right? 20 CHAIRWOMAN BAILEY: Yes, delete it. 21 COMMISSIONER BALCH: This is an attempt to deal with a bad situation. You don't want it to be 22 permanent in any way. 23 24 CHAIRWOMAN BAILEY: Do we all agree on 25 removing the words "as a precautionary matter" and

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instead using the words "during an emergency"? 1 2 COMMISSIONER BALCH: Yes. 3 COMMISSIONER BLOOM: I agree with that, 4 yes. 5 CHAIRWOMAN BAILEY: Okay. The next 6 definition to go to is floodplain. It means U.S. 7 Army Corps of Engineers or FEMA documented 100-year 8 floodplain. Is there any discussion on that? 9 COMMISSIONER BLOOM: Madam Chair, I think 10 this was being inserted because it makes it easy to enforce what a floodplain is. To our friends in 11 12 industry, I would comment that FEMA has begun 13 remapping floodplains in New Mexico, and oftentimes 14 there's been unbelievable disagreement at the county 15 level doing it county by county, and areas are getting cast in the floodplains that folks imagine 16 is up for serious debate. And I would just caution 17 everyone to keep an eye on this process and make 18 sure you check in with your flood map managers 19 20 because sometimes things can appear in a floodplain 21 and we can get sheet flows and things like that and it can be very disruptive if you have a lot of 22 23 floodplain added. 24 COMMISSIONER BALCH: I'm glad to hear you 25 say they are reworking on it on a county-by-county

1	Page 2439 basis. But right now in New Mexico, if you go to
2	FEMA floodplains, most of the state is broadly
3	categorized county by county as the whole county is
4	X risk. So if you want to find more detailed
5	information, it's certainly out there. But
6	enforceable, ultimately the U.S. Army Corps of
7	Engineers or FEMA are the nationally accepted
8	authority.
9	COMMISSIONER BLOOM: That's correct.
10	CHAIRWOMAN BAILEY: So shall we accept
11	this definition?
12	COMMISSIONER BALCH: I don't see any other
13	way to define a floodplain.
14	COMMISSIONER BLOOM: I agree. No other
15	way to do it neatly.
16	COMMISSIONER BALCH: Let me correct that.
17	There's another way to define a floodplain but it
18	requires two years of a master's student's life.
19	Because I had a student do a floodplain analysis for
20	the Pecos River. It took her two years.
21	CHAIRWOMAN BAILEY: I don't think our
22	inspectors have that option, so we will accept this
23	proposed definition and go on to the definition for
24	groundwater. I would like to point out that this
25	definition is not what's recognized by the Water

Page 2440 1 Quality Control Commission in their regulations 2 20.6.2.7. That's the Water Quality Control 3 Commission definition. 4 COMMISSIONER BALCH: So the green text here, that's NMOGA's second modification? 5 6 COMMISSIONER BLOOM: Does that come in 7 from IPA? 8 CHAIRWOMAN BAILEY: That's IPA. In fact, NMOGA's proposed modifications does not have a 9 10 definition -- does not have this definition. 11 COMMISSIONER BALCH: What is the other 12 definition that you referred to? Or is there a strict definition? 13 14 COMMISSIONER BLOOM: WQCC? 15 CHAIRWOMAN BAILEY: For the Water Quality 16 Control Commission? I think I have it somewhere here. I don't seem to be able to put my fingers on 17 it right now. As I recall, it does not require the 18 water to be capable of entering the well in 19 sufficient amounts to be used as a continuous water 20 21 supply. 22 COMMISSIONER BALCH: So it just says 23 something like "means institial water that occurs in 24 saturated earth material." Something like that. 25 CHAIRWOMAN BAILEY: And is capable of

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Page 2441 entering the well to be used as a water supply. 1 Do you guys want to --2 MR. SMITH: CHAIRWOMAN BAILEY: Take a break? 3 MR. SMITH: Well, either take a break or 4 move on and let me see if I can find it here on 5 Westlaw? 6 CHAIRWOMAN BAILEY: That would be good. 7 8 COMMISSIONER BLOOM: I wasn't tracking this change, and I don't recall the discussion we 9 10 had on it. So if there would be any way to pull 11 that up here in the transcript, that might be 12 helpful. Maybe search institial. COMMISSIONER BALCH: This brings up a 13 question that I think will come up later. 14 What happens when -- who has precedence on definitions 15 for some of these things? 16 17 I'm sorry? MR. SMITH: 18 COMMISSIONER BALCH: So later on we will be talking about fluid management pits that have a 19 greater than a ten acre foot capacity. 20 But there's apparently a limitation in other state regulations 21 22 to impoundments that are greater than ten acre feet. 23 Who has precedent or who can write the rule on that case? Can we write a rule that counters somebody 24 else's definition? 25

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Page 2442 MR. SMITH: Well, your definitions don't 1 have to be like other definitions. Now, if an 2 operator who is subject to your regulations is also 3 subject to these other regulations, then probably 4 until there is some sort of resolution in the 5 courts, the operator is probably going to have to 6 7 comply with the more restrictive of the two. That is to say, I don't think an operator would want to 8 say, "Well, I'm subject to both of these but because 9 10 OCC says I can do X plus one, that's what I'm going to do even though some other agency says only do X." 11 12 Do you understand what I'm saying? COMMISSIONER BALCH: Yes. 13 14 MR. SMITH: You create a problem for the 15 operator that way. If they are not subject to the 16 other agency's regulations you can do whatever you want to do. 17 COMMISSIONER BALCH: When it comes to that 18 19 point I'm sure we will have an active discussion, but I was curious about what happens when you have 20 conflicting rules. 21 22 CHAIRWOMAN BAILEY: As in if we allow the insertion of "continuous water supply" rather than 23 just "water supply"? 24 25 COMMISSIONER BALCH: Right.

Page 2443 CHAIRWOMAN BAILEY: I don't believe that 1 we have a good reason to insert "continuous water 2 3 supply" when Water Quality Control Commission 4 Regulation 20.6.2.7, I believe, says "of entering 5 the well in sufficient amounts to be used as a water 6 supply." COMMISSIONER BALCH: And it sounds like 7 8 from counsel's perspective if we did change it, you 9 would create a point of litigation. 10 CHAIRWOMAN BAILEY: I believe we would. 11 MR. SMITH: Do you want me, if you guys 12 are going to take a break, do you want me to try to pull up what the WQCC says? 13 COMMISSIONER BLOOM: Sure, that would be 14 15 helpful. CHAIRWOMAN BAILEY: Yes. 16 17 COMMISSIONER BLOOM: I would agree that we 18 don't want to have two definitions of groundwater in the state. 19 20 CHAIRWOMAN BAILEY: Why don't we take a ten-minute break. 21 22 (Note: The hearing stood in recess at 23 10:00 to 10:15.) 24 CHAIRWOMAN BAILEY: When we broke for the 25 break, there was still the question on the Water

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Page 2444 1 Quality Control Commission definition for groundwater. I believe our counsel found that 2 definition during the break, and it is highlighted 3 4 up on the screen, that it means interstitial water 5 that occurs in saturated earth material and which is 6 capable of entering a well at sufficient amounts to 7 be utilized as a water supply. Commissioners, do you want to replace the proposed definition for 8 groundwater with that definition? 9 10 COMMISSIONER BLOOM: The only difference is change the spelling of interstitial and drop 11 continuous? 12 CHAIRWOMAN BAILEY: 13 Yes. Then I would find the 14 COMMISSIONER BLOOM: definition from the WQCC to be sufficient. 15 16 COMMISSIONER BALCH: Seems like an 17 adequate definition. 18 CHAIRWOMAN BAILEY: Then we are in 19 agreement that the proposed definition for groundwater will be replaced with the Water Quality 20 21 Control Commission definition for groundwater. 22 MR. SMITH: Let me say for the record, 23 that definition is at NMAC 20.6.2.7 Subparagraph Z as in zebra. 24 25 CHAIRWOMAN BAILEY: The next definition is

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Page 2445 life form ratio. It is the relative percentage of 1 plants in each of the following classifications: 2 Shrubs, forbs and grasses. Commissioners, do you 3 4 have opinions on that? I believe that this shows up 5 in the sections concerning reclamation. 6 COMMISSIONER BLOOM: Madam Chair, I prefer 7 the definition proposed by the OCD which is "Life form ratio means the relative percentage of 8 regionally native species in each of the following 9 10 classifications: Shrubs, forbs and grasses," so we would be adding in "regionally native species." 11 12 CHAIRWOMAN BAILEY: Commissioner Balch, do 13 you support that? 14 COMMISSIONER BALCH: It certainly sounds 15 better. 16 COMMISSIONER BLOOM: I will say that I like OCD's definition because it does make sure that 17 we are dealing with native species when we are 18 dealing with revegetation. That's important and it 19 should be in there, and I think regionally is good 20 in that it doesn't mean it has to be a site-specific 21 22 native species, so if there was a particular strain 23 of grass or something on a nearby site but seeds 24 weren't available but something that was regionally 25 appropriate and generally fitting with the area,

Page 2446 1 that it would be well suited for revegetation of the 2 area. COMMISSIONER BALCH: I believe that was 3 Dr. Buchanan's argument was you didn't want to 4 5 restrict yourself -- if you said only plants native to New Mexico but you had a location that was on the 6 7 New Mexico/Colorado border and the climate, the elevation, all of that stuff is appropriate for the 8 plant that doesn't usually show up in New Mexico but 9 might, you wouldn't be able to use it if you said 10 regionally. 11 My only concern would be -- and this is 12 actually sort of -- this comes back to the issue of 13 enforceable and vague rules. Because regionally 14 could mean something different to everybody. 15 Somebody could say the Southwest U.S., and that 16 17 would include Texas and Arizona and maybe New Mexico. But if you are in the northern part of the 18 19 state, you are more like Colorado or Wyoming type 20 climates. If you are in the Southeast you are much 21 more like Texas. 22 So if it's going to be easily enforceable, I think you want to leave as broad an ability to put 23 in the correct plants that you can. Even just 24 25 saying a relative percentage of plants, how do you

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1 come up with that number?

CHAIRWOMAN BAILEY: There are requirements 2 in the current rule concerning comparison with plant 3 4 species and thickness, volume, in the same general 5 area as the well site. I believe that regionally is specific enough as to eliminate California or New 6 7 York or any areas clearly outside of the region, no matter if you are talking about the mountainous west 8 or the desert southwest. 9

10 COMMISSIONER BALCH: Sure. I quess let me 11 restate my concern. It's not that great of a 12 concern necessarily, but if you go down to the Gila 13 Wilderness you will find plants that are unique to that area which are seen nowhere else in New Mexico 14 really. However, they would be in the same region. 15 You could theoretically take that plant and use it 16 17 in the San Juan Basin or the Permian Basin, which I'm not sure if that's necessarily bad. I just want 18 to point out that you might take a regionally native 19 20 species from the Permian Basin that may not necessarily be found in the San Juan Basin. 21 22 So maybe you would COMMISSIONER BLOOM: 23 like to suggest language then that cleans that up a 24 little bit and would be something along the lines of

25 relative percentage of native species to a New

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Page 2448 Mexico region? Or a region in New Mexico? 1 2 COMMISSIONER BALCH: I don't think you can 3 clean it up better than it is. The fact is, a plant 4 that can't survive in the new area would not take 5 anyway. Of course, that leaves you without your 6 ground cover. So you are kind of trusting wherever 7 else in the regulations that specify your relative percentage of plants to -- I'm not sure that I'm 8 9 being clear. 10 CHAIRWOMAN BAILEY: No, I can see where 11 you're trying to define region. 12 COMMISSIONER BALCH: But I don't think you really can. 13 CHAIRWOMAN BAILEY: I don't think you can 14 15 either, but I think we want to eliminate California 16 and New York. 17 COMMISSIONER BALCH: Right. So what was the OCD definition again that you were reading, 18 please? 19 20 COMMISSIONER BLOOM: Yes. "Life form ratio means the relative percentage of regionally 21 22 native species in each of the following classifications: Shrubs, forbs and grasses." 23 24 COMMISSIONER BALCH: If I recall 25 correctly, I think that Dr. Buchanan actually had a

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1 difference of opinion with language that was very similar to that because he thought it would be eliminating.

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4 COMMISSIONER BLOOM: I think Dr. 5 Buchanan's concern was that native could be over-enforced and you could end up with somebody 6 saying well, there was a particular strain of blue 7 8 grama grass on this pad originally and that's what has to be put there, and maybe there's no seed 9 10 market for that so you couldn't find it. I think that was his concern, that it could be you were 11 12 causing some issues.

13 COMMISSIONER BALCH: I guess my question is: Is there a list of regionally native plants? 14 If there is, does it include Russian Thistle? 15 16 That's not native but it's all over the United 17 States.

COMMISSIONER BLOOM: I don't think that's 18 19 considered a native species.

20 CHAIRWOMAN BAILEY: I don't think so. Ι 21 think that's one of those introduced species that 22 they are trying to eliminate.

23 COMMISSIONER BALCH: You could eliminate 24 it. It's tumbleweeds. You see it everywhere. So 25 there's a place where you could find lists of native

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Page 2450 plants? 1 CHAIRWOMAN BAILEY: I believe so. 2 3 COMMISSIONER BALCH: I don't think we can 4 come up with a better definition than the proposed 5 OCD language. 6 CHAIRWOMAN BAILEY: So shall we agree to 7 insert the words "is the relative percentage of 8 regionally native plants in each of the following classifications"? 9 10 COMMISSIONER BALCH: I would agree to that. 11 COMMISSIONER BLOOM: That would work for 12 13 me. MR. SMITH: Plants or species? 14 CHAIRWÖMAN BAILEY: Plants, because we are 15 talking three different types, shrubs, forbs and 16 17 grasses. 18 COMMISSIONER BALCH: Should that be plant 19 species? 20 CHAIRWOMAN BAILEY: Native species. 21 COMMISSIONER BALCH: Native plant species? 22 COMMISSIONER BLOOM: Regionally native 23 plant species. Does that help? 24 CHAIRWOMAN BAILEY: Sure. COMMISSIONER BLOOM: Add "plant" between 25

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1 native and species.

2 CHAIRWOMAN BAILEY: Then we come to low 3 chloride fluids. The proposed definition is "means 4 fluids that contain less than 15,000 milligrams per 5 liter of chlorides determined by analysis or process 6 knowledge." Do either of you believe that we need 7 to have this definition first? 8 COMMISSIONER BALCH: It seems kind of an 9 interesting definition to have, because it's not half of sea water but it's half higher than drinking 10 11 water standards, which is why I think it's in the definition. 12 CHAIRWOMAN BAILEY: Drinking water 13 standards is 250 milligrams per liter. 14 COMMISSIONER BALCH: What's the limit? 15 16 CHAIRWOMAN BAILEY: TDS, total dissolved solids. 17 MR. SMITH: Low chloride fluids is what 18 you are working on? 19 20 COMMISSIONER BLOOM: Yes. 21 CHAIRWOMAN BAILEY: Because the way this 22 definition is used, it makes the distinction between siting locations, burial of waste materials and 23 24 analyses performed for soils. Other states have 25 developed their own definitions for low chloride

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1	Page 2452 fluids. It appears to be a useful standard in the
2	industry.
3	COMMISSIONER BALCH: It certainly gives
4	you something to measure against.
5	CHAIRWOMAN BAILEY: Yes, it does.
6	COMMISSIONER BALCH: More or less. It's
7	either less or greater than. What is the typical
8	number for other states that you are aware of?
9	CHAIRWOMAN BAILEY: I think in the
10	transcripts there were some numbers that were given.
11	In some states it may be as low as 5,000 and in
12	others it may be 15,000.
13	COMMISSIONER BALCH: That's what I
14	remember. I think it was pointed out in the hearing
15	that it was a number that basically translated to
16	material being able to be buried on-site when you
17	did your mixes.
18	CHAIRWOMAN BAILEY: And site locations.
19	COMMISSIONER BALCH: Right.
20	CHAIRWOMAN BAILEY: As far as offsets.
21	COMMISSIONER BALCH: So it's not exactly
22	arbitrary, but it does allow you to conclude that if
23	you have a fluid with less than that concentration
24	that you would be able to bury it on-site in many
25	cases.

Page 2453 1 CHAIRWOMAN BAILEY: If we decide that 2 that's an option. 3 COMMISSIONER BALCH: Right. I was just 4 saying I think that's where the number came from. 5 It wasn't pulled out of a hat. 6 COMMISSIONER BLOOM: Madam Chair, I don't 7 support the inclusion of the definition of low 8 chloride fluids. Chlorides are currently used as a 9 marker and if we set the level this high there wouldn't be a cause to look at chloride plumes, 10 which is pretty helpful in terms of finding how a 11 leak is moving. 12 CHAIRWOMAN BAILEY: No, I have to disagree 13 with that statement because we still would be able 14 15 to mark chloride plumes within groundwater. COMMISSIONER BLOOM: We wouldn't be 16 looking at them over a certain period. 17 CHAIRWOMAN BAILEY: Of course we would. 18 We would be able to analyze any volume of chlorides 19 20 or any concentration of chlorides, put it that way, 21 in groundwater. 22 COMMISSIONER BLOOM: I think we want to look at that. 23 24 COMMISSIONER BALCH: Maybe if I can say 25 this briefly, this may be something we have to come

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1	back to after we look at the end result, which is
2	why we do have this limitation or this definition.
3	CHAIRWOMAN BAILEY: Shall we come back to
4	it later?
5	COMMISSIONER BLOOM: We could do that.
6	That would be fine.
7	CHAIRWOMAN BAILEY: Okay.
8	COMMISSIONER BALCH: It may turn out that
9	we don't need a definition or that the discussion
10	will be more meaningful in context.
11	CHAIRWOMAN BAILEY: Okay. Why don't we go
12	down to the definition for measurable. It means a
13	layer of oil greater than a sheen that is measurable
14	by color cutting or other acceptable method.
15	COMMISSIONER BALCH: This is another one
16	that's hard to measure.
17	CHAIRWOMAN BAILEY: Unless you have color
18	cut tape.
19	COMMISSIONER BALCH: I think the examples
20	were if you had a windy day it could be blown to one
21	side of the pit and you wouldn't necessarily be able
22	to see it at all. Other days that same amount of
23	oil or whatever could cause a sheen that would cover
24	half the pond. So do you color cut if you have
25	that situation and you use your tape, will you see

Page 2455 anything if it's all blown to one side of the pond? 1 CHAIRWOMAN BAILEY: Obviously, it's 2 decided by where you put your tape, but on the tank 3 or on the pit under the normal circumstances you 4 5 would be able to say from an unbiased point of view this is what it shows on the tape as measurable. 6 7 COMMISSIONER BALCH: Okay. Could you describe what that tape is? 8 9 CHAIRWOMAN BAILEY: I haven't used it in a very long time. 10 11 COMMISSIONER BALCH: You have got me beat. 12 I have never used it so I guess I want to understand what it does. 13 CHAIRWOMAN BAILEY: A very long time. 14 There have been other improvements and it's simply a 15 matter of dipping it in and the tape shows the depth 16 17 of the --18 COMMISSIONER BALCH: Okay. So it measures 19 the thickness of the oil on top of the water? 20 CHAIRWOMAN BAILEY: Yes. COMMISSIONER BALCH: And then the 21 thickness is translated on a volume across the area 2.2 23 of the surface? Okay. And measurable, you know, what kind of limitations are on that? I think you 24 have to be able to see it to be able to measure it. 25

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Page 2456 You would see the sheen before you would measure it. 1 CHAIRWOMAN BAILEY: You would see 2 something, yes, obviously. If it's measurable, it's 3 4 visible, but there is that distinction between visible and measurable because you can see a sheen 5 6 but it's not going to be measurable. 7 COMMISSIONER BALCH: Right. It's a 8 molecule thing. 9 CHAIRWOMAN BAILEY: Yes. 10 COMMISSIONER BLOOM: I'm wondering, and 11 this just occurred to me, I haven't considered it before, but do we want to look at the definition of 12 visible at the same time? I think these seem to 13 14 intersect at some point. 15 COMMISSIONER BALCH: That's on the next 16 page. 17 CHAIRWOMAN BAILEY: Page 3. 18 COMMISSIONER BALCH: I guess it would be 19 т. No, it's still S. 20 CHAIRWOMAN BAILEY: So you can see a 21 sheen. 22 COMMISSIONER BLOOM: Then there's a separate OCD definition of visible, which is any oil 23 24 on the surface of the pit. 25 CHAIRWOMAN BAILEY: Any sheen.

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Page 2457 1 COMMISSIONER BLOOM: That's correct. 2 CHAIRWOMAN BAILEY: That's visible, not measurable. You're not going to be able to clean up 3 4 a sheen as easily or practically as you can a 5 measurable amount. 6 COMMISSIONER BALCH: So I guess what is 7 the purpose of the definition? Where would it come 8 into play for measurable and for visible? CHAIRWOMAN BAILEY: Operations. I think 9 10 in the chapter on operations there are references to distinguish visible from measurable. 11 12 COMMISSIONER BLOOM: I'm wondering if we need both. 13 14 CHAIRWOMAN BAILEY: Do you want to come back to that? 15 16 COMMISSIONER BLOOM: We should come back to that. 17 COMMISSIONER BALCH: I would like to be 18 clear. Visible is what triggers the measurement 19 20 perhaps? 21 CHAIRWOMAN BAILEY: Let's come back to 22 that after we look at Section 1107. We come to 23 multi-well fluid management pit, which includes not 24 only the definition but time and size is not 25 attached to the definition. It means a pit used for

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Page 2458 1 the storage, treatment and recycling of stimulation 2 fluids and flowback water, not drilling muds, not 3 produced water, during the drilling and completion of multiple wells. They are not governed by the 4 Surface Waste Management Rule and not used for the 5 6 disposal of drilling or completion waste. Located 7 either on-site or off-site of a well drilling location and may remain in use until all wells 8 9 identified in the pit are completed. Any freshwater containment structure such as pond, pit or other 10 11 impoundment is not included in this definition. I think we have a lot of work to do on 12 13 this paragraph. 14 COMMISSIONER BALCH: So 19.13.36 NMAC, is that where you are limiting your impoundments to 15 less than ten acre feet? 16 CHAIRWOMAN BAILEY: Rule 36 is the Surface 17 Waste Management Rule which has to do with landfills 18 and ponds for disposal or treatment of wastes. 19 20 Landfills. This would exempt it because it's not a 21 permanent disposal of the stimulation fluids and flowback water, but there's no size limitation and 22 23 there's no expiration in this definition. 24 COMMISSIONER BALCH: The reason there's no 25 size limitation is because you don't know

Page 2459 1 necessarily how many wells you might want to treat 2 as a single --3 CHAIRWOMAN BAILEY: Or what volume will be used in the frac job. 4 5 COMMISSIONER BALCH: It would be determined operationally what the size of the pond 6 would be? 7 8 CHAIRWOMAN BAILEY: Right. 9 COMMISSIONER BLOOM: I know during testimony, I think it was Mr. Lane, talked about the 10 multi-well fluid management pit and said that the 11 typical multi-well pit would have about 40 acre feet 12 as opposed to a temporary pit, which is about ten. 13 So we're looking usually at about four times the 14 volume. 15 16 I'm very intrigued by the multi-well fluid management pit. I think we have much less surface 17 disturbance, conservation of water. It works in a 18 lot of ways. But I don't know that it was fleshed 19 20 out very well throughout the -- or developed here in 21 terms of how it's regulated, and we heard bits and 22 pieces and I don't know if we can cobble something together and make these work but I am very intrigued 23 24 by it. 25 CHAIRWOMAN BAILEY: I have done some

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Page 2460 1 research, because like you, I have been intriqued by 2 it. I think that there are some strong advantages, 3 but yet I believe that there are some regulatory 4 constraints that should be put on them. In fact, 5 during the discussion with Mr. Lane I asked, "When does the regulator step in and say this is no longer 6 7 a multi-well pit, it's a permanent pit because it 8 has some aspects of a permanent pit." And his testimony was that there may be an inactivation 9 component that needs to be built into this. 10 So looking at that, I checked what's the 11 typical size of a frac job? And I looked at frac 12 focus, which is the national database, and I found 13 everything from less than 2000 gallons of water to 14 six and seven million gallons of water for some of 15 the larger jobs. The six and seven I found in 16 I didn't find those in New Mexico. But just 17 Texas. from my plunking around, it appeared as though a 18 typical water volume was about 3.2 million gallons. 19 20 I looked specifically at the Devon Snapping 2 State 3H, which used 3.3 rounded up 21 million gallons of water in their report. 22

23 COMMISSIONER BLOOM: So to make sure we 24 are on the same page, an acre foot is 325,000 25 gallons, ten acre feet is 3.25 million gallons? Is

1 that right?

2 CHAIRWOMAN BAILEY: The way I measured it 3 out, ten acre feet was about 3,350,000 gallons, so 4 the ten acre foot limitation would take care of many 5 of the frac jobs that go on, many of the frac 6 systems. It wouldn't take care of all of them, but 7 would take care of many of them.

8 COMMISSIONER BALCH: It would depend on 9 the operations, too. If you are doing them serially, then I think ten acre feet would be able 10 to cover your typical shale frac jobs of two, three 11 or four million gallons. You do lose water on the 12 frac job. Your flowback is half to 70 percent of 13 the water you put in. It varies, depending upon the 14 formation, compatibility. 15

The idea, I think, and the way these are 16 17 done in practice, the reason they are large in places like Wyoming and Texas is so they can be 18 rapidly moving their rig. Or you have two rigs 19 20 operating at once on a sequence of wells. That said, I don't think you want something that's -- if 21 22 you are starting to look at things that are to the 23 scale of several Olympic swimming pools, you need to 24 . probably look at them a little differently than a 25 temporary pit.

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1 The petitions, I think, tried to address 2 that primarily by some sort of double liner or liner 3 in play with monitoring for your leakage, and then 4 by describing them as temporary, everything in there 5 would be removed and the site reclaimed and nothing 6 left on the site.

7 Whether that addresses all of the concerns you might have with the large scale impoundment, and 8 then my other concern, I think, is limitation --9 10 other limitations by other agencies on the size of ponds and impoundments. We have to figure out 11 jurisdictionally if we can even have something 12 greater than ten acre feet. I don't know for sure 13 and we can probably discuss that later on. 14

CHAIRWOMAN BAILEY: I checked into it. 15 Ι 16 believe -- and I may be wrong because I'm not an authority on State Engineer regulations. 17 I believe that it's a matter of our determining if we want to 18 have a size limitation and, if we want to have that 19 20 limitation, what it should be. In my research, it appeared as though the 3.3 million gallon volume 21 would be ten acre feet and would be adequate for 22 many -- maybe the majority of jobs. But if it was 23 24 inadequate they could always bring trucks, as they 25 apparently are doing now, to supplement.

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Page 2463 I quess if the ten 1 COMMISSIONER BALCH: acre feet limitation was not for operating under the 2 new paradigm of production, particularly with shales 3 4 and some of these large commingled plays, and I'm 5 thinking more of what's happening in West Texas 6 right now, if that ten acre feet limit was enough, 7 then they wouldn't be building ponds that are bigger, and they are building ponds that are bigger. 8 CHAIRWOMAN BAILEY: Because that 9 eliminates the need for additional trucking. 10 11 MR. SMITH: I just want to caution you all 12 to remember that you need to be able to look to your record in order to justify whatever decisions you 13 make in this matter. I don't know whether there's 14 enough evidence for you to make these kinds of 15 determinations or not. That's up to you all, but 16 17 you want to look to the record in order to make your decisions. 18 I think they didn't 19 COMMISSIONER BALCH: 20 put a -- in testimony, I don't think Mr. Lane put a limitation on it because he didn't want there to be 21 22 a limit that was imposed arbitrarily. He would 23 rather it be imposed by the needs of the operation.

25 I think there's a couple things that are important

That said, in a well-formed regulation you would --

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Page 2464 to me in multi-well fluid management pits. I think 1 2 they have to be substantially temporary. You don't 3 want them sticking around for ten years or five 4 years. You want it to be there for the duration of 5 the operation that's it's being built for. You want 6 to make sure there's something that has some 7 limitation on the time so it is temporary. 8 CHAIRWOMAN BAILEY: I have some 9 suggestions for that, too. 10 COMMISSIONER BALCH: Okay. The other 11 thing is do you want to let them be of any arbitrary size? And I think that one approach that might be 12 viable is to set some limit, and then above that you 13 14 would have to seek an exception or a variance on a case-by-case basis. What that limit is, I do not 15 16 know. 17 COMMISSIONER BLOOM: That's a concern I have as well. We don't have a lifespan yet. 18 The 19 lifespan would be, I quess, the --20 COMMISSIONER BALCH: Until the operations 21 are completed. 22 COMMISSIONER BLOOM: Yes. If you get 23 bigger in size, we haven't really talked about 24 performance of liners and what liners would be 25 adequate, but we do have the permanent pits and they

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are limited to ten acre feet and then they have
 their guidelines which I would have to review. But
 that's out there.

4 CHAIRWOMAN BAILEY: Talking about a time 5 limit that you are concerned about also, and based 6 on Mr. Lane's comment, "So there may be an inactivation component that needs to be built into 7 8 this," I looked to see where else in the oil and gas 9 industry we have the potential for a reasonable 10 limitation on time. If we use the language that the 11 pit may remain in use -- looking at the third line from the bottom -- until all wells with approved 12 APDs identified in the pit permit are completed --13 14 because APDs have a two-year limitation.

15 COMMISSIONER BALCH: That would be the 16 operational period plus two years at the most. It 17 would be two years at the most from the latest filed 18 APD.

19 CHAIRWOMAN BAILEY: There's another 20 approach. I tell you, I was intrigued with the 21 idea. In the template for the standard unit 22 agreements, exploration unit agreements, there is a 23 section on drilling to discovery, and it says that, 24 "An operator shall continue drilling diligently one 25 well at a time allowing not more than six months

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Page 2466 between the completion of one well and the beginning 1 of the next well," which means that -- or until the 2 production is -- the discovery is made. 3 We don't need to have that, but there's also the limitation 4 5 that the director could modify the drilling requirements of that section by granting reasonable 6 7 extensions of time when such action is warranted. So I throw out for discussion, we could 8 9 either limit it to only those approved APDs and/or we could have this continuous drilling requirement. 10 I think the active 11 COMMISSIONER BALCH: APDs to me sounds a little more easy to enforce and 12 13 trackable because it's already tracked on the map. Whether you can drill or not -- APDs, can you get an 14 extension on the two years? 15 CHAIRWOMAN BAILEY: They can be renewed. 16 17 COMMISSIONER BALCH: They can be renewed 18 for another two years? CHAIRWOMAN BAILEY: Yes. 19 20 COMMISSIONER BALCH: Just another two Continuously drilling -- here is my concern. 21 years? And I think you have heard me say this a lot of 22 23 times. About 70 percent of all oil comes from the 24 smaller producers and about half our natural gas at this time. Well, last time I checked in 2003. 25 Ι

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have no reason to think that's changed
 substantially. By small, I mean not a major oil
 company.

4 If some of the scenarios that Mr. Lane 5 described were to occur in the San Juan Basin and be 6 done by a large operator, I would imagine that the 7 pits would only be there for a year because they would get in there, they would do a completion, 8 9 three weeks later another completion, three weeks 10 later another completion. They would probably spend 11 more time on building and dismantling the pit than 12 they did on operation.

On the other hand, if you have a smaller 13 operator or a group of smaller operators, you could 14 15 run into delays that would extend that time period and you definitely don't want to discourage those 16 people from using a tool like a multi-well fluid 17 18 management pit which would make things more efficient, use less resources and be more 19 cost-effective. But you also want to make sure it 20 doesn't hang around for four years or two years and 21 22 another two years and another two years, and you are starting to get to the point where you wonder if the 23 liner is going to be stable for that time period. 24 25 So something has to be put in there to

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Page 2468 1 make sure that these are temporary, that's easily monitored and enforceable but allows the flexibility 2 to make them actually beneficial. Did I pose more 3 4 questions than I did answers there? 5 CHAIRWOMAN BAILEY: Well, I'm looking for 6 a solution to the proposal. 7 COMMISSIONER BALCH: I like the idea of tying it to APDs and having certain APDs tied to the 8 9 initial application for the multi-well fluid 10 management pit. COMMISSIONER BLOOM: I think that's a good 11 way to start considering it, putting a lifespan on 12 there, on the multi-well fluid management pit. 13 I'm concerned that ten acre feet might not be enough for 14 15 industry. It may be where they would need to go bigger. Commissioner Balch talked about some in 16 Texas or some larger pits, and I think one of the 17 things that we like about the multi-well fluid 18 management pits is you reduce a lot of truck traffic 19 20 which is often a complaint in our oil producing 21 regions. You have less environmental impacts. 22 If we found something that would end a 23 good portion of the truck traffic, I think that would be good. I don't know how -- I haven't heard 24 25 any testimony of anything over ten acre feet and I

don't know how liners perform given various volumes
 and depths.

I think there was 3 COMMISSIONER BALCH: 4 testimony on that, and it particularly came up in 5 regards to hydraulic head, and I think the idea was that the pits would not necessarily be deeper, they 6 7 would tend to be larger in area. So the point of where you are measuring your hydraulic head on a 8 liner at the bottom of the pit, it doesn't care how 9 much water there is to the side. It only cares how 10 much water is above it. 11 COMMISSIONER BLOOM: I understand it. Ιf 12 we go wider there's more evaporative loss of water 13 and more surface disturbance, too. 14 COMMISSIONER BÅLCH: Right. Although if 15 you are replacing multiple heads you wash out the 16 increase in the surface area. I don't know what a 17 good average number is. I do know that you want 18 something that can be useful and flexible enough. 19 20 In other words, if you say ten or you say 20 or you say 30 or 80 or like some of these pits in Texas 21 that are 100 acre feet, I don't know if pinning an 22 exact number on it is the best way to go or having a 23 number over which you have to have a more active 24 involvement by the Division or the Commission. 25

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Page 2470 1 Now, in our work that we have done lately, 2 we look at the acid gas injection wells. The reason is because it's something that's becoming more and 3 4 more prevalent, and we want to understand the 5 usefulness and the implications of a variety of features and how do you best address them. 6 So it 7 may be a similar time period where we would look at some of these larger pits or pits above a certain 8 size just to see what they are doing and come up 9 10 with a good understanding of how well they work or what is a size below you don't worry too much and 11 above you want to have extra considerations taken. 12 13 CHAIRWOMAN BAILEY: Are you suggesting 14 that we put a ten acre feet and approved APD, but say that there exceptions may be for differences in 15 size or length of time? 16 17 COMMISSIONER BALCH: Well, I guess I am less confident about putting a size limit. I don't 18 19 know what would be appropriate. I think if you are 20 doing -- I think some of the jobs that Mr. Lane described might be ten wells or 15 wells, and if you 21 have a limitation of ten acre feet and that was one 22 23 frac job, then I think you are not going to have 24 something that would be efficient for rapidly completing those wells with just ten acre feet. 25

Page 2471 On the other hand, do I want them to be 1 able to arbitrarily build as large of an impoundment 2 3 as he wants to? I think there has to be someplace 4 where you look at it a little more closely. MR. SMITH: 5 Let me just interject here real quickly. You want to make sure, I think, that 6 7 the discussions that you are having at this point are matters of how to exercise your judgment as 8 9 opposed to matters not having enough evidence to make the decision. 10 Okay. 11 COMMISSIONER BALCH: I think --MR. SMITH: I mean, I'm not arguing 12 anything one way or the other. I just, again, want 13 to caution you that you want to make sure that you 14 15 have enough evidence in the record to make decisions or maybe you do and you are trying to make a 16 judgment call. That's up to you guys. 17 18 CHAIRWOMAN BAILEY: I believe this is a 19 judgment call based on the information that is in the record. 20 21 MR. SMITH: Okay. CHAIRWOMAN BAILEY: And the additional 22 research that was done at the time. 23 24 MR. SMITH: That's fine. I'm just doing 25 my job.

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Page 2472 CHAIRWOMAN BAILEY: I realize that. 1 COMMISSIONER BALCH: Appreciate it. 2 3 CHAIRWOMAN BAILEY: There is the possibility of not putting a size limitation but 4 putting a construction requirement that it meets the 5 same standards as a permanent pit with the heavier 6 liner and the double liner? 7 COMMISSIONER BALCH: I think other 8 9 concerns that were raised was about the nature of the double protective system. 10 CHAIRWOMAN BAILEY: We do have testimony 11 concerning the problem with the construction. 12 13 COMMISSIONER BLOOM: We heard both things. Somebody said there would be two liners and somebody 14 said it could be one fabric liner and it could be 15 clay as well. 16 17 COMMISSIONER BALCH: What does the current 18 regulation state for permanent pits? 19 CHAIRWOMAN BAILEY: Unchanged. 20 COMMISSIONER BALCH: Right. I understand. 21 CHAIRWOMAN BAILEY: It's a double liner with a leak detection system. 22 COMMISSIONER BLOOM: You have a choice of 23 a 30 mil flexible PVC or 60 mil HDPE liner. 24 CHAIRWOMAN BAILEY: The 60 mil is the 25

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Page 2473 1 permanent pit. 2 COMMISSIONER BLOOM: It allows both. "Geomembrane liner shall consist of 30 mil flexible 3 PVC or 60 mil HDPE liner." 4 CHAIRWOMAN BAILEY: Oh, okay. Depending 5 6 on the type? 7 COMMISSIONER BLOOM: Exactly. CHAIRWOMAN BAILEY: It has the upper liner 8 geomembrane and secondary lower liner, geomembrane 9 liners. Geomembrane shall constant of 30 mil or the 10 60 mil. 11 12 COMMISSIONER BLOOM: I will note, too, that when I was reading OGAP's closing statement 13 that they also shared some concerns about was this 14 fleshed out enough that the permanent pit could be a 15 possible solution here, looking at that for 16 17 quidance. 18 CHAIRWOMAN BAILEY: Right. I would feel more comfortable if we put the time limitation of 19 20 the approved APDs for the wells that would be 21 dedicated. 22 COMMISSIONER BALCH: That these would include --23 24 CHAIRWOMAN BAILEY: Yes. And the use of 25 the construction standards of a permanent pit

Page 2474 1 without any kind of size limitation. 2 COMMISSIONER BLOOM: Now, I would have 3 some concerns there in that if the pit went higher 4 and bigger, you would have a lot more head, correct? And maybe those liners wouldn't be sufficient in 5 that case. I haven't heard any testimony about the 6 7 efficacy of those liners if the size would increase above ten acre feet. 8 9 CHAIRWOMAN BAILEY: So are you proposing the time limitation, the size limitation and the 10 permanent pit construction standards? 11 12 COMMISSIONER BALCH: I think he is talking more about a depth limitation. 13 14 COMMISSIONER BLOOM: Depth, yeah. COMMISSIONER BALCH: 15 There was testimony about hydraulic head on a number of occasions. 16 The 17 back of the envelope calculation like I believe 18 Dr. Neeper did in one of his exhibits, he could calculate a rather large amount of water going 19 through a liner with ten feet of hydraulic head, but 20 21 I don't believe that those equations really work 22 very well for the effusive flow that you are seeing with the liner, so you are really looking more at 23 what's going to come through pinhole leaks and 24 25 imperfections and things like that.

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Page 2475 To some extent, if you increase head 1 dramatically you might increase that amount of 2 effusive flow, but I would have to do an awful lot 3 4 more calculation before I comfortably want to look at that. I think I would rather see these pits be 5 larger aerially than considerably much deeper. 6 Is 7 there a limitation on the depth of permanent pits? CHAIRWOMAN BAILEY: No. 8 9 COMMISSIONER BLOOM: I don't think so. 10 CHAIRWOMAN BAILEY: Do you have a copy of the current Rule 17? 11 COMMISSIONER BLOOM: I am looking at the 12 NMOGA's Attachment A which had their changes. 13 Permanent pit is on Page 15 of that. 14 COMMISSIONER BALCH: I think, practically 15 16 speaking, you are probably not going to end be up with a 40-foot deep head. If you have a ten acre 17 foot head, it could be ten acres of area and ten 18 19 feet of depth or it could be five acres of area and 20 20 feet of depth -- sorry, five acres of 20 feet of depth. But at some point you are going to find it 21 easier to make it wider than deeper with a 22 23 bulldozer, and being able to meet other construction quidelines such as your edge material and your 24 25 overlap and things like that. Berm.

Page 2476 And the slope that we 1 CHAIRWOMAN BAILEY: still need to talk about. 2 COMMISSIONER BALCH: 3 Right. 4 COMMISSIONER BLOOM: Dr. Balch, is there a 5 way to increase the volume similar to the 20 acre feet that there would be more than enough to do at 6 7 one average frac job, increase it to 20 acre feet, not get it to a size where it has too much more head 8 on it than you would have in a permanent pit that's 9 ten acre feet? 10 COMMISSIONER BALCH: Well, head is just 11 dependent on the depth of the water so the only 12 thing you would be able to do is put a limitation on 13 14 the depth of the pond. But there was not, I don't 15 think, any testimony or anything about depth and what would be appropriate --16 17 COMMISSIONER BLOOM: We don't have 18 quidance. 19 COMMISSIONER BALCH: Now, these liners have design specifications and I'm going to guess 20 that one of those design specifications would be how 21 much head can it handle, how much pressure. 22 Well, 23 normally what they do is a rod test, poke at it with a rod or something until it breaks and then they 24 25 know how much pressure in the particular location.

Page 2477 1 So, I mean, some of the things we are 2 discussing may not be important at all because they will already be in the limitations of the materials 3 4 if they are used correctly, which is a concern. 5 Now, as far as limiting the size of a multi-well fluid management pit, I think if you do 6 that then very likely we will be discussing it again 7 pretty soon because you are not making a design 8 that's based upon operational parameters and needs, 9 10 you are making one based on some arbitrary number, that probably the three of us individually are not 11 necessarily qualified to determine. We have the 12 evidence that's before us that there's a need for 13 it, and I think it's up to us that makes a 14 regulation that allows for it in a safe and 15 effective way. 16 And I like the stronger requirements of 17 the permanent pit. I don't like ad hoc limitation 18 19 on size. I have a feeling that I don't want them to 20 be 100 feet deep or 300 acres big, but I don't know how to really limit that. The only limitation I can 21 see is to limit the number of wells that would be 22 23 allowed on a permanent for multi-well pit, at which

effective operations. But that might be the easiest

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point you are looking at effecting what is the most

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way to limit the size.

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2 If you say ten wells, you are going to be 3 looking at, at most, probably 50 acre feet would be a very large, effective volume that you could use. 4 5 CHAIRWOMAN BAILEY: But that --COMMISSIONER BALCH: And if they wanted 6 7 more than that, then they would have to seek an 8 exception. CHAIRWOMAN BAILEY: That disallows use of 9 the pit for large frac jobs if you limit it to the 10 number of wells. A central location within one of 11 the large units in the Northwest may service more 12 than ten wells. 13 14 COMMISSIONER BALCH: Sure. Well, ten was an arbitrary number. My concern in constructing a 15 useful regulation is that if you put in arbitrary 16 limitations then you defeat the purpose of having 17 the rule in the first place. You create an 18 artificial limit on what it's supposed to remove, 19 which is an inefficiency. 20 21 COMMISSIONER BLOOM: I agree. You want this to serve the industry's needs and be efficient 22 for them. 23 COMMISSIONER BALCH: Well, and the most 24 25 efficient they are, the less truck traffic, the less

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Page 2479 water tanks there are moving down the freeways, the 1 2 less individual chance for leaks from all the fittings and valves that you have on your thousand 3 I mean, it makes a lot of sense to reduce 4 tanks. 5 your footprint for these large operations, and realistically, the direction that industry is going 6 7 is towards shales and towards larger frac jobs and that's going to be happening in New Mexico as well. 8 Texas doesn't have a Pit Rule, so they can 9 10 build a 100 acre multi-well pit if they want to. But because we have a ten acre limit, that's why 11 it's brought up. If industry thought they could do 12 this with a ten acre pit they wouldn't have put it 13 They would just do it under the current 14 in here. rules. 15 16 CHAIRWOMAN BAILEY: Because the permanent pit is only used for the produced water. 17 COMMISSIONER BALCH: No, I meant using the 18 19 temporary pit. I guess there's no allowance in the 20 current version of the Pit Rule for using multiple wells from one pit anyway. You have to have one 21 well, one pit, which is an example of what I was 22 just saying. If you -- you have to be careful not 23 24 to impose limitations that defeat the purpose of the 25 proposed change if we think the proposed change is a

1 good thing.

2 CHAIRWOMAN BAILEY: So what would you like 3 to see?

4 MR. SMITH: Let me remind you about your 5 idea for a variance. Maybe that would give you more 6 flexibility.

7 COMMISSIONER BALCH: The idea is if there 8 was some trigger where like with the acid gas 9 injection wells that have to come before the Commission and not potentially give us more work but 10 it does give an opportunity to put a workable 11 regulation into play now rather than doing ten years 12 of research and then putting the regulation into 13 play. I think this is something that is extremely 14 15 important.

16 CHAIRWOMAN BAILEY: It is. So do you 17 suggest a ten acre foot limitation with a larger to 18 be an exception to be heard by a hearing examiner or 19 the Commission?

20 COMMISSIONER BALCH: I think I like the 21 idea better of having the larger pits managed by 22 something else, like a number of APDs that are 23 attached to it or something like that. Or the 24 predicted -- you know, at some point it's going to 25 become impractical -- and I think Mr. Lane brought

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Page 2481 this up -- it's going to become impractical to have 1 2 more than X number of wells managed by one central 3 management pit because you do have to have temporary 4 pipelines and all kinds of things like that to move 5 the water around. 6 It seems like you would end up with a 7 situation where you would be fracking the 100 wells 8 from one multi-well pit. 9 CHAIRWOMAN BAILEY: So the true limitation would be the number of wells with approved APDs that 10 can be drilled using that pit within two years or 11 extensions thereof. 12 13 COMMISSIONER BALCH: That would seem to be 14 a practical limit that would be pretty easily monitored. Well, it wouldn't have to be monitored. 15 It would take care of itself. 16 17 CHAIRWOMAN BAILEY: Takes care of itself. 18 COMMISSIONER BALCH: So if you had an operational plan to do 20 wells and you could do it 19 20 within two years -- I quess you wouldn't make a plan 21 then if you couldn't do it within three years, so it would be a natural limitation. And if you weren't a 22 23 large company and you were doing it with a different type of operation, you may not try to put 20 wells 24 25 on your APD. Maybe that would be the best way to

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Page 2482 limit it. I really don't like the idea of putting 1 an arbitrary size limit on it. 2 3 CHAIRWOMAN BAILEY: And we have had no 4 testimony. 5 COMMISSIONER BALCH: That's right. Now, on the other hand, I think if those APDs are put up 6 7 for renewal, that's when it should come before the Commission, because then they are going to extend 8 9 the life of the pit. 10 CHAIRWOMAN BAILEY: What is your belief, 11 Commissioner Bloom? COMMISSIONER BLOOM: If we could cobble 12 13 something together that would be protective of the environment and base it on testimony we heard and 14 15 what's in the rule currently, I think we could do I don't know that -- I'm still wondering if 16 that. 17 we have heard enough to be able to put together a multi-well pit that works for industry and gets them 18 what they need. 19 20 COMMISSIONER BALCH: Well, I think that the time limitation on the APDs will self-limit the 21 volume, the size of the volume they need. 22 23 COMMISSIONER BLOOM: Let me ask you this: What if the frac job requires -- hearing what 24 Commissioner Bailey found was some three million 25

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gallons plus for an average frac job, but we are seeing some that go up much larger than that. We could be seeing in the Northwest more shale oil production. If we make something too small we lose some of the environmental benefits.

6 COMMISSIONER BALCH: Here's the thing. 7 The larger the frac job -- your frac job size is going to be dictated by a couple things. The first 8 9 thing it's going to dictate is how many stages you 10 are going to do. The number of stages is going to 11 be dictated by the length of the section that you are trying to fracture and the rock mechanics that 12 13 goes into how much fluid is needed within a particular closed-off section to break the rock. 14 So 15 the larger your horizontal wells are, the longer 16 they are, the less wells you are going to need. 17 So as you increase the size of the frac job, you need less wells in the same area. 18 There's · also going to be a limitation on how many -- well, 19 20 there's not really a limitation on horizontal wells, is there? 21 22 CHAIRWOMAN BAILEY: No. 23 COMMISSIONER BALCH: But basically, I think that's the other side of it. If you are doing 24

25 a much larger job, you need to do less of them in

Page 2484 1 the same relative area to fracture the rock effectively. So I think it would be self-limiting 2 to some extent. Actually, to a great extent. 3 Ι really like the automatic use of the APD timeline 4 5 and then if they want to extend the APD then they 6 have to come show us. 7 COMMISSIONER BLOOM: I think we could work something with that, and if it extended out two 8 years it could still be okay maybe because we were 9 dealing with something originally designed as a 10 11 permanent pit which would have a longer lifespan. 12 COMMISSIONER BALCH: I think you would want to have a re-evaluation at that point basically 13 14 and make sure that there's a fixed time. And that's 15 when coming before the Commission would be 16 appropriate. 17 CHAIRWOMAN BAILEY: You want them to come 18 before the Commission or before the Division? 19 COMMISSIONER BALCH: The Division, yeah. 20 Doesn't have to come straight to us. I know with the acid gas it comes straight to us. And since 21 this is a new thing, that might be advisable for a 22 23 period of time. I don't know how you write something like that. 24 25 CHAIRWOMAN BAILEY: We can simply say it

Page 2485 shall go to hearing, and then --1 2 COMMISSIONER BALCH: You can administratively decide --3 4 CHAIRWOMAN BAILEY: Then administratively 5 say, like the acid gas comes to the Commission, administratively say that it comes to the Commission 6 7 for extensions. COMMISSIONER BALCH: APDs for wells tied 8 to a multi-well management pit? 9 CHAIRWOMAN BAILEY: Okay. Then let's do 10 11 some wordsmithing. COMMISSIONER BLOOM: 12 Excuse me. Have we decided on a ten acre foot size limit on this? 13 14 COMMISSIONER BALCH: No. 15 CHAIRWOMAN BAILEY: No. 16 COMMISSIONER BALCH: I think the 17 modification will be based on what they can do 18 operationally within two years, which should be a 19 pretty good limitation on size. I think that would be greater than ten acre feet but it won't be a 20 21 million acre feet or 100 or something like that. 22 Hopefully it gives enough flexibility that they can 23 design operations appropriately, and I think most operations would be designed to be completed by the 24 time the APD expires. 25

Page 2486 COMMISSIONER BLOOM: If it was to go 1 beyond ten acre feet, would there be a way we could 2 craft something where the depth wouldn't be much 3 4 bigger on average than what you find in the 5 permanent pit so you don't have --COMMISSIONER BALCH: I think it would be 6 7 more on the design specifications than the liners. COMMISSIONER BLOOM: Not to exceed the 8 design specifications. 9 10 COMMISSIONER BALCH: Not to exceed. Or 11 actually engineering, they usually have a 200 percent factor so you wouldn't go up to a limit of 12 13 the liner, you would go to half the limit of the 14 liner typically in most engineering designs. 15 COMMISSIONER BLOOM: That could work. 16 CHAIRWOMAN BAILEY: There's one other 17 small detail. Part of this definition says "Multi-well fluid management pits may be located 18 either on-site or off-site of the well drilling 19 location." One of the public comments by R360 20 Environmental Solutions talked about the definition 21 22 of on-site. On their public comment dated May 2nd, 2012 on Page 7 R360 suggests keeping the word 23 "on-site" throughout 19.15.17.11 NMAC and defining 24 25 it in 19.15.17.7 NMAC to mean within the boundaries

Page 2487 1 of the lease and/or development plan wherein 2 exploration and production waste continues to be under the control and management of the 3 4 operator/producer. 5 That would prevent a commercial landfill from being developed on an on-site area that allows 6 7 disposal of the fluids or temporary holding of the fluids in the multi-well fluid management pits. 8 The word -- I'll repeat that. Because we use the term 9 "on-site" in this definition, I believe we need to 10 have a definition of on-site to mean within the 11 boundaries of the lease and/or development plan 12 wherein exploration and production waste continues 13 to be under the control and management of the 14 operator/producer. 15 16 COMMISSIONER BALCH: Is there ever a 17 situation where it would be off-site by that definition? 18 19 CHAIRWOMAN BAILEY: When we start allowing fluids from multiple wells to be put into an 20 21 off-site location? 22 COMMISSIONER BALCH: Right, but I'm guessing by the definition that -- where would it be 23 off-site? Because it would still be -- they would 24 25 still have to have an agreement for the pit with the

Page 2488 1 surface owner. 2 COMMISSIONER BLOOM: Maybe they are trying to prevent somebody opening multi-well fluid 3 4 management pits, say, on private land and saying, "I will take the water over to you," or something like 5 that where it's no longer in the control of the 6 7 owner/operator. 8 COMMISSIONER BALCH: Somebody basically saying you can put it on my ranch? 9 10 COMMISSIONER BLOOM: Yeah. CHAIRWOMAN BAILEY: Then they become --11 12 COMMISSIONER BALCH: They become a partner in the operation. So by definition it would be 13 14 on-site. Now, the question there might be sort of how do you connect the water to your operations? 15 Ι think you have to have a continuous surface area to 16 be able to run your temporary pipeline, get the 17 water from the management pit to the site that you 18 need. So I quess off-site, the only thing that 19 20 would be really off-site is something that was disconnected to that location and you would have to 21 have some other arrangement to move the pipeline or 22 23 pipe the water. That might be the concern. 24 CHAIRWOMAN BAILEY: Well, if you have multiple leases and multiple well sites and you are 25

Page 2489 1 using a centralized multi-well pit that's not located on the lease --2 MR. SMITH: Let me ask you two to keep in 3 mind -- and I don't know whether it's used elsewhere 4 or not -- but if you are going to define on-site for 5 the purpose of making this definition clearer, you 6 want to make sure that however you define it, it 7 does not unintentionally affect uses of the term 8 9 on-site elsewhere in the regulations. 10 CHAIRWOMAN BAILEY: Then why don't we hold off on debating this definition for on-site until we 11 see where else in the rule it may appear. We will 12 just stay alert. 13 MR. SMITH: Well, not just the use of the 14 15 word "on-site" where it may appear in the amendments but use of the word "on-site" where it's left 16 completely alone. I mean, you may not notice it 17 18 there, but what we should probably do is a search 19 for the word "on-site" throughout the whole 20 document, not just looking at it there. 21 COMMISSIONER BALCH: Seems like what the intent of the existing definition is, is you 22 wouldn't necessarily have to put it at a well 23 24 drilling location. 25 CHAIRWOMAN BAILEY: Yes.

Page 2490 1 COMMISSIONER BALCH: But I think that maybe eliminating the words "on-site" or "off-site" 2 and putting in something that is more appropriate 3 4 would be better than trying to tackle the issue of 5 the definition, which may have cross-purposes in 6 other places. We could better frame the intent 7 using a different set of words. 8 CHAIRWOMAN BAILEY: Why don't we see where 9 else "on-site" and "off-site" are used within the 10 rule. 11 COMMISSIONER BALCH: Okay. CHAIRWOMAN BAILEY: But other than that, 12 13 do we want to use this definition but insert the words in that next to the last sentence where it 14 says, "Multi-well fluid management pits may be 15 located either on-site or off-site of a well 16 17 drilling location and may remain in use until all wells with approved applications for permits to 18 drill APDs identified in the pit permit are 19 completed." 20 21 COMMISSIONER BLOOM: Yes. 22 COMMISSIONER BALCH: That gives it a 23 two-year maximum, and that would self-limit the size 24 of the operation. 25 COMMISSIONER BLOOM: Does that leave some

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Page 2491 1 ambiguity in there about whether or not the APD could be extended? 2 3 COMMISSIONER BALCH: Okay, so now in the 4 next sentence --5 COMMISSIONER BLOOM: Do we want to say 6 "the original life of the APD" or add something else 7 after that which would say should the APD be 8 extended this would go before --9 CHAIRWOMAN BAILEY: "Any extensions of 10 approved APDs in the pit permit shall come to hearing." 11 12 COMMISSIONER BLOOM: Yes. 13 COMMISSIONER BALCH: Yes. Aren't extensions common? 14 15 CHAIRWOMAN BAILEY: It depends. A lot of 16 times. I can't give you a number. 17 COMMISSIONER BALCH: I think that addresses the time limit. 18 COMMISSIONER BLOOM: The lifespan. 19 20 COMMISSIONER BALCH: Now we can talk about the other design characteristics when we get to that 21 part of the rule. 22 CHAIRWOMAN BAILEY: Okay. So that brings 23 24 us to the definition for permanent pit. 25 COMMISSIONER BALCH: No, that hasn't

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1 caught up yet.

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2 CHAIRWOMAN BAILEY: "Until all wells with approved applications for permit to drill." After 3 4 that sentence -- no. No, no period there. That's 5 part of the sentence. Go to the end of the sentence 6 and insert another sentence that says, "Any 7 extensions of permits to drill identified in the pit permit shall go to hearing." Identified in the pit 8 9 permit shall go to hearing. 10 COMMISSIONER BALCH: At the beginning we have until "all wells" twice. 11 MR. SMITH: Just before the language 12 identified in the pit permit, do you want to 13 put "that are" in there? 14 15 CHAIRWOMAN BAILEY: Okay. 16 COMMISSIONER BALCH: Put an effective 17 three-year lifespan or something on the pit? MR. SMITH: Do you want to discuss the two 18 different definitions and why you are picking one 19 20 over the other? 21 CHAIRWOMAN BAILEY: What are the differences between the two other than what we 22 23 inserted? MR. SMITH: Well, I think it's the 24 25 discussion of the Surface Waste Management Rule in

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Page 2493 1 the first one. I don't see that in the second one. I haven't done it word for word. 2 3 COMMISSIONER BLOOM: Where did the second definition come from? 4 MR. SMITH: I think that's IPANM. Is that 5 6 IPANM? 7 MS. FOSTER: No. MR. SMITH: You're not supposed to talk. 8 9 I enjoyed that. 10 CHAIRWOMAN BAILEY: That portion concerning the Surface Waste Management Rule is part 11 of the NMOGA application, so the second paragraph 12 would be the TPANM. 13 14 COMMISSIONER BALCH: So what's the Surface Waste Management Rule of 1936? 15 16 CHAIRWOMAN BAILEY: That's the Surface 17 Waste Management Rule. 1.8 COMMISSIONER BALCH: Basically governs --19 CHAIRWOMAN BAILEY: Disposal of wastes. 20 COMMISSIONER BLOOM: Since this is not a 21 permanent --22 COMMISSIONER BALCH: There's no disposal 23 on-site. And if there happened to be a leak you would have to claim it. So there would still be 24 25 notice.

Page 2494 Does that clarify the 1 COMMISSIONER BLOOM: rule by having that in there? 2 3 CHAIRWOMAN BAILEY: I think so. So we can 4 eliminate the second paragraph, the one in green? 5 COMMISSIONER BLOOM: Let's see if there are any other differences. I don't think there are. 6 7 COMMISSIONER BALCH: Then we will have to come back. Maybe get her to highlight the 8 9 on-site/off-site and we will have to come back to that and discuss that later. 10 MR. SMITH: You might want to consider for 11 clarity's sake, instead of saying "not governed 12 under the Surface Waste Management Rule," if what 13 you really want there is to say "may not be used for 14 permanent disposal" as opposed to making some sort 15 of --16 17 CHAIRWOMAN BAILEY: So it would read "Multi-well fluid management pits may not be used 18 for the disposal of drilling or completion waste." 19 20 MR. SMITH: Are there only two kinds of waste? Do you want to put "drilling, completion or 21 22 other"? I don't know. I'm just a lawyer. 23 CHAIRWOMAN BAILEY: That would ensure that nothing is disposed of. 24 25 COMMISSIONER BLOOM: Could it be

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1	"Multi-well fluid management pits may not be used
2	for the permanent disposal of waste"?
3	COMMISSIONER BALCH: "Or other waste"
4	covers everything.
5	COMMISSIONER BLOOM: Okay.
6	CHAIRWOMAN BAILEY: Good.
7	MR. SMITH: You want to take out the next
8	one; is that correct?
9	CHAIRWOMAN BAILEY: Yes. It's 20 till
10	12:00. Shall we go for a couple more?
11	COMMISSIONER BALCH: Are they smaller?
12	CHAIRWOMAN BAILEY: They are smaller.
13	They should not be nearly as time-consuming. The
14	next definition is for permanent pit. It means a
15	pit, including a pit used for collection, retention
16	or storage of produced water or brine that is
17	constructed with the conditions and/or the duration
18	provided in its permit and is not a temporary pit,
19	and then they have suggested adding the language "or
20	a pit governed under the Surface Waste Management
21	Rule 19.15.36," which is the surface waste
22	management or disposal, permanent disposal or for
23	land farming.
24	COMMISSIONER BALCH: I think the reason we
25	took it out of the other one is because it was

Page 2496 1 temporary. But the permanent pit is, by its very 2 nature, permanent. 3 CHAIRWOMAN BAILEY: But a permanent pit is 4 specifically for produced water or brine. Permanent 5 pit does not include anything other than those two 6 components. 7 COMMISSIONER BALCH: I think that 8 definition is okay. CHAIRWOMAN BAILEY: To include the 9 10 suggested language or to not? 11 COMMISSIONER BALCH: I'm not a lawyer. 12 CHAIRWOMAN BAILEY: I don't think we need it when we have Rule 36 that says what it covers. 13 COMMISSIONER BLOOM: I'm fine with that. 14 15 CHAIRWOMAN BAILEY: Shall we eliminate the suggested language? 16 17 COMMISSIONER BLOOM: I would be fine with 18 that. MR. SMITH: I don't think you need to 19 reference other statutes or make a claim with 20 respect to what is or is not governed as long as you 21 are saying what you mean without reference to the 22 23 other statute. My fear is it could lead to argument 24 later on. Just say what you mean and stop. 25 CHAIRWOMAN BAILEY: Rule 36 should say

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Page 2497 1 what it covers. 2 MR. SMITH: Yeah. CHAIRWOMAN BAILEY: We can go to -- are we 3 4 all in agreement? 5 COMMISSIONER BALCH: Yes. COMMISSIONER BLOOM: Yes. 6 7 CHAIRWOMAN BAILEY: Shall we go to playa 8 lake? It means a dry, barren area in the lowest 9 part of an undrained natural desert basin underlain 10 by clay, silt or sand and commonly soluble salt, which the OCD suggests a different definition. 11 COMMISSIONER BALCH: Any relevant state 12 regulations that describe the playa lake? 13 14 CHAIRWOMAN BAILEY: Not that I'm aware of. 15 COMMISSIONER BLOOM: So the NMOGA definition doesn't mention the formation of the 16 temporary lake. This definition is taken from 17 19.15.2.7.4. 18 CHAIRWOMAN BAILEY: Which is the current 19 20 definition in the OCD regs. 21 COMMISSIONER BLOOM: Okay. COMMISSIONER BALCH: I don't see that 22 23 putting the definition in accomplishes anything. 24 CHAIRWOMAN BAILEY: I don't either. 25 COMMISSIONER BALCH: So --

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Page 2498 1 COMMISSIONER BLOOM: Let me look for one minute in NMOGA's closing documents to see if they 2 3 reference that. They may tell why they want to make It says, "NMOGA proposes the 4 those changes. 5 addition of a new definition of playa lake" and gives the definition that should be adopted. 6 There's no further elaboration. 7 If we want to use that over what we currently have --8 9 COMMISSIONER BALCH: The OCD definition better fits my dim recollection of geology. 10 CHAIRWOMAN BAILEY: I don't see the need 11 12 to change the definition for playa lake. 13 COMMISSIONER BLOOM: I would agree with that. 14 CHAIRWOMAN BAILEY: So we will use the OCD 15 definition which is retaining the current definition 16 of 19.15.2.7P4. 17 18 COMMISSIONER BALCH: Do we have to explicitly state that or just eliminate the 19 definition from the proposed rule? 20 21 CHAIRWOMAN BAILEY: We can eliminate the 22 definition from the rule because it's already in the 23 rule. 24 COMMISSIONER BALCH: So N can go away? 25 CHAIRWOMAN BAILEY: Then there's the

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suggested deletion of the term restore, which is found predominantly in the reclamation requirements. So I suggest we come back to this because what we decide in the reclamation area will determine whether or not we need to retain the definition here.

7 COMMISSIONER BALCH: For housekeeping 8 maybe you want to scroll back up. There were a 9 couple other things we want to come back to later 10 before we started highlighting things. Further up. 11 I and J and, I think, S.

12 CHAIRWOMAN BAILEY: Okay. We agreed on 13 the definition for continuously flowing watercourse and now we have a proposed definition for 14 15 significant watercourse. The proposed language eliminates the words "a first order" and adds "the 16 17 next lower order tributary with a defined bed and bank of such watercourse." The OCD suggestion is "a 18 watercourse with a defined bed and bank either named 19 20 or identified by a dashed blue line on a USGS 7.5 minute quadrangle map or the next lower order 21 22 tributary with a defined bed and bank of such 23 watercourse." 24 If we choose to change the definition,

25 then the OCD language is what is suggested. I don't

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Page 2500 1 want to imply that the OCD is advocating this, just that if we decide to change the language, their 2 3 proposed language is better. 4 COMMISSIONER BALCH: I think the OCD 5 definition is a little more clear and definitely states what you're looking for on the map, the 6 7 dashed blue line. I would prefer that definition. CHAIRWOMAN BAILEY: And it does require 8 9 defined bed and bank for a significant watercourse 10 or the next lower order tributary. 11 COMMISSIONER BLOOM: Yes. CHAIRWOMAN BAILEY: We are all in 12 13 agreement to use the OCD language? 14 COMMISSIONER BLOOM: Yes. 15 COMMISSIONER BALCH: Okay. Do you need that language? 16 17 CHAIRWOMAN BAILEY: All right. We can move on to definition of sump. Shall we do that 18 after lunch? 19 20 COMMISSIONER BALCH: Looks like a long 21 one. 22 CHAIRWOMAN BAILEY: It's one that could possibly take some time and discussion. 23 24 COMMISSIONER BLOOM: Yes. 25 CHAIRWOMAN BAILEY: When would you like to

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Page 2501 1 come back? 2 COMMISSIONER BLOOM: 1:00 o'clock? CHAIRWOMAN BAILEY: Ten after 1:00 we will 3 4 reconvene. 5 (Note: The hearing stood in recess at 11:52 to 1:10.) 6 7 CHAIRWOMAN BAILEY: We will go back on the record. Mr. Smith, as commission counsel, you said 8 9 you wanted to say something? 10 MR. SMITH: Yes. Could we put the document back up on the screen. 11 Go down to closed-loop. Can you all see that? It has been 12 brought to my attention, and I have confirmed, that 13 during the hearing IPANM requested the word "or 14 workover" be pulled from that definition, and I 15 16 wanted to draw that to your attention so you could consider whether to do so or not. 17 18 COMMISSIONER BALCH: If I recall, the concern was if you were doing a simple recompletion 19 you have to file a form. 20 CHAIRWOMAN BAILEY: And in the IPANM's 21 22 proposed Findings of Fact they do reiterate that IPANM deleted the words "workover" before the word 23 24 "fluids" so that in Section 19.15.17.9 only 25 notification of the use of closed-loop systems

Page 2502 1 during operations would be required. MR. SMITH: I would like to point out that 2 3 I think it's important that it be a reiteration. Asking for something after the record has been 4 5 closed and the public has not had the ability to comment, I think would be inappropriate. 6 But this 7 was requested during the hearing so I think you could consider this change. 8 9 CHAIRWOMAN BAILEY: Okay. So the request is to delete the word "workover" and make it "a 10 system that uses above-ground steel tanks for the 11 management of drilling fluids." 12 MR. SMITH: That's the suggestion. 13 They 14 haven't done it yet. CHAIRWOMAN BAILEY: Commissioner Bloom? 15 16 I'm sorry, would you COMMISSIONER BLOOM: 17 point me to the IPANM's closing statement? I don't know if there's page numbers. 18 CHAIRWOMAN BAILEY: It's this far back 19 into the Findings of Fact. The section is labeled 20 the IPANM Petition Section --21 22 COMMISSIONER BLOOM: I see it. Thank you. 23 CHAIRWOMAN BAILEY: And they reference Mr. Mullins' testimony and Mr. Scott. 24 25 COMMISSIONER BLOOM: My question to you

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Page 2503 1 would be does the OCD want to be notified if the closed-loop system is being used for a workover? 2 3 COMMISSIONER BALCH: It could be a really simple, small job. 4 5 COMMISSIONER BLOOM: Are we considering, in terms of notification for closed-loop systems, 6 7 just turning it into a box that's checked? CHAIRWOMAN BAILEY: I believe that's 8 9 what's proposed. COMMISSIONER BLOOM: Right. 10 So --11 CHAIRWOMAN BAILEY: If we go further into 12 that paragraph of IPANM's Findings of Fact, it says, "As noted by Mr. Mullins, the intent of the Pit Rule 13 regulation concerns management of solids or drill 14 cuttings. Mr. Scott defined the closed-loop system 15 as solids removal equipment that is in addition to 16 normal drilling equipment that would be utilized to 17 dewater the solids on location and move them from 18 the location to a central facility. Therefore, 19 closed-loop systems are part of the drilling 20 operation." 21 COMMISSIONER BLOOM: I think it goes on in 22 the next paragraph, too. 23 24 CHAIRWOMAN BAILEY: Yes. 25 COMMISSIONER BLOOM: Down below it says

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Page 2504 1 Mr. Martin for the OCD agreed that "this Pit Rule 2 doesn't pertain to workovers." That's in the 3 transcript, Page 1917. He would not have a problem taking the word "workover" out of the definition if 4 5 the operator is using a tank and not a full closed-loop system with a shale shaker, et cetera. 6 7 CHAIRWOMAN BAILEY: Okay. So do you believe that we could delete the words "or workover" 8 and leave it only for drilling cuttings? While you 9 10 think about it, Dr. Balch? COMMISSIONER BALCH: Well, I can think of 11 wells where they go in every couple months to clean 12 out paraffin so you are potentially creating a flood 13 of forms that don't provide any purpose, and I think 14 15 the intent as stated was to manage the solids. 16 CHAIRWOMAN BAILEY: I agree. 17 COMMISSIONER BLOOM: Okay. I think I agree with that. 18 19 CHAIRWOMAN BAILEY: Okay. So we will remove the words "or workover" from the definition 20 of closed-loop systems so it reads "Means a system 21 that uses above-ground steel tanks for the 22 23 management of drilling fluids." Did you have anything else, Mr. Smith? 24 25 No, ma'am. Except that I do MR. SMITH:

Page 2505 have a search that Theresa did for on-site and 1 off-site whenever you all are ready to go back and 2 consider it. 3 CHAIRWOMAN BAILEY: Well, we can since she 4 5 has it handy. MR. SMITH: Probably I should just hand it 6 7 to you guys. COMMISSIONER BALCH: Looks like a good 8 number of instances. 9 COMMISSIONER BLOOM: A lot of those will 10 be to on-site burial. 11 CHAIRWOMAN BAILEY: Right. Why don't we 12 just leave it as-is unless we see a reason to change 13 it when we get farther back into it? 14 15 COMMISSIONER BLOOM: I think that's wise. 16 COMMISSIONER BALCH: Continue on until we 17 finish the rest of the definitions. 18 COMMISSIONER BLOOM: This was in reference to the multi-well fluid management pits, correct. 19 20 CHAIRWOMAN BAILEY: Yes. Okay. We can go 21 to sump as our next definition. And the suggested language has been "means a subgrade impermeable 22 vessel that is partially buried into ground. It's 23 in contact with the ground surface or is a 24 25 collection device incorporated within a secondary

Page 2506 1 containment system with a capacity less than or 2 equal to 500 gallons, which remains predominantly 3 empty, serves as a drain or receptacle for de minimis releases on an intermittent basis, and is 4 not used to store, treat, dispose of or evaporate 5 products of waste." Adding the language "Buckets, 6 7 pails, drip pans or similar vessels that are not in contact with the ground surface are not sumps." 8 9 Dr. Neeper, in his testimony, requested that we remove the size so that we have a system 10 which remains predominantly empty. Doesn't matter 11 what size, according to Dr. Neeper. 12 COMMISSIONER BALCH: And 500 gallons is 13 approximately 20 barrels, I guess, between 15 and 20 14 15 barrels. I can envision a system where you may want to have a larger sump. If you have a limitation on 16 the size, you might have under-engineered a 17 protected response that you are trying to achieve. 18 19 CHAIRWOMAN BAILEY: That's a point. The OCD has suggested language which says, "A collection 20 21 device with a capacity less than or equal to 500 gallons." That's if we decide we want to use that 22 size, "Which remains predominantly empty and serves 23 as a drain or receptacle for releases on an 24 25 intermittent basis and is not used to store, treat,

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Page 2507 dispose of or evaporate products or wastes. 1 2 Buckets, pails, drip pans, et cetera." So it's just 3 a change of wordsmithing there for the OCD's 4 suggestion. 5 I think the de minimis phrase is an important key to what this is and I believe that 6 7 inspectors have had problems considering buckets as sumps and so I understand why that last sentence was 8 9 added to this definition. COMMISSIONER BLOOM: I think that last 10 sentence certainly makes sense in light of that. 11 COMMISSIONER BALCH: The function of the 12 sump is to be an always-present emergency overflow, 13 not a bucket or other catch basin language. 14 CHAIRWOMAN BAILEY: I have no problem with 15 this definition as proposed. And you say that we 16 should leave the volume description in there? 17 18 COMMISSIONER BALCH: I think so. This is a question of function, and as Dr. Neeper said, the 19 size of it really depends upon what it is you are 20 21 trying to protect. I may have made that last 22 interpretation myself. The function is to have an emergency overflow that is sufficient for every 23 24 operation. 25 COMMISSIONER BLOOM: Are sumps subject to

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Page 2508 1 inspection? 2 CHAIRWOMAN BAILEY: Yes. 3 COMMISSIONER BLOOM: Okay. How frequent is that? 4 5 CHAIRWOMAN BAILEY: Whenever the inspector 6 is out at the facility. 7 COMMISSIONER BALCH: If it has fluid in it, it better have been in there a very short period 8 9 of time. The sump is the catch basin and then they will come and pump it out with a truck or something 10 like that. 11 CHAIRWOMAN BAILEY: On an intermittent 12 basis and not used to store, treat, dispose of or 13 evaporate. So shall we accept Dr. Neeper's 14 modification? 15 16 COMMISSIONER BLOOM: My concern is these get really big and we are engineering something 17 that's huge and this is sitting on the ground, but 18 if it's inspected and the integrity is checked, I 19 don't think the size particularly matters. 20 21 COMMISSIONER BALCH: You want them to size 22 it to the job. 23 COMMISSIONER BLOOM: Yeah. Okay. 24 CHAIRWOMAN BAILEY: So we can delete the 25 language "with the capacity less than or equal to."

Page 2509 So it would read, "Or is a collection device 1 incorporated within a secondary containment system 2 which remains predominantly empty." Is that 3 correct? 4 5 COMMISSIONER BLOOM: Yes. 6 CHAIRWOMAN BAILEY: We can go to the next definition, temporary pit? Dr. Neeper also 7 suggested that if we incorporate the words "and 8 solids" that we specify that that's minimal solids 9 and not paint cans. 10 11 COMMISSIONER BALCH: He suggested "and solids". 12 13 CHAIRWOMAN BAILEY: Which NMOGA did not have "and solids." 14 15 COMMISSIONER BLÖOM: My only concern is would a paint can be interpreted as a mineral solid? 16 17 CHAIRWOMAN BAILEY: That would really be pushing it. 18 COMMISSIONER BLOOM: I thought we could 19 20 include it. There might be a better way to phrase 21 it. COMMISSIONER BALCH: Well, I think 22 Dr. Neeper's concern was people throwing wrenches or 23 a chunk of broken pipe. Some of it may damage the 24 inner liner integrity really. I think that's a 25

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1 valid concern.

2 CHAIRWOMAN BAILEY: Yes. And then IPANM 3 suggested that we add the language, "Will be closed 4 in less than one year from the spud date" so that we 5 have a beginning time to start from when we are 6 talking about closure.

7 COMMISSIONER BLOOM: Can I raise an issue There's a lot of things that we may be trying 8 here? 9 to do with the temporary pit so it would be extending the closure date out six months. You 10 might have that pit serving more than one well. 11 It would then be burying its contents with different 12 concentration of contaminants that are of interest 13 14 to us.

15 COMMISSIONER BALCH: I think there's 16 actually a separate -- we are addressing multi-well 17 fluid management pits separately from temporary pit, 18 which are just for the drilling phase of the 19 operation, whereas multi-well management pits are 20 more for completion.

21 COMMISSIONER BLOOM: Here I'm talking 22 about the temporary pit being used for more than one 23 wells.

24 COMMISSIONER BALCH: I see, yes. We have25 the on-site or off-site again.

Page 2511 COMMISSIONER BLOOM: One thing I would 1 add, too, is the way we have been asked to deal with 2 3 the temporary pit is allow the liquids to stay in 60 4 days versus the current 30, so we are going to have 5 more liners out there. It might have liquids in it 30 days post-production or 60 days. It could have 6 7 six months exposure to the elements or now it could be a year. 8 9 COMMISSIONER BALCH: Not only a year, but 10 if you have multiple wells, when does the spud date 11 start? On the first well or the second well or the third or the fifth? 12 13 CHAIRWOMAN BAILEY: It's not specific, is it? 14 15 COMMISSIONER BALCH: No. Again, I think 16 you would like to be able to come up with a way where you could use the pit for more than one well 17 if you have closely spaced completions. You don't 18 want four pits if you can avoid it. 19 CHAIRWOMAN BAILEY: We encourage reuse and 20 recycled and drilling pits can be reused and 21 recycled. 22 I think if we can 23 COMMISSIONER BALCH: come up with a way to ensure that they don't become 24 25 semi-permanent as we did with multi-well pits that

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1	can be transparently regulated, that will be a good
2	idea.
3	CHAIRWOMAN BAILEY: We would be dealing
4	with that under the closure requirement.
5	COMMISSIONER BLOOM: Let me throw one more
6	thing out there, and that is when I believe it was
7	Mr. Gantner was giving his testimony on allowing a
8	temporary pit to serve more than one well, he said
9	that typically there have been periods in the past
10	where they wanted one pit to serve two wells, and it
11	sounded like that's what they wanted to do.
12	Commissioner Balch, when you were cross-examining
13	Mr. Gantner, that came up again, that really what
14	they are looking to do is have that pit serve two
15	wells.
16	COMMISSIONER BALCH: It would become
17	impractical certainly to serve more than a few
18	because of spacing. But if you could use one for
19	two or one for three, that would be efficient.
20	COMMISSIONER BLOOM: I guess my only
21	reservation about no, I have a couple
22	reservations about extending the temporary pit to
23	more than one well, and that would be when we
24	see more of a I don't know if it's a reservation
25	but we might see more of a concentration of
1	

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1	contaminants that we are concerned about, but I
2	guess the pit would be dealt with accordingly.
3	COMMISSIONER BALCH: You have to close the
4	pit if you are above the threshold.
5	COMMISSIONER BLOOM: Right, doesn't matter
6	how many wells fed into it. So maybe I don't have
7	to worry about that. The other one is if the pit is
8	being used for this extended period of time, it
9	might not be an extended period of time but seeing
10	more use, more fluids going through it, will the
11	liner hold up to the same extent?
12	COMMISSIONER BALCH: I'm not sure we heard
13	any direct testimony about how durable pits are,
14	temporary pits.
15	CHAIRWOMAN BAILEY: No, there are
16	specifications for the thickness of the liner and
17	there are specifications for tears in the liner
18	above or below the water line.
19	COMMISSIONER BALCH: So in the definition
20	the way it's written right now, it says "constructed
21	with the intent that it will hold liquids and will
22	be closed in less than one year," so it doesn't
23	matter how many wells you service if you close
24	within one year.
25	CHAIRWOMAN BAILEY: If you add "from the

Page 2514 spud date." 1 2 COMMISSIONER BALCH: It would have to be the first well. That's when you are into operation. 3 4 CHAIRWOMAN BAILEY: We could say that, 5 from the spud date of the first well. 6 COMMISSIONER BALCH: Would that alleviate 7 your concern, Commissioner Bloom? The time starts 8 when you first start to use the pit basically? 9 COMMISSIONER BLOOM: I think that would be 10 helpful. CHAIRWOMAN BAILEY: So we could insert the 11 words, "And would be closed within one year from the 12 spud date of the first well." Do we need to get 13 more specific than "of the first well"? 14 15 MR. SMITH: I was just thinking about 16 Why don't you leave it that way for now. that. CHAIRWOMAN BAILEY: Okay. I have some 17 concerns about the last sentence of this definition 18 19 where it says, "Any freshwater containment structure 20 such as a pond, pit or other impoundment is not a temporary pit." I would like to insert the word, 21 "Any untreated freshwater structure." Or "any 22 23 containment structure holding untreated freshwater 24 if it does not include produced water or other 25 fluids or contaminants."

Page 2515 1 Because so many times the freshwater containment structure could have biocide or 2 something added to it, and in my mind that's no 3 4 longer freshwater containment. 5 COMMISSIONER BALCH: Do we have somewhere a definition of freshwater? I don't know if this 6 7 happens in New Mexico or if it has happened, but when you are trying to find water for frac fluids, 8 9 people are going to untraditional sources -- city 10 water, which might be treated to make it, obviously, more drinkable. 11 12 CHAIRWOMAN BAILEY: True. 13 COMMISSIONER BALCH: Swimming pools. 14 CHAIRWOMAN BAILEY: You would have the 15 chlorine. Well, that's an interesting point. 16 COMMISSIONER BALCH: I appreciate the 17 distinction, because this is something that will 18 probably be open to have cattle come up and drink 19 out of it. A kid might swim in it, things like 20 that. 21 CHAIRWOMAN BAILEY: Or we could put it 22 this way: "Any freshwater containment structure 23 such as a pond, pit or other impoundment is not a 24 temporary pit if it does not include produced water 25 or other fluids or mixed contaminants."

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1	COMMISSIONER BALCH: Can we put that up?
2	CHAIRWOMAN BAILEY: "If it does not
3	contain produced water or other fluids or other
4	contaminants."
5	COMMISSIONER BALCH: Other contaminants?
6	MR. SMITH: Is contaminant defined?
7	CHAIRWOMAN BAILEY: No.
8	MR. SMITH: I didn't think so.
9	COMMISSIONER BLOOM: Does not contain
10	produced water or other industry-related fluids?
11	Industry-specific fluids?
12	COMMISSIONER BALCH: Well, the word
13	"treated" is great. The problem is, what if they
14	are using city water? You don't want them to take a
15	non-temporary pit, storage, for water and then start
16	to pretreat it for stimulation fluid.
17	CHAIRWOMAN BAILEY: We could use the word
18	"industry fluids." Scratch the last part "or other
19	contaminants" and just say, "Does not contain
20	produced water or other industry fluids,
21	industry-related fluids." This is going to be an
22	attractive structure for wildlife of any kind.
23	COMMISSIONER BLOOM: If it was treated
24	city water it would still fit in that definition
25	unless there's an issue with chlorine or something.

Page 2517 COMMISSIONER BALCH: I wonder if there's a 1 2 definition for freshwater. CHAIRWOMAN BAILEY: I don't think the WOCC 3 4 has a definition of freshwater, but I know that 5 IPANM in their Findings of Fact -- was it? 6 MR. SMITH: Commissioner Balch, why does 7 the last sentence need to be in there? Why do we need to exclude these? 8 9 COMMISSIONER BALCH: Well, okay. So we 10 are going to be permitting temporary pits. This would be a holding pond somewhere where they store 11 freshwater nearby from a farm or some other source 12 and then they will be distributing it to pits 13 14through trucking or something like that. That's my 15 interpretation. What you don't want them to do is to take that big pond and start messing with its 16 chemistry prior to it being a production pit, so 17 it's really -- I think this is a form for 18 approaching kind of a discussion. If we go back to 19 20 what the basic definition is, we might be able to 21 come at this from another direction. 22 CHAIRWOMAN BAILEY: But I don't think we have a definition for freshwater. We have something 23 24 that's been suggested. 25 MR. SMITH: Would it help if you put

Page 2518 instead of any freshwater containment structure, any 1 containment structure that holds freshwater or that 2 3 is holding freshwater? Because if it's freshwater it's not going to be produced. It's not going to be 4 fresh, is it, if it has industry-related fluids in 5 Do you have all you need just by saying 6 it? 7 freshwater and taking the structure and reversing it so that the structure is defined by that which it 8 holds? 9 10 COMMISSIONER BALCH: I think that maybe the way to go on this is somehow getting language 11 that it does not have an influx of water from a 12 producing well --13 CHAIRWOMAN BAILEY: No, we don't want it 14 to be treated with --15 16 COMMISSIONER BALCH: Well, other industry-related fluids, I think that covers 17 18 everything. 19 CHAIRWOMAN BAILEY: It really does. COMMISSIONER BALCH: But in 20 21 interpretation, what's an industry-related fluid? Well, not all industry-related fluids do not have 22 23 other uses. You know, there are contexts. For example, chlorine to city water or fluoride or 24 something like that. I'm sure there's probably 25

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Page 2519 better examples out there than that. The main thing 1 is this is a source of freshwater and it's never had 2 3 contact from industry. All they would be doing is drawing fluid from it. That's the bottom line. 4 5 MR. SMITH: Why not just say, "Can only contain freshwater"? 6 CHAIRWOMAN BAILEY: Let's structure it 7 8 that way. 9 COMMISSIONER BALCH: Unless somebody wants 10 to argue that the City of Hobbs' water isn't fresh. 11 MR. SMITH: Hobbs will be pleased, I'm 12 sure. 13 CHAIRWOMAN BAILEY: So it should read -how did you have it before? 14 MR. SMITH: So it would be "a containment 15 structure that holds freshwater, such as" -- and 16 then it would go on. 17 18 CHAIRWOMAN BAILEY: Holds only freshwater. 19 COMMISSIONER BALCH: Holds only freshwater. 20 21 MR. SMITH: What you want to do is after 22 the word "any" at the beginning --23 COMMISSIONER BLOOM: Type it out after 24 that sentence and we can compare it. Start over. 25 MR. SMITH: "Any containment structure

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Page 2520 that holds only freshwater" and then continue on 1 2 with it just the way it is up there, "such as a pool, pit or other," and just repeat that. 3 I'm 4 sorry, stop. Okay. Go ahead. 5 COMMISSIONER BLOOM: Stop at pit or keep 6 going? 7 COMMISSIONER BALCH: I think you stop at 8 pit. 9 CHAIRWOMAN BAILEY: Are we agreed on that? COMMISSIONER BLOOM: Yes. 10 COMMISSIONER BALCH: Yeah. 11 CHAIRWOMAN BAILEY: Theresa, if you would 12 delete the previous sentence then. 13 14 MR. SMITH: What you might do after the first well up there, Madam Chair, you remember you 15 asked should we just leave it at that? 16 Spud date of 17 the first well? 18 CHAIRWOMAN BAILEY: Yes. 19 MR. SMITH: You might want to put in there after the first well language like "the liquid from 20 21 which is placed in the pit." 22 COMMISSIONER BALCH: We want to say 23 basically when the pit first goes into service. MR. SMITH: Right. It would be the spud 24 date from the first well, the liquid of which is 25

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Page 2521 1 placed in the pit. It would still be the spud date. 2 COMMISSIONER BLOOM: We marked spud date, 3 though, right? And I don't know if we marked when the liquid would first come out of the well and into 4 5 the --6 COMMISSIONER BALCH: It could be some time 7 later. I don't know. 8 CHAIRWOMAN BAILEY: We have not discussed 9 whether or not it should be open for six months or 10 closed in less than a year. COMMISSIONER BLOOM: We need to talk about 11 that, and one well or more than one well. 12 13 CHAIRWOMAN BAILEY: We need to have that 14starting date as to when you are going to require the closure. 15 COMMISSIONER BLOOM: I think I would be 16 okay with spud date of the first well. 17 18 COMMISSIONER BALCH: Spud date is clearly 19 identifiable in the city records. MR. SMITH: The first well on the lease? 20 The first well in the area? 21 22 CHAIRWOMAN BAILEY: First well using the 23 pit. 24 COMMISSIONER BLOOM: The shared pit or 25 something.

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Page 2522 COMMISSIONER BALCH: The problem is you 1 2 have "Temporary pits may be used for more than one or more wells." I think you want to take the 3 4 "Temporary pits may be used for on or more wells" 5 and put that in front of -- there's no place to put We're talking about the concept of multiple 6 it. 7 wells before we define the possibility of multiple wells. 8 MR. SMITH: Yeah, I think that makes 9 10 sense. So what Commissioner Balch is talking about, see the first red that says "temporary pits may be 11 used"? Take that sentence and put it --12 COMMISSIONER BLOOM: Put it behind "six 13 months." 14 15 CHAIRWOMAN BAILEY: Why did you want to move that sentence? 16 MR. SMITH: Well, I think the reason 17 Commissioner Balch wanted to move it is because it 18 makes it plain that a temporary pit may be used for 19 20 more than one wells, because the definition of your spud date implies that there may be more than one 21 well that is used. So the movement of that sentence 22 23 would be laying the predicate for the implication that more than one well can be used. 24 The problem 25 is, it doesn't make any sense to say "Temporary pit

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1 means temporary pits may be used." That's not going 2 to work.

COMMISSIONER BALCH: Maybe if you went 3 right up to where it says, "Which is constructed for 4 5 the use of one or more wells and with the intent" --MR. SMITH: Wait a minute. You can say, 6 7 "Means a pit including a drilling or workover pit which is constructed with the intent that the pit 8 9 will hold liquids, " period. "Temporary pits may be 10 used for more than one wells," blah blah blah. Then make it temporary pit -- make it mandatory --11 12 temporary pits must be closed in less than one -and then move on that way. That way you accomplish 13 14 what you want to accomplish. COMMISSIONER BALCH: Now we are just 15 adding the time. 16 17 MR. SMITH: Do you want to see what that 18 looks like? What you want to do, I think, is instead of "and" put "temporary pits must be 19 closed." See if that does what you want. 20 CHAIRWOMAN BAILEY: So the question 21 becomes we have a temporary pit that may be used --22 23 that has drilling mud and other fluids that may be used for more than one well. The pit does not have 24 25 netting but it does have a fence. It is lined. Ιt

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Page 2524 1 may be located off-site from where they were reused, 2 recycled, that drilling mud. So the guestion is, 3 can we leave it open for a year or does it need to be closed in six months? 4 5 COMMISSIONER BLOOM: No. 6 COMMISSIONER BALCH: What have you been 7 seeing in practice? Do you have a lot of people asking for extensions? 8 9 CHAIRWOMAN BAILEY: Yeah. COMMISSIONER BLOOM: Very often? 10 Common enough where you are going to increase the paperwork 11 12 load? CHAIRWOMAN BAILEY: Yes. 13 14 COMMISSIONER BLOOM: The extension is 15 granted? CHAIRWOMAN BAILEY: Most of the time 16 unless there's reason not to. 17 18 COMMISSIONER BALCH: All they can do is shut the drilling down and close the bid and open a 19 20 new one. Okay. So currently it's six months, which 21 appears to at least in some percentage of cases be 22 too short. 23 CHAIRWOMAN BAILEY: Especially if it's during wintertime or something. 24 25 COMMISSIONER BALCH: What sort of

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Page 2525 extensions are usually granted? 1 2 CHAIRWOMAN BAILEY: Six months. 3 COMMISSIONER BALCH: Which makes it a 4 year. So essentially it's automatically granting 5 the extension for six months under the current Rule 6 19. CHAIRWOMAN BAILEY: There was some 7 8 discussion about that in the transcript. 9 COMMISSIONER BLOOM: Chairman Bailey, do 10 we ever grant a second extension? CHAIRWOMAN BAILEY: Not that I'm aware of. 11 COMMISSIONER BLOOM: Could we --12 CHAIRWOMAN BAILEY: There would have to be 13 14 extenuating circumstances? COMMISSIONER BLOOM: Would we put language 15 in there that would say something along the lines 16 of, "Extensions will not be granted after one year." 17 18 COMMISSIONER BALCH: I think "must be closed" kind of takes care of that. If they don't 19 20 want to close it, they have to go to hearing. 21 COMMISSIONER BLOOM: True. 22 CHAIRWOMAN BAILEY: Or ask for a variance. 23 COMMISSIONER BALCH: We haven't gotten to that yet. 24 25 CHAIRWOMAN BAILEY: That's tomorrow.

Page 2526 1 COMMISSIONER BLOOM: With what we heard from testimony, it was the desire to use the 2 3 temporary pit for two wells? I think I would be 4 more comfortable with that language in that we're 5 not creating a backdoor to a multi-well temporary 6 pit, I guess. Something like, "As 7 COMMISSIONER BALCH: 8 many as two wells" or three wells or something. 9 COMMISSIONER BLOOM: Temporary pits may be 10 used for up to two wells? 11 CHAIRWOMAN BAILEY: Up to two wells? 12 COMMISSIONER BLOOM: One or two wells. 13 COMMISSIONER BALCH: I quess if they want to do three or four they have to ask for an 14 exception or a variance. I would be comfortable 15 16 with that. I think it becomes impractical to 17 service too many wells with one drilling pit. CHAIRWOMAN BAILEY: Well, the mud 18 itself --19 20 COMMISSIONER BALCH: If you have to pump 21 at any distance. 22 COMMISSIONER BLOOM: Help me get a better 23 understanding of on-site/off-site implications because now you typically see the temporary pit 24 25 there in very, very close proximity to the well.

Page 2527 1 What sort of distances could we be looking at 2 between them? Where would the pit be located between two wells? 3 COMMISSIONER BALCH: What is on-site and 4 what is off-site? 5 6 COMMISSIONER BLOOM: Yeah. 7 COMMISSIONER BALCH: A drilling pad could be one definition of on-site and it could also be 8 the entire lease. 9 CHAIRWOMAN BAILEY: Uh-huh. If the size 10 of the lease varies depending on what the Land 11 Office and the federal government or the fee lands 12 13 determine. COMMISSIONER BLOOM: What could the 14 15 spacing be? 16 COMMISSIONER BALCH: Down to 20 for the --CHAIRWOMAN BAILEY: What, spacing? 17 18 COMMISSIONER BLOOM: That's the smallest 19 spacing I could think of. CHAIRWOMAN BAILEY: For in-field drilling. 20 But we also have the 320 and 640. 21 COMMISSIONER BALCH: That's where -- it 22 23 would probably be impractical to use the temporary pit for two wells at the 320 unless you have them 24 25 near each other with horizontals always going away.

Page 2528 1 CHAIRWOMAN BAILEY: From the same well pad 2 we may have multiple wells because of directional drilling. So the definition that says only two 3 wells, we may have multiple wells coming off of that 4 5 same well pad. 6 They have drilling COMMISSIONER BALCH: 7 islands in the potash reserve. 8 CHAIRWOMAN BAILEY: Yes. So that would be 9 a real problem because we would like to have as 10 little surface disturbance or as few pits as 11 necessary. 12 COMMISSIONER BLOOM: In that case, I quess then I have renewed concern for the protection 13 offered by the 20 mil liner. I think if we increase 14 the number of wells, horizontal, to share one head, 15 16 does that --17 COMMISSIONER BALCH: The problem with 18 liners, you know, within a year it's not going to 19 degrade because of the environment. It will degrade because of people throwing a wrench on it and 20 21 running over it with bulldozers or something like that. Sharp rocks maybe a little bit? I don't 22 23 know. The 20 mil liner is pretty thick. 24 CHAIRWOMAN BAILEY: It is. 25 COMMISSIONER BALCH: I think we actually

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Page 2529 1 have testimony -- I can't remember who said it but 2 of closing the pit and seeing the outline of a 3 wrench in the bottom of the liner. So it can take a 4 good amount of abuse.

5 COMMISSIONER BLOOM: I don't know if this 6 was during the hearing or elsewhere but I think we 7 have seen pictures, too, of liners that have been 8 torn up by the wind and probably come loose, 9 unanchored, and they don't last long in 50 10 mile-an-hour New Mexico winds.

COMMISSIONER BALCH: That's a little hard 11 12 to predict, because if the wind event happens in August and you drill it in September the previous 13 year, it would take 12 months for it to get to that 14 point. But if you drill it in July, it might happen 15 within 30 days. So that is really up to the good 16 design and good monitoring of the pit during its 17 18 operation, which I think may fall more appropriately under the Spill Rule. 19

CHAIRWOMAN BAILEY: Well, we do address reporting of torn liners later in the rule. COMMISSIONER BLOOM: We don't need to get too far out. I don't know that a 20 mil liner is going to survive 50 mile-an-hour winds better than a 30 mil liner. I hadn't considered that, but we

Page 2530 could have multiple wells coming off of one hole and 1 you are protective of the disturbance and not have 2 3 too much surface disturbance. CHAIRWOMAN BAILEY: We want to allow the 4 5 drilling pit to be there for all wells that are drilled on-site. 6 7 COMMISSIONER BALCH: What happens now in case of one of these drilling islands? 8 9 CHAIRWOMAN BAILEY: Well, we don't have 10 any yet. COMMISSIONER BALCH: I know Bass has 11 drilled wells in the potash reserve. 12 There's drilling islands. 13 CHAIRWOMAN BAILEY: Okay, but not the one 14 that's been proposed by the BLM. 15 COMMISSIONER BALCH: Well, that's somebody 16 else's can of worms. 17 18 MR. SMITH: If your concern is multiple wells from one pad, isn't that of necessity going to 19 be on-site? 20 21 CHAIRWOMAN BAILEY: Yes. MR. SMITH: So why would you want to leave 22 off the "or off-site"? 23 24 COMMISSIONER BALCH: I think the thing we 25 are wrestling with is what is on-site? Is it the

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Page 2531 entire lease or is it the pad? If it's the entire 1 lease it could be quite a distance away. 2 CHAIRWOMAN BAILEY: But we don't want to 3 limit the number of wells that can use the well pad, 4 5 as we were discussing a while ago. MR. SMITH: Why don't you say for more 6 than one well? 7 8 COMMISSIONER BALCH: We have one or more wells was the original language. 9 10 MR. SMITH: One or are more wells and then tie that to the pad if that's what you are concerned 11 12 about. COMMISSIONER BALCH: 13 There's two 14 scenarios. There's the scenario where you have a drilling island and there are multiple wells from a 15 relatively larger well than normal for five or six 16 laterals going up. Also in shale drilling now they 17 18 do a lot of this and if shale drilling becomes big 19 in New Mexico you will see the same thing, where you 20 have multiple laterals and you have a pad that's long and you have the wellheads spaced every 25 to 21 30 feet or something like that. The other scenario 22 23 is where you have two leases next to each other. 24 Say they're 320, but your pads are close enough to 25 each other where you can share one drilling pad. So

Page 2532 1 there's two scenarios that are addressed by this language. 2 3 MR. SMITH: Well, maybe it introduces some vagary, but instead of saying either on-site or 4 off-site, do you want to introduce the notion of 5 6 proximity to the well pad? COMMISSIONER BALCH: I think we need to 7 figure out what on-site and off-site mean, whether 8 9 it's proximity or lease-wide or something. 10 CHAIRWOMAN BAILEY: Do you want to review the suggested language that came in in the public 11 comment from R360? The word "on-site" to mean 12 within the boundaries of the lease and/or 13 development plan wherein exploration and production 14 15 waste continues to be under the control and management of the operator/producer. 16 COMMISSIONER BALCH: Yeah. 17 18 COMMISSIONER BLOOM: What about the 19 scenario where you have a lease, 640 acres, and you have two 320s and they both want to drill from the 20 21 same corner, so essentially your pit could be a half 22 mile apart. Would this even be feasible? 23 COMMISSIONER BALCH: I think it becomes 24 impractical to pump the mud that distance. 25 COMMISSIONER BLOOM: So it would be more

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Page 2533 1 in the case you just described to Mr. Smith of two 320s and the wells are being drilled on the line 2 and --3 COMMISSIONER BALCH: The well pads would 4 have to be fairly close to each other, I think, to 5 make it practical. 6 7 COMMISSIONER BLOOM: So that really wouldn't be a concern if we have a pit on one corner 8 9 of a 320 and then a few hundred -- assuming a half mile away you have the other well being drilled and 10 that temporary pit is going to service that well. 11 12 That would not happen. It's just impractical. 13 COMMISSIONER BALCH: I'm not an expert on that sort of fluid flow, but you have a mud and 14 you're circulating it. That's going to have an 15 awful lot of resistance. I don't think practically 16 17 that you could have something that was significantly longer. You would use it in a case where you have 18 two very near well pads. 19 20 COMMISSIONER BLOOM: Perhaps one line of 21 thinking on this could be we want to have different language for a temporary pit that's servicing 22 23 multiple horizontals off of one pad and other 24 language where we have the separate scenario where 25 it's two 320s on a 640 acre lease? I'm just

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1 throwing stuff out.

2 CHAIRWOMAN BAILEY: If it is impractical or too expensive, industry is not going to use the 3 4 mud, so in that way it is limiting right there. Ιf we allow the language to say "temporary pits may be 5 used for one or more wells," then that takes care of 6 7 the multi laterals from one lease or one well pad. COMMISSIONER BALCH: Well, I think it 8 really comes down to timing. How long do you want a 9 10 temporary pit to exist? If you are going to service so many multi laterals it will take you more than a 11 year, you probably ought to do something different 12 with your pit. I think that really boils down your 13 14 concern. 15 COMMISSIONER BLOOM: It does. 16 COMMISSIONER BALCH: So for the first 17 thing to decide, I think, is how long you would let a temporary pit exist, no matter how many wells are 18 using it. Then if you need a pit for longer than 19 20 that, there's a solution. It's called a permanent pit. 21 22 CHAIRWOMAN BAILEY: No, permanent pits are only for producing --23 COMMISSIONER BALCH: Well, okay, you're 24 25 right. I think that's where you would have to

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1 trigger a variance or --

2	CHAIRWOMAN BAILEY: The automatic renewal.
3	COMMISSIONER BALCH: Well, some sort of
4	oversight. If you want to have a temporary pit more
5	than X time, be it a year or six months or whatever,
6	I think that's a different animal. You have to look
7	for something different. Now, if you do ask for an
8	exception or a variance, then I guess there's a
9	process for that.
10	COMMISSIONER BLOOM: Under Rule 17 we
11	haven't seen much use of the exception, so I don't
12	know that there would be anything out there. But
13	have you seen, Chairman Bailey, any requests for an
14	exception that would allow a temporary pit to go
15	more than a year?
16	CHAIRWOMAN BAILEY: That's handled at the
17	district office, so I would not necessarily become
18	aware of it. It's just handled through the district
19	supervisor.
20	COMMISSIONER BLOOM: Would a more robust
21	liner be required?
22	CHAIRWOMAN BAILEY: No, because you are
23	not going to reline the pit that's already there.
24	COMMISSIONER BLOOM: That's true. I was
25	wondering if the exception occurred from the

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1 outside.

2 CHAIRWOMAN BAILEY: We did have 3 discussions about the automatic renewals for the 4 closure of the pits. Remember that? Where they get 5 the six-month extension? 6 COMMISSIONER BLOOM: I don't remember

7 that. I will have to go back and read it. That was 8 a proposal?

9 CHAIRWOMAN BAILEY: Ms. Foster talked or 10 questioned the witnesses about the automatic 11 extensions. And it is regularly given. So if we 12 are having multiple wells using one pit so that we 13 have less disturbance, I don't think that it's out 14 of line to go ahead and have the one-year closure 15 time and then that saves that surface disturbance.

16 COMMISSIONER BALCH: I think if it's more 17 than a year, then apply for an exception or variance 18 and they would go to the district office and/or 19 hearing, and then that hearing or the district 20 office might specify a more stringent liner or 21 something like that.

22 CHAIRWOMAN BAILEY: But the liner is
23 already there. It's not like -24 COMMISSIONER BALCH: Well, I'm talking

25 about a case where somebody knows they will need it

Page 2537 1 for more than a year, where they are going to drill eight laterals from one well pad. 2 It hasn't 3 happened in New Mexico yet but I think it could 4 happen. 5 CHAIRWOMAN BAILEY: We could always leave 6 that door open for an operator that has that many 7 wells or knows beforehand they'll need it. So can we live with the definition "means a pit including a 8 drilling or workover pit which is constructed with 9 the intent that the pit will hold liquids"? Well, 10 it's also going to hold solids. 11 12 COMMISSIONER BLOOM: Mineral solids, 13 right? 14 COMMISSIONER BALCH: Liquids and mineral solids. 15 16 CHAIRWOMAN BAILEY: "Will hold liquids and 17 mineral solids. Temporary pits may be used for one 18 or more wells." Delete that up to two wells, "and located either on-site or off-site of a well 19 drilling location. Temporary pits must be closed in 20 less than one year from the spud date of the first 21 well using the pit. Any containment structure that 22 23 holds only freshwater, such as a pond, pit or other 24 impoundment, is not a temporary pit." Can we live 25 with that?

Page 2538 1 COMMISSIONER BALCH: I think so for me, although I think the language about on-site might be 2 3 useful to define somewhere. If your concern is to ensure 4 MR. SMITH: that the temporary pit be somewhere around the pads, 5 6 as I appreciate it, the way -- I would suggest from the legal standpoint you not rely on practical 7 limitations, that you try to state something that 8 9 gets at your intent in that regard. 10 COMMISSIONER BALCH: Which is why the definition of on-site versus off-site would be 11 useful. 12 13 COMMISSIONER BLOOM: Or we go around that and we could say something like, "Temporary pits 14 must be located on a pad." 15 16 MR. SMITH: That's not going to help you 17 with respect to multiple pads. 18 COMMISSIONER BLOOM: No. 19 MR. SMITH: And even if you define on-site, if you say either on-site or off-site, you 20 21 haven't done anything to fix your problem with respect to this definition. 22 23 CHAIRWOMAN BAILEY: Because all this says 24 is that they can move it from one drilling location to another drilling location. 25

Page 2539 MR. SMITH: Right. I mean, to say it can 1 either be on-site or off-site means close to the pad 2 3 or in my living room. Practical considerations 4 might keep them from a living room, but if what your 5 intent here is to say somewhere in the neighborhood of the wells that are using the pit, then you need 6 7 to figure out some sort of way to say that if that's what you mean. If that's not what you mean it 8 doesn't make a difference. 9 COMMISSIONER BALCH: Well, the definition 10 of on-site that was proposed by the public commenter 11 basically says on lease. The reason for the on 12 lease definition was that then other waste 13 management is the responsibility of the operator in 14 that area. 15 COMMISSIONER BLOOM: Could we have a 16 situation where you create the temporary pit that 17 18 serves one or more wells and it's sitting -- the 19 temporary pit is off on its own sort of between the 20 number of drilling locations rather than being on one of the drilling locations? 21 CHAIRWOMAN BAILEY: Not inconceivable. 22 23 Nothing denies that. 24 COMMISSIONER BALCH: With technology you can do amazing things. 25

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Page 2540 COMMISSIONER BLOOM: So I guess I wonder 1 2 about surface disturbance, if that's creating -would that be ideal? 3 4 COMMISSIONER BALCH: Every time you drill 5 a pit you are creating a surface disturbance. COMMISSIONER BLOOM: But generally now we 6 7 see the pit and the drilling equipment --COMMISSIONER BALCH: Localized. 8 COMMISSIONER BLOOM: -- localized, yeah, 9 10 essentially all in one area. So this could allow something where you have two drilling sites and a 11 temporary pit in the middle and you have an extra 12 road in between them. I don't know. 13 CHAIRWOMAN BAILEY: What I think is 14 15 probably a more likely scenario is that we have a 16 temporary pit at one well location and they want to drill a well at another location. They go and pump 17 out the fluids from one pit and go put it in another 18 pit and that way they are removing the drilling muds 19 20 and putting it for reuse/recycle at the other well. I mean, I would believe that would a more likely 21 scenario. 22 23 MR. SMITH: But if you want to allow what Commissioner Bloom has just described --24 25 COMMISSIONER BLOOM: Or not allow.

Page 2541 MR. SMITH: Right. But if you want to 1 2 allow what Commissioner Bloom has described, then saying something about it being within a proximity 3 4 of the well pad might not get you there. 5 COMMISSIONER BALCH: So I know what the average pad size is. What, if anything, dictates 6 7 the size of the pad that can be put down? CHAIRWOMAN BAILEY: The number of trucks, 8 9 the amount of activity, the depth of the well and 10 the proposed --COMMISSIONER BALCH: So there are only 11 operational constraints. No one is going to make a 12 500 by 200 foot pad. 13 CHAIRWOMAN BAILEY: Most leases are for as 14 much of the surface as is necessary for the 15 operation. 16 COMMISSIONER BALCH: So the situation 17 there, compared to what you were talking about where 18 19 you have Pad 1 and Pad 2 with a circulating fluid pit in the middle. Instead of having Pad 1 and Pad 20 2, they might just make a bigger pad that 21 encompasses all of that. You might actually 22 increase the surface disturbance in that scenario 23 24 compared to having a single pit between. But I 25 don't know if that entire pad has to be paved

Page 2542 over -- not paved over but does the entire pad have 1 2 to be worked? Flattened? Leveled? 3 CHAIRWOMAN BAILEY: Yes. COMMISSIONER BALCH: Has to be? 4 5 CHAIRWOMAN BAILEY: Yes. COMMISSIONER BALCH: So if you just limit 6 7 it to a pad you might end up with the scenario of two wells off of one pit where they put in a bigger 8 pad. 9 10 COMMISSIONER BLOOM: I'm not trying to find a new things but just look at the unintended 11 12 consequence. COMMISSIONER BALCH: I understand. 13 That's why I pointed out the unintended consequence. 14 COMMISSIONER BLOOM: Yeah. 15 16 COMMISSIONER BALCH: The operators have a 17 lot of discretion as far as setbacks and things like that, about where they can place the well within 18 their lease. 19 20 CHAIRWOMAN BAILEY: There are drilling windows for location of wells, but there's a lot of 21 22 discretion within that general window. 23 COMMISSIONER BALCH: Right. So if you could encourage people to locate the drilling pads 24 closer to one another, you are going to overall 25

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Page 2543 decrease the number of roads that are necessary to 1 2 access the same resource. One way to encourage them is to allow them to use the drilling pits for more 3 4 than one well. Practically speaking, you will have 5 a hard time using it for more than two, except for the case of drilling islands where you could be 6 7 using any number in theory. Now, you could limit it to two and then 8 have specific exceptions for drilling islands. 9 10 CHAIRWOMAN BAILEY: I think that's a mistake. 11 COMMISSIONER BLOOM: How come? 12 13 CHAIRWOMAN BAILEY: Because we will have many wellbores coming from one well pad with the 14 15 laterals and they are not necessarily drilling 16 islands. COMMISSIONER BALCH: Just a really long 17 pad. 18 19 CHAIRWOMAN BAILEY: I think we can just 20 leave the language as it is and allow variances if they are needed. 21 COMMISSIONER BALCH: I think if it's 22 23 clearly stated "must be closed within a year," it's in their operation plan and it's going to take them 24 25 18 months, then they have to come and get a variance

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Page 2544 1 or an exception. 2 CHAIRWOMAN BAILEY: Uh-huh. COMMISSIONER BALCH: And possibly beef up 3 their design. 4 5 CHAIRWOMAN BAILEY: Right. 6 COMMISSIONER BLOOM: If it's okay with you 7 all, I would like to sleep on this and think about on-site/off-site a little bit more. I think we are 8 moving towards still considering whether or not to 9 remove the language about only having fluids in the 10 pit for six months. I think these pits are going to 11 see more activity than they would have previously. 12 13 CHAIRWOMAN BAILEY: We can come back to this. 14 15 COMMISSIONER BALCH: This is highlighted. 16 CHAIRWOMAN BAILEY: I think we will be able to make better progress by just coming back to 17 18 something after we think about it some more. COMMISSIONER BALCH: We will get to the 19 20 place where we have to have a definition of 21 temporary pits and we will come back to it. 22 CHAIRWOMAN BAILEY: The next definition is 23 unconfined groundwater. We deleted the definition 24 for confined groundwater, seeing that we did not want to make that distinction between confined and 25

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Page 2545 unconfined, so if we hold with that justification, 1 we could go ahead and delete this definition. 2 Are we all agreed to delete the definition for 3 unconfined? 4 5 COMMISSIONER BLOOM: Agreed. COMMISSIONER BALCH: 6 Yes. CHAIRWOMAN BAILEY: And then we come to 7 the definition for visible, which we touched on 8 9 lightly when we talked about measurable. 10 COMMISSIONER BLOOM: We put off talking about measurable. 11 COMMISSIONER BALCH: We wanted to talk 12 about visible before. It's one of those things 13 where you have two issues that are intertwined. You 14 15 can see the well before you can measure it. You have a molecule thick level of oil that you can't 16 measure but you can see. 17 18 COMMISSIONER BLOOM: I think if this helps 19 any, I appreciated OCD's recommendations on visible. 20 I think the concern with NMOGA's proposal was that how and when do you have 30 percent if it's a windy 21 day and the sheen would be swept to one side of the 22 pit. So I prefer OCD's. 23 24 COMMISSIONER BALCH: Sounds like the 25 measuring is not a complicated task, so if someone

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Page 2546 goes out and they see oil, they should make a make a 1 note of it. 2 3 CHAIRWOMAN BAILEY: So what we can do is delete the language that says, "means any sheen that 4 5 occupies 30 percent or more of the total pit liquid surface area, " and simply use the OCD suggested 6 language of, "any sheen on the pit liquid surface 7 8 area." Are we all in agreement with that? COMMISSIONER BALCH: I think so. 9 Then we go back and look at measurable, I suppose. 10 CHAIRWOMAN BAILEY: "Measurable means a 11 layer of oil greater than a sheen that is measurable 12 by color cutting or other acceptable method, " which 13 gives us our contrast between visible and 14 measurable. 15 16 COMMISSIONER BLOOM: OCD coincides with 17 that. 18 COMMISSIONER BALCH: Color cutting, see how much it reacts. That makes sense. 19 20 CHAIRWOMAN BAILEY: Okay. So we are accepting the definition for measurable as "means a 21 22 layer of oil greater than a sheen measurable by color cutting or other acceptable method." 23 24 COMMISSIONER BALCH: So when the OCD 25 inspector goes out there, they have the means to do

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Page 2547 that with them in their truck? 1 2 CHAIRWOMAN BAILEY: Right. 3 COMMISSIONER BALCH: Okay. And when they 4 make the measurement, then they would calculate some 5 area as the thickness and see if it triggers a 6 response or not? 7 CHAIRWOMAN BAILEY: Right. 8 COMMISSIONER BALCH: Seems appropriate. 9 CHAIRWOMAN BAILEY: Now we come to the definition for wetlands. "Means those areas that 10 are inundated or saturated by surface or groundwater 11 of a frequency and duration sufficient to support 12 and under normal circumstances to support a 13 prevalence of vegetation typically adapted for life 14 in saturated soil conditions in New Mexico. 15 This definition does not constructed wetlands used for 16 wastewater purposes." Do you have an opinion on 17 that definition? 18 19 COMMISSIONER BALCH: Are there any other 20 definitions of wetlands that we need to deal with? 21 COMMISSIONER BLOOM: Who did the proposal 22 come from? CHAIRWOMAN BAILEY: Must be IPANM. 23 No, 24 that's not OCD, that would be IPANM. 25 COMMISSIONER BALCH: All the modifications

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1 are in green.

2 CHAIRWOMAN BAILEY: Green means IPANM.3 The red was NMOGA.

4 COMMISSIONER BALCH: Some of the green was 5 OCD.

6 CHAIRWOMAN BAILEY: I think the question 7 here is whether or not constructed wetlands used for 8 wastewater purposes falls under the definition of 9 wetlands, which would be natural wetlands.

10 COMMISSIONER BLOOM: IPANM in its closing 11 says, "Wetlands definition added by IPANM to 12 highlight the last sentence proposed as this 13 definition does not include constructed wetlands 14 used for wastewater purposes. The IPANM concern 15 revolves around building a retention pond and 16 avoiding classification of the wetland.

17 COMMISSIONER BALCH: So why use the word 18 wastewater? Wouldn't this apply to any fresh water 19 storage? If you leave it there long enough ducks 20 will land on it.

21 CHAIRWOMAN BAILEY: They will. And we 22 have no authority for closing dates for freshwater 23 impoundments, so it's a matter of do we determine 24 that man-made wetlands --

25 COMMISSIONER BLOOM: Are there other

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Page 2549 definitions of wetlands used in Fish & wildlife? 1 Game & Fish? 2 3 CHAIRWOMAN BAILEY: I don't know. COMMISSIONER BLOOM: I'm sure there are. 4 5 And maybe what we could do is in order to look at that we could skirt it and just say, "Wetlands do 6 not include constructed wetlands or constructed 7 8 areas used for wastewater purposes" or something like that? 9 MR. SMITH: Why don't you let me look and 10 see if I can find another definition of wetlands and 11 you can come back to it. 12 13 CHAIRWOMAN BAILEY: Okay. We could take a break. 14 15 COMMISSIONER BALCH: That's the last 16 definition. 17 CHAIRWOMAN BAILEY: Let's take a 18 ten-minute break. (Note: The hearing stood in recess at 19 20 2:30 to 2:45.) CHAIRWOMAN BAILEY: All right. Mr. Smith? 21 I believe during the break you were checking to find 22 a definition for wetlands that would already be 23 established in New Mexico? 24 25 MR. SMITH: Yes. It's on the screen here.

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Page 2550 1 It's from NMAC 20.6.4.7(W)(4) which is under Chapter 2 6, Water Quality, Standards for Interstate and 3 Intrastate Surface Water. COMMISSIONER BALCH: That's substantially 4 5 the same. 6 CHAIRWOMAN BAILEY: It is. The only 7 difference is the very last sentence. The proposed language that IPANM gave us was "This definition 8 does not include constructed wetlands used for 9 10 wastewater purposes," and that definition has the last sentence saying "That brings in surface waters 11 of the state and wastewater treatment," which I 12 think may not be correct, but I think wastewater 13 treatment has to do with city sewage ponds and that 14 type of activity rather than what we have here, 15 16 which is waste water, two words. MR. SMITH: I think that's right. 17 18 CHAIRWOMAN BAILEY: The distinction is that one deals with treatment facilities for cities 19 and counties and people, and this one has to do with 20 waste water that is part of the oil and gas 21 activity? 22 23 COMMISSIONER BLOOM: So what we are trying 24 to prevent is pit or other body of water that the industry would use or create from being seen as a 25

1 wetlands, correct?

2 COMMISSIONER BALCH: Evaporation ponds,3 things like that.

4 CHAIRWOMAN BAILEY: Right.

5 COMMISSIONER BALCH: But in that case 6 couldn't we just adopt the previous definition with 7 the last sentence as a caveat?

8 CHAIRWOMAN BAILEY: I'm not sure I 9 understand what you just said. Adopt the proposed 10 language by IPANM or the --

11 COMMISSIONER BALCH: No, I think you want 12 to use the existing regulatory language, and then if 13 you want to be specific about not including 14 constructed wetlands used for wastewater purposes, 15 you would add that off. I don't think you have to 16 have a definition of wetlands in there. You could 17 say "wetlands, as defined by NMAC" whatever.

18 MR. SMITH: Well, the question there would be, though, if you are going to allow something 19 constructed for wastewater purposes under the Oil 20 and Gas Act to come within the definition of the 21 22 WQCC wetlands, does that require -- I mean, are 23 there regulations that are going to apply to that that you don't know about? Now, this is pursuant to 24 25 the Water Quality Act, and you all are a constituent

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1 agency, correct?

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CHAIRWOMAN BAILEY: 2 Yes. 3 MR. SMITH: Which as I appreciate it means that you enforce the Water Quality Act. So the 4 question is, if you're going to include wastewater 5 wetlands that have been constructed by the oil and 6 gas industry in the definition of wetlands, what 7 does that mean with respect to your regulation of 8 them under the water quality? 9 CHAIRWOMAN BAILEY: That we should not 10 include this definition in our rule. 11 MR. SMITH: I'm not saying that you 12 shouldn't, I'm saying that you may be in a situation 13 14 where you need to enforce regulations, the scope of which I'm unable to tell you right now, though I can 15 16 find it out. 17 CHAIRWOMAN BAILEY: Well, discharge plans 18 are an example of where we use and enforce the water quality control regulations and there could be 19 wetlands that would be developing outside of their 20 evaporation ponds, for example, at a facility. 21 This would be changing or creating -- not changing but 22 creating a question of which act is being -- or 23 24 which regulations are being enforced? 25 It would be creating that MR. SMITH:

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Page 2553 1 question. That's right. 2 COMMISSIONER BALCH: Okay. So if we don't 3 have this definition and the last sentence as a caveat, is that a better way to do this? 4 5 CHAIRWOMAN BAILEY: Yes. Not to have this definition. 6 COMMISSIONER BALCH: What happens now for 7 these constructing wetlands? Do we have a life 8 cycle defined by permit? 9 10 CHAIRWOMAN BAILEY: No. COMMISSIONER BALCH: So just created --11 MR. SMITH: You already have the 12 definition of wetlands. 13 CHAIRWOMAN BAILEY: Under the Water 14 15 Quality Control regulations. 16 MR. SMITH: No, I think under your 17 regulations. I think that's right. Hang on. 18 CHAIRWOMAN BAILEY: Here it is. It means "Those areas that are inundated and saturated by 19 surface to groundwater at a frequency and duration 20 sufficient to support and under normal circumstances 21 do support a prevalence of vegetation typically 22 adapted for life and saturated soil conditions in 23 New Mexico. This definition does not include 24 constructed wetlands used for wastewater treatment 25

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Page 2554 purposes." 1 2 COMMISSIONER BALCH: So essentially we 3 already have a definition. CHAIRWOMAN BAILEY: We already have a 4 5 definition and it exempts --COMMISSIONER BALCH: Wastewater. 6 7 CHAIRWOMAN BAILEY: Wastewater treatment, not waste water purposes. 8 MR. SMITH: And wastewater treatment would 9 be consistent with the WOCC definition. 10 CHAIRWOMAN BAILEY: Yes. 11 COMMISSIONER BALCH: Is there a situation 12 13 where you construct a wetland and not treat it? What is the definition of treatment? Is allowing it 14 15 to evaporate a treatment? 16 CHAIRWOMAN BAILEY: Yes. 17 COMMISSIONER BALCH: Okay. This is a 18 question that has -- that I have thought about a couple of times in regards to coal bed methane 19 produced water in the Raton Basin that is cleaner 20 21 than the Pecos River water yet it's industrial waste and we can't do anything with it. 22 23 CHAIRWOMAN BAILEY: It's produced water. 24 COMMISSIONER BALCH: Yes. CHAIRWOMAN BAILEY: I don't see a need to 25

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Page 2555 change our current definition. I don't think we had 1 sufficient testimony to change our current 2 definition. 3 4 COMMISSIONER BLOOM: The change would only be wastewater would be adding treatment there. 5 COMMISSIONER BALCH: Essentially. 6 MR. SMITH: The change would be --7 COMMISSIONER BLOOM: Change would be two 8 9 purposes. 10 MR. SMITH: Change would be the delete the word "treatment," right? 11 CHAIRWOMAN BAILEY: And combine 12 waste water into one word, which has a different 13 meaning than waste water? 14 15 MR. SMITH: Wastewater purposes is certainly a very different phrase from waste water 16 treatment purposes. That's not an inconsequential 17 change. 18 CHAIRWOMAN BAILEY: Right. 19 COMMISSIONER BLOOM: I agree that we 20 didn't. 21 COMMISSIONER BALCH: If the existing 22 definition already in the regulation covers this 23 area, then I don't see why it needs to be addressed. 24 25 COMMISSIONER BLOOM: I agree with that.

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Page 2556 1 CHAIRWOMAN BAILEY: Okay. That conclusion our discussion about definitions, except for those 2 3 definitions that we will come back to, one of them 4 having to do with low chloride, one of them having 5 to do with on-site and off-site designations, and 6 one of them having to do with temporary pits. Other 7 than that, we have reached agreement with the other definitions. Do I hear a motion to adopt --8 9 MR. SMITH: I'm sorry, before you do that, 10 Madam Chair, you want this wetlands definition deleted then, correct? 11 12 CHAIRWOMAN BAILEY: Yes. 13 MR. SMITH: Okay. 14 CHAIRWOMAN BAILEY: Do I hear a motion to adopt those definitions that we have agreed on and 15 to come back to deal with low chloride, on-site and 16 17 off-site and temporary pits? 18 COMMISSIONER BALCH: At a later time. 19 COMMISSIONER BLOOM: I would so move. 20 COMMISSIONER BALCH: I would second. 21 CHAIRWOMAN BAILEY: All in favor? Aye. 22 COMMISSIONER BLOOM: Aye. 23 COMMISSIONER BALCH: Aye. 24 CHAIRWOMAN BAILEY: Okay. We can move to 19.15.17.8, Permit or Registration Required, where 25

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Page 2557 the words "or registration" are inserted in the 1 title. Below-grade tanks are removed from the 2 3 requirement for a division-issued permit and 4 closed-loop systems are something that we need to 5 talk about and just registration of below-grade 6 tanks. We will go line by line. I agree we need to put in "or registration" in the title. Do you both 7 8 agree with that? COMMISSIONER BALCH: If the idea as to 9 10 eliminate 5,000 below-grade tanks. 11 CHAIRWOMAN BAILEY: Ten thousand. 12 COMMISSIONER BALCH: I underestimated it. Then that would certainly be the case. 13 COMMISSIONER BLOOM: Yes. 14 15 CHAIRWOMAN BAILEY: We have agreed to include "or registration" in the title. 16 17 COMMISSIONER BLOOM: Yes. 18 CHAIRWOMAN BAILEY: First line, "A person 19 shall not construct or use a pit, " and the suggestion is to delete the words "or below-grade 20 tank except in accordance with the division-issued 21 22 permit." I believe that makes sense if we are going 23 to have registration of the below-grade tanks rather than the permitting of the below-grade tanks. 24 We 25 had quite a bit of discussion on that.

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COMMISSIONER BLOOM: We did.

1

2 COMMISSIONER BALCH: Well, I think it was 3 demonstrated pretty conclusively that those existing tanks are never going to be processed using the 4 5 current system, and the registration would at least 6 give you most of the relevant information that you 7 need, how long it's been in operation and the maintenance schedule, if necessary, by examining the 8 records of the operator. If I recall correctly. 9 10 CHAIRWOMAN BAILEY: And registration would still be protective of groundwater. It would not 11 harm or cause any additional potential threat to 12 groundwater. 13 14 COMMISSIONER BLOOM: Because of the regular inspection and testing. 15 16 CHAIRWOMAN BAILEY: Right. COMMISSIONER BLOOM: Yeah. 17 18 CHAIRWOMAN BAILEY: So we agree to delete the words "or below-grade tank" in section A? 19 20 COMMISSIONER BLOOM: Agreed. 21 COMMISSIONER BALCH: Agreed. 22 CHAIRWOMAN BAILEY: The suggestion is made. to delete all of the current B and instead have 23 24 additional paragraphs below, but we would then skip to "issuing a single permit for all pits," deleting 25

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Page 2559 "below-grade tanks, closed-loop systems or division 1 approved" -- and also include "or division-approved 2 3 alternative methods associated with a single 4 application for a permit to drill." That removes 5 the permit required for a below-grade tank and the closed-loop system. 6 7 COMMISSIONER BALCH: And allows the 8 inclusion at some future date of the provision of 9 other approved methods. 10 CHAIRWOMAN BAILEY: Right. COMMISSIONER BALCH: Right now an 11 application for closed-loop system is a single page 12 and it's treated pretty much as a rubber stamp at 13 the division level? 14 CHAIRWOMAN BAILEY: Yes. 15 COMMISSIONER BALCH: So all it does is 16 17 create paperwork and doesn't serve a real purpose. But to register them much like the tanks, you know 18 19 when and where they were operated. 20 CHAIRWOMAN BAILEY: Well, the last 21 paragraph of this says that closed-loop systems and 22 sumps don't require either a permit or a 23 registration, that they are simply used as part of a drilling system and neither a registration nor a 24 25 permit are required. I believe we had sufficient

1 testimony on that.

2 COMMISSIONER BLOOM: Looking at OCD's language here. I guess that's the next section 3 4 where we see notification required, correct? So we 5 are getting away from permitting or registration to 6 notification, correct? So essentially the addition 7 of D isn't complicated by the notification 8 requirement that comes in the next section, correct? 9 CHAIRWOMAN BAILEY: Yes. 10 COMMISSIONER BLOOM: Okay. COMMISSIONER BALCH: And it simplifies 11 operations because they don't have to file another 12 application with the BLM or other related agencies. 13 Right. These also 14 CHAIRWOMAN BAILEY: introduce the notion of a single registration for 15 16 all below-grade tanks as part of the APD system. 17 COMMISSIONER BALCH: Single registration for all below-grade tanks. So they file something 18 with a list? 19 20 CHAIRWOMAN BAILEY: Yes. 21 COMMISSIONER BALCH: For all the 22 below-grade tanks including the location and all 23 that? 24 COMMISSIONER BLOOM: So Company A could 25 register all their below-grade tanks in New Mexico

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1 with one list?

2 CHAIRWOMAN BAILEY: Right.

3 COMMISSIONER BALCH: If they add a tank,4 how does it get added to the list?

5 CHAIRWOMAN BAILEY: They do an additional.
6 COMMISSIONER BALCH: If they remove one do
7 they send a revised list every so often?

8 CHAIRWOMAN BAILEY: That comes in the next 9 section of 17.9, Permit Application and 10 Registration. There's a whole portion to go to below-grade tanks, so at this point we are simply 11 saying that we will not require the permitting or 12 registration of closed-loop systems and sumps, that 13 14 below-grade tanks may be registered and single registration is good for all of their below-grade 15 16 tanks at that location.

17 COMMISSIONER BLOOM: But I think Commissioner Balch's question might still be of 18 interest. Operationally would this allow, as it 19 stands -- we might need to take the two sections 20 21 together. I don't know if they are related, but would it allow for updates or require an annual 22 23 update or require somebody to --24 CHAIRWOMAN BAILEY: No. It requires

25 inspections. Below-grade tanks are inspected.

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Page 2562 1 COMMISSIONER BLOOM: Right. But would the 2 list be updated or would the company notify OCD when 3 a tank is removed or a tank is sold? 4 CHAIRWOMAN BAILEY: Or closed out? 5 COMMISSIONER BLOOM: Closed, yeah. Transferred. 6 COMMISSIONER BALCH: 7 COMMISSIONER BLOOM: I'm just wondering about the logistics of OCD keeping updated paperwork 8 and compliance. 9 10 COMMISSIONER BALCH: I think the initial round of looking at this page is to see if the 11 12 language is appropriate. I think the language is appropriate, assuming we work our way through the 13 14 registration page as well, so I think we can look at the language and say right now it looks fine and 15 16 then go back and rewrite it after we are done with 17 Section 17.9. 18 COMMISSIONER BLOOM: I agree with that. 19 CHAIRWOMAN BAILEY: So we will have a 20 conditional approval of the suggested language in 17.8? 21 22 COMMISSIONER BLOOM: Yeah, I think we can all agree on all that language. Yes. 23 COMMISSIONER BALCH: The language that the 24 25 operator may file a single registration for all

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1 below-grade tanks.

2

COMMISSIONER BLOOM: Shall?

3 COMMISSIONER BALCH: I think "shall" is 4 better than "may," because you have "must be 5 registered" in the first sentence and then may file 6 the list. Is that to allow them to have multiple 7 lists if they want?

8 COMMISSIONER BLOOM: Maybe "The operator 9 shall register all below-grade tanks" and they can 10 decide if it's one list or numerous lists?

11 CHAIRWOMAN BAILEY: This is all related to 12 a single application for a permit to drill, if you 13 will look at the last sentence of the paragraph 14 above. "The division may issue a single permit for 15 all pits or division-approved alternative methods 16 associated with a single application for permit to 17 drill."

18 COMMISSIONER BALCH: Similar language in19 C.

20 CHAIRWOMAN BAILEY: Okay. Shall file a 21 single registration for all below-grade tanks 22 associated with --

23 COMMISSIONER BALCH: But is the intent --24 okay. Is that the intent or is it the intent to 25 have one master list for their entire operation is a

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Page 2564 possibility? 1 CHAIRWOMAN BAILEY: I think that would 2 3 create more chaos than anything else. 4 COMMISSIONER BALCH: So it's better to associate it with an indexable APD number. 5 6 CHAIRWOMAN BAILEY: Right. 7 COMMISSIONER BLOOM: But what about the 8 backlog that's out there? 9 CHAIRWOMAN BAILEY: That's permitting, not 10 registration. That's a laborious process of going through and analyzing each and every tank that's 11 operating. 12 13 COMMISSIONER BALCH: Basically you file a C 144 for each tank, which takes a week or so of 14 processing time on OCD's side? 15 16 CHAIRWOMAN BAILEY: Well, it's only being 17 looked at upon request of specific tanks for when operators are selling the facility or transferring 18 19 the tanks. So for No. C should we have the last 20 sentence, "The operator shall file a single 21 registration for all below-grade tanks associated 22 with a single application for a permit to drill" and 23 that way we are not talking about the entire list of 24 every below-grade tank they have in the state? 25 COMMISSIONER BLOOM: Yes.

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Page 2565 COMMISSIONER BALCH: That will be easily 1 2 and transparently regulated? CHAIRWOMAN BAILEY: Through the API 3 number. 4 5 COMMISSIONER BALCH: If they have three 6 tanks associated with an operation they could just 7 send a list of three tanks with the application? 8 CHAIRWOMAN BAILEY: Yes. 9 COMMISSIONER BALCH: Or have it attached 10 to the application? If they changed it when then they would modify it? 11 12 CHAIRWOMAN BAILEY: So did you pick that 13 up, Theresa? C, the very last sentence of C should read, "The operator shall file a single registration 14 for all below-grade tanks associated with a single 15 application for permit to drill." 16 17 So now we go to 17.9, Permit Application and Registration. And do we want to include "and 18 19 registration" in the title of this section? 20 COMMISSIONER BLOOM: Yes. 21 COMMISSIONER BALCH: Yes, we do. 22 CHAIRWOMAN BAILEY: The first line, "An 23 operator shall use the appropriate Form C144? Does that make sense to y'all? 24 25 COMMISSIONER BLOOM: Yes.

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Page 2566 CHAIRWOMAN BAILEY: To apply to the 1 Division for a permit to construct or use a pit or 2 proposed alternative method." Does that make sense? 3 4 Do you agree? 5 COMMISSIONER BLOOM: Yes. 6 COMMISSIONER BALCH: Yes. 7 CHAIRWOMAN BAILEY: Deleting the words "closed-loop system or" and then "to register 8 9 a below-grade tank" to which 19.15.17 NMAC applies. Do we a agree with the first sentence? 10 COMMISSIONER BLOOM: 11 Yes. 12 COMMISSIONER BALCH: Yes. CHAIRWOMAN BAILEY: "Operator shall submit 13 14 the Form C144 used separately or as an attachment to 15 a permit application for a facility with which the pit," deleting the words closed-loop system, 16 "below-grade tank or proposed alternative method 17 18 shall be associated." Do we agree with the deletion 19 of closed-loop system? 20 COMMISSIONER BALCH: If they will be dealt with by registration. 21 CHAIRWOMAN BAILEY: "For upstream 22 23 facilities the operator may submit Form C144 24 separately or as an attachment to an application for 25 well permit." Then to include the words "An

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Page 2567 operator shall use a C101, C103 or applicable BLM 1 form to notify the appropriate division district 2 office of construction or use of a closed-loop 3 system," so that reduces closed-loop systems from 4 permitting or registration to simply a notification 5 6 on the C101 or C103. 7 COMMISSIONER BALCH: Okay. And I think this version only strikes the last sentence. 8 Otherwise it leaves it the same. 9 10 CHAIRWOMAN BAILEY: So do you want to 11 include the language "requiring appropriate engineering principles and practices and following 12 applicable manufacturer's requirements?" We had 13 testimony showing that would be limited for all of 14 the different types of systems that some of the 15 16 operators have come up with. I think the concern 17 COMMISSIONER BALCH: was ambiguity. What is appropriate practices, and 18 19 those will change over time, and they may change depending on how deep your well is, your pressure 20 and a variety of other things that were brought out 21 22 in testimony. So this would remove the ambiguity. 23 It says the purpose of the closed-loop system is merely to manage the solids and the liquids. 24 Ultimately it doesn't really matter how they do it 25

Page 2568 1 as long as it works, right? 2 CHAIRWOMAN BAILEY: Right. So do we agree with elimination of the last sentence concerning --3 4 COMMISSIONER BLOOM: I am trying to think, are there any other instances where we have language 5 6 that a system shall use appropriate engineering 7 principles? 8 CHAIRWOMAN BAILEY: When we come to the 9 lining, I believe, of the different kinds of pits. 10 COMMISSIONER BLOOM: That's right. 11 COMMISSIONER BALCH: We will probably 12 replace that with language that has more to do with specifications. 13 14 MR. SMITH: Are there BMPs that link to this? 15 16 CHAIRWOMAN BAILEY: Possibly. 17 MR. SMITH: That's something you could reference, the best management principles. 18 19 COMMISSIONER BALCH: Whether you say it or not, that's what will be applied. 20 COMMISSIONER BLOOM: I am wondering if 21 22 generally we do not put such language -- I mean, I 23 guess I could see an instance where you could put that language after everything and that would be 24 redundant. You know, sump, below-grade tank, a 25

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Page 2569 1 boom --CHAIRWOMAN BAILEY: Any operation. 2 3 COMMISSIONER BLOOM: Yeah. I think it's presumed. 4 5 COMMISSIONER BALCH: I think that was the 6 primary concern in the testimony, it stifles 7 innovation. 8 CHAIRWOMAN BAILEY: So we agree to delete 9 that last sentence? 10 COMMISSIONER BALCH: Yes. 11 COMMISSIONER BLOOM: Yes. 12 CHAIRWOMAN BAILEY: Theresa, we are deleting the last sentence. 13 14 MR. SMITH: Are you all comfortable with 15 whatever the applicable BLM form is? 16 CHAIRWOMAN BAILEY: Yes. 17 COMMISSIONER BALCH: No control over BLM, 18 right? I think that was the only difference between those two paragraphs but we can doublecheck. 19 20 CHAIRWOMAN BAILEY: So we come to the section having to do with the permit application for 21 permanent pits and there have not been any 22 23 suggestions to change the permit application for 24 permanent pits. However, multi-well fluid 25 management pits are an issue that we might want to

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Page 2570 consider as including in this list and treating a 1 2 multi-well fluid management pit in a manner similar 3 to permanent pits because we had deleted any kind of 4 size restriction. 5 COMMISSIONER BALCH: If you had a 6 multi-well management pit that was under ten acre feet or above ten acre feet, you may want to apply a 7 8 more stricter regulation to. Ten acre feet you may 9 be willing to go with existing temporary pit 10 specifications. Already they're allowed to have temporary pits of up to ten acre feet. 11 12 CHAIRWOMAN BAILEY: Permanent fits are 13 also restricted to ten acre feet. It's a matter of 14 how long the pit is going to be up. We have imposed essentially a two-year limitation, which is double 15 the time of the temporary pit. 16 17 COMMISSIONER BALCH: There's a section where we address multi-well fluid management pits 18 and their specifications. 19 20 CHAIRWOMAN BAILEY: Yes. 21 COMMISSIONER BALCH: Maybe that's where we have to tackle that. 22 CHAIRWOMAN BAILEY: Save the discussion 23 for that time? 24 25 COMMISSIONER BLOOM: It's coming up fast

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Page 2571 1 in the permit application registration as well. 2 COMMISSIONER BALCH: Regardless, permanent 3 pits -- nobody has requested a modification of 4 permanent pits. 5 CHAIRWOMAN BAILEY: Nobody, no. COMMISSIONER BALCH: There's not a lot to 6 7 discuss there then. 8 CHAIRWOMAN BAILEY: Then we can move along to temporary pits. The suggested change for 9 10 temporary pits is 17.9B2C, to delete "the actual and potential effects on soil, surface water and 11 groundwater." 12 COMMISSIONER BALCH: If I may interject, 13 Commissioner Bloom had just a few minutes ago 14 mentioned the possibilities of other places where we 15 16 had appropriate engineering principles. There's appropriate engineering principles in the beginning 17 description of B2, Temporary Pits. "The plan for a 18 temporary pit shall use appropriate engineering 19 20 principles and practices and follow all applicable liner manufacturing requirements." 21 COMMISSIONER BLOOM: I think it's 22 23 important to have in there at least the part that 24 says "follow applicable liner manufacturer 25 requirements." Particularly -- not so much in this

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Page 2572 case but as we're moving forward and looking at 1 liner requirements for multi-well fluid management 2 3 pits. 4 COMMISSIONER BALCH: I am actually 5 interested that nobody suggested a change to this during testimony, because there was an awful lot of 6 7 discussion about appropriate engineering principles when it came to the design of temporary pits. 8 Ι don't know if that's more of a footnote. Later on 9 10 we will most certainly be discussing these applicable or appropriate engineering principles and 11 practices. 12 CHAIRWOMAN BAILEY: When it comes to 13 14 liners, yes. 15 MR. SMITH: Well, you have taken it out of 16 the one area though. If you leave it in here the 17 question, of course, is why? Do you intend not to 18 require the appropriate engineering principles and practices for the former but you do for the latter? 19 20 COMMISSIONER BALCH: No. I think I don't want to misquote Mr. Bloom, but it's an add-on. 21 Ιf doesn't necessarily add anything. 22 23 CHAIRWOMAN BAILEY: So you are suggesting 24 that we have that line be, "Temporary Pits. The plan for a temporary pit shall follow applicable 25

Page 2573 liner manufacturer requirements"? 1 2 COMMISSIONER BLOOM: I didn't make a proposal. I was thinking if we were going to be 3 4 consistent we might remove, "Use appropriate 5 engineering principles and practices" but we leave in "following applicable liner manufacturer's 6 requirements." 7 8 CHAIRWOMAN BAILEY: We would keep that portion and delete the language "use appropriate 9 10 engineering principles and practices." COMMISSIONER BLOOM: 11 Okay. COMMISSIONER BALCH: We may have to do a 12 search through the document to see if there's 13 14 something else in the black text. 15 MR. SMITH: Yeah. I think -- do you want this language highlighted? 16 17 CHAIRWOMAN BAILEY: Deleted. MR. SMITH: Right. Now, that still 18 differs from what you had previously, right? In the 19 20 prior section? I think you deleted "follow the applicable manufacturer's requirements," didn't you? 21 22 COMMISSIONER BLOOM: Up above in A we deleted the last line. "The closed-loop system 23 24 shall use appropriate engineering principles and 25 practices and follow applicable manufacturer's

Page 2574 requirements or equivalent thereto." 1 2 COMMISSIONER BALCH: We might want to put the last part of the sentence back in. 3 4 CHAIRWOMAN BAILEY: So it would say, "A closed-loop system shall follow applicable 5 6 manufacturing requirements or equivalent"? 7 COMMISSIONER BALCH: I think we are talking apples and oranges here. They are not the 8 9 same thing. But I think it's appropriate to strike 10 it here. COMMISSIONER BLOOM: We can't imagine that 11 12 someone would go out and think that they could use 13 the equipment outside the requirements or something. 14 COMMISSIONER BALCH: We can certainly imagine it. 15 16 COMMISSIONER BLOOM: We can imagine it. 17 CHAIRWOMAN BAILEY: So we will leave the entire sentence deleted in A and only delete those 18 words "use appropriate engineering principles and 19 practices" under temporary pits, under the section 20 of temporary pits. Is that what we agreed to? 21 COMMISSIONER BALCH: 22 I think I am proposing that. 23 24 COMMISSIONER BLOOM: I'm sorry, what did 25 you propose?

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Page 2575 1 COMMISSIONER BALCH: Just to strike -it's been stricken. 2 CHAIRWOMAN BAILEY: So "use appropriate 3 4 engineering principles and practices." 5 COMMISSIONER BLOOM: Delete that, yes. I would agree with that. 6 7 COMMISSIONER BALCH: It doesn't add 8 anything. 9 COMMISSIONER BLOOM: No. 10 CHAIRWOMAN BAILEY: Okay. Then we will go 11 to Subparagraph C. COMMISSIONER BLOOM: I'm sorry, continuing 12 13 on with 2 --COMMISSIONER BALCH: There's a lot more. 14 15 COMMISSIONER BLOOM: I propose the 16 deletion of "the actual and potential effects on soil surface water and groundwater." 17 18 CHAIRWOMAN BAILEY: Yes. 19 COMMISSIONER BLOOM: Okay. 20 CHAIRWOMAN BAILEY: The operator still 21 needs to provide information on soil geology, hydrology, and those --22 23 COMMISSIONER BLOOM: That's a pretty major 24 change. CHAIRWOMAN BAILEY: Those factors have to 25

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Page 2576 1 do with the siting criteria. One of them is the 2 enforceability of at this point is the district -are the district personnel capable of evaluating 3 actual effects on water? 4 5 COMMISSIONER BALCH: Or even potential effects. 6 CHAIRWOMAN BAILEY: Or even potential 7 effects at this point. 8 9 COMMISSIONER BLOOM: So as it stands now, 10 this permit application comes in and includes operating and maintenance procedures, closure plan, 11 climatological data, detailed on topography and 12 soils, and now I'm just worried that compliance with 13 the siting criteria of 19.15.17.10 NMAC, we would 14 just get down to is the pit going to be within 300 15 16 feet of a continuously flowing water or something like that. And this would be instructing the 17 district office to also evaluate effects on soil 18 19 surface water and groundwater. 20 CHAIRWOMAN BAILEY: Which is difficult in 21 this application. 22 COMMISSIONER BALCH: I think they are 23 asking for somebody with the appropriate amount of skill to determine the data after the fact, the 24 actual effects, and predict to some extent the 25

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Page 2577 potential effects. That's out of the specialty, I 1 think, of the person approving this at the division 2 3 level. CHAIRWOMAN BAILEY: And we can't have 4 5 every APD come to Santa Fe for a hydrologist's evaluation. 6 7 COMMISSIONER BALCH: I think the idea is that -- I think the reason they struck it -- I'm 8 sorry, I didn't mean to interrupt you. 9 10 COMMISSIONER BLOOM: I was just going to say that then begs the question whether over the 11 years that Rule 17 has been in effect have we not 12 been looking at potential effects on soil surface 13 14 water and groundwater when we are siting the pit? 15 CHAIRWOMAN BAILEY: They have been going 16 by what the Rule 17 specifies. They have been enforcing the rule as it was written. 17 18 COMMISSIONER BALCH: I quess the question 19 may be -- in fact, if I could try to rephrase the 20 question a little bit. When the application comes in you have a checklist of the geology, topography, 21 surface hydrology, all that stuff. When that comes 22 in, is it just checked off on a list or is somebody 23 taking it and interpreting it for actual and 24 potential effects on soil, surface water and 25

Page 2578 groundwater or is it even possible to do that? 1 CHAIRWOMAN BAILEY: I don't think it's 2 possible to do that. So I would be greatly 3 surprised if the skills of the district supervisors 4 or the people who are evaluating the APDs run to the 5 hydrology for the potential effects or the actual 6 effects. I think that they look at what is required 7 under 17 to see if that information is given. 8 9 COMMISSIONER BALCH: So it's given and they read it, they read through it and check it off 10 on a list essentially? 11 CHAIRWOMAN BAILEY: T think so. 12 COMMISSIONER BLOOM: Let me add this. Ιf 13 we look at 19.15.17.10, the siting requirements 14 under A, it doesn't look like -- that's sort of a 15 checklist of depth to groundwater and its 16 17 relationship to siting, horizontal distance to other bodies of water. It can't be in a 100-year 18 19 floodplain and if it's in an unstable area the 20 operator has to demonstrate that it's incorporated the measures into the design, but that would not 21 require any analysis of effects on soil, surface 22 water and groundwater. 23 24 So I guess my concern is, are we 25 essentially saying that these decisions are made in

Page 2579 1 the district office, and we don't care what the effects of soil, surface water and groundwater are? 2 COMMISSIONER BALCH: I don't think it's so 3 4 much that we don't care, but it sounds like it's 5 impossible to determine with current technology. 6 CHAIRWOMAN BAILEY: The current rule savs 7 that an operator shall not locate a temporary pit in these certain conditions, which includes depth to 8 water. That is one of the things that is looked at. 9 10 As I say, the rule is enforced as it is currently 11 written. So if you want to say that groundwater 12 that is less than 50 feet below the bottom of the 13 temporary pit is grounds for analyzing hydrologically whether or not there is a potential 14 15 threat to groundwater, the people who look at the 16 APDs say this is what the rule says, this is whether 17 or not we can approve this APD. COMMISSIONER BALCH: So it seems like, 18 Commissioner, that the stricken-out part would most 19 likely only apply to exceptions. That's where you 20 would do the analysis -- that's where you might try 21 to convince somebody that you're not in dangering 22 water or health, groundwater, surface water or what 23 not, and that the main protective feature is the 24 25 siting requirements and implementation.

Page 2580 1 CHAIRWOMAN BAILEY: And depth to 2 groundwater. COMMISSIONER BALCH: Siting requirements. 3 MR. SMITH: I would like to ask a question 4 5 here to make sure that you avoid ambiguity. This 6 requires the submission of operating maintenance 7 procedures, closure plan, hydrogeologic data that provides, and then it goes on to list a variety of 8 detail on topography, soil, geology, blah blah blah, 9 10 right? If you make this change it will say, "To allow the district office to evaluate compliance 11 with siting criteria." 12 Now, do you need all that stuff to 13 evaluate the siting criteria? And if you don't and 14 you want to limit this district office's evaluation 15 to complying with siting criteria, I think you 16 should get rid of everything in that sentence before 17 that that isn't useful to evaluating siting 18 criteria. Otherwise, you are asking for a lot of 19 useless information. 20 I'm assuming that some of that information 21 or the information that's listed there would be 22 23 useful to what I understand to be the impossible task of evaluating effects on soils and water. 24 But 25 if you're going to take that out, the stuff up prior

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Page 2581 to that that you were asking to have submitted that 1 doesn't really have anything to do with siting 2 criteria, you should take that out, I think. 3 COMMISSIONER BALCH: Everything that leads 4 5 up to the to "evaluate the actual effects on soils, surface water and groundwater." 6 7 MR. SMITH: So what I am saying is you look at everything after the word "include" where it 8 says "operating and maintenance procedures," and 9 then go down to "to enable the appropriate 10 division," everything in between there, evaluate 11 what you need for what you want the district office 12 to do. 13 I don't know, maybe you wind up taking out 14 the whole thing. I don't know. But there's no 15 point in requiring the submission of information 16 17 that you're not going to use. It just creates confusion as to the purpose of the character. 18 19 COMMISSIONER BLOOM: Let me add that we 20 may need a good bit of the information, geology, 21 maybe some of the hydrology, if we are going to -if we expect OCD to work with this language in 22 Section 10, which is talking about unstable areas. 23

24 Then that information would still be useful.

25

COMMISSIONER BALCH: Unstable areas is

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Page 2582 very interesting because it's another one of those 1 ambiguous terms. I think in practice what people 2 3 submit for unstable areas is a map of potential -obviously, a sinkhole would be a unstable area. 4 But what if you had a slope above a certain degree or 5 6 you were in an area that had --7 CHAIRWOMAN BAILEY: A mine? COMMISSIONER BALCH: -- a mine. They also 8

9 submit maps of mine locations as part of another 10 requirement, but I think that Mr. Smith has a really 11 good point; that -- you know, a lot of this stuff, the specific information they are asking for right 12 here is stuff you would use if you were trying to 13 get an exception to whatever siting criteria we end 14 up with, and then you would try to say, "Well, this 15 is still safe because the soil characteristics are 16 like this. You won't have the flow, we have 30 17 percent loam, 70 percent sand." 18

19 COMMISSIONER BLOOM: So when I read this, 20 I guess that sentence, I'm thinking that the data 21 that's requested is to help with the determination 22 on actual potential effects on soil, surface water 23 and groundwater and that it's about something more 24 than just giving enough information so you can 25 understand the siting criteria, which might be

Page 2583 something along the lines of well, the groundwater 1 is at 48 feet and there's no surface water within a 2 half mile and neither are there any residences, 3 4 wells, missile boundaries or some of the other things. I think the language that there is now goes 5 6 beyond just addressing siting. 7 COMMISSIONER BALCH: It does go beyond addressing siting, but I think the problem is it's 8 not --9 10 CHAIRWOMAN BAILEY: It's not doable. 11 COMMISSIONER BLOOM: Did we hear any 12 testimony to that? COMMISSIONER BALCH: We had a lot of 13 testimony about the length of time it takes to 14 15 prepare and process all this information, and to me, the conclusion is if you want -- if you don't have 16 some siting criteria -- the siting criteria is 17 designed, I think, to say if you are above this 18 19 limit you are not really causing a risk. If you are below the limit that's set, then there's a potential 20 21 for risk and you want to do a further evaluation. That's where you need a lot of the 22 additional information, when you're trying to say 23 24 that groundwater is at 48 feet but I still think it's safe because of this, and then somebody would 25

Page 2584 make an evaluation using the data you gave them on 1 whether they thought you are correct on that. 2 MR. SMITH: You all can require this 3 information in whatever context you want. 4 My 5 suggestion is largely simply to divorce it from an evaluation of siting criteria. If you want that 6 7 information you can require it someplace, but to say that you want it in order for the district office to 8 evaluate the siting criteria, I don't know -- I 9 think people are going to be confused about why am I 10 giving this for siting criteria? 11 12 CHAIRWOMAN BAILEY: Okay. MR. SMITH: But if you take this out, is 13 this the only place -- and I'm sorry, I don't know 14 this -- is this the only place, for instance, that a 15 16 closure plan is required? 17 COMMISSIONER BALCH: No, I don't think a 18 closure plan is required anyway. 19 CHAIRWOMAN BAILEY: Every facility has a 20 closure plan. Permanent pits, below-grade tanks, temporary pits, multi-well fluid management pits all 21 have a closure plan. 22 I may go off on a 23 COMMISSIONER BALCH: slight tangent to try to work this through in my own 24 25 mind. As was pointed out in some of the prehearing

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Page 2585 statements, I worked with developing software to 1 address siting criteria in particular. 2 It's really nice to say that we are going to precisely identify 3 depth to groundwater, distance to surface stream, 4 5 soil geomorphology, all that stuff. It's really nice to say and you wish in a perfect world that you 6 7 have that information to the accuracy you desire. But in reality, you are working with 8 9 elevation models that have an accuracy of plus or 10 minus 20 feet. You are working with soil maps that are drawn for entire regions of the state. You are 11 working with water maps and topography that are 12 13 updated every 25 or 30 years. So you could go out 14 there for every single site, have a surveyor come 15 in, pinpoint every single point of elevation at as 16 fine a scale as you want. People could go out there and sample 100 locations for soil characteristics. 17 You could drill test wells for depth to water and 18 get a better value than what you're going to 19 20 estimate from the OSC water well database. You could do all that stuff, but I think 21 it's not particularly practical and it comes down to 22 23 two of the strongest arguments I think in the And on the one hand, you have the 24 findings. petitioners that are saying you have to reasonably 25

Page 2586 protect; and the other side, I think they want a 1 much more strong affirmation that you are actually 2 protecting. And this question of balance is 3 4 something that I think we have to address at some 5 point. 6 MR. SMITH: One thing you might want to 7 note is the language in your current rule is evaluating the effects as opposed to determining, 8 9 for instance. 10 COMMISSIONER BLOOM: Chairman Bailey, I 11 guess I'm trying to think of anywhere in the rule 12 that would -- I'm trying to think here -- that would give the district office personnel the ability to 13 make a decision that would change siting or 14 15 something else based on what they thought the actual potential effects on surface, soil water and 16 groundwater is. 17 COMMISSIONER BALCH: I think that comes 18 back to the result of the rule and the way it's 19 20 applied. I'm sorry, I don't want to --21 CHAIRWOMAN BAILEY: No, go ahead. 22 COMMISSIONER BALCH: Is that the result is 23 or the implementation is they have a checklist for 24 the siting criteria. If it meets the siting criteria it's okay. If it doesn't it's not okay and 25

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1 then you have to get an exception.

2 CHAIRWOMAN BAILEY: Which is a very3 practical process.

4 COMMISSIONER BALCH: Yes.

5 CHAIRWOMAN BAILEY: Determining the four 6 wells ever drilled, what the actual effect is on 7 groundwater that may be a certain depth below the surface of the temporary pit is an impossibility 8 9 unless you have a pipe that goes directly down and 10 pouring contaminants down that pipe, which the OCD 11 is very careful to ensure that drilling does not 12 delay during penetration of the surface until after 13 they have gone beyond the aquifer and cementing practices ensure that we do not have contamination 14 of the aquifer because of cement issues. 15

16 So the practical ability to determine the 17 actual effects on surface and groundwater is not 18 something that can be done without, as I say, an 19 intent to actually affect the groundwater.

The question is, as Commissioner Balch brings out, if the district office is given the site's topography, soils, geology and surface and groundwater hydrology along with the siting requirements that we will incorporate into any kind of rule that comes out of this, is that sufficient

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Page 2588 to provide reasonable protection for groundwater? 1 have mulled this over for guite a few years. 2 This 3 is not a brand new since April or May this year, and I liken it very much to a gate. You can close the 4 5 gate to deter access to a location. You can put a 6 padlock on the gate. You can put an electronic lock 7 along with that padlock on the closed gate. Then you can electrify that gate along with the 8 electronic lock and padlock and the closed gate, and 9 then you can put barbed wire. 10

11 Is all that sufficient to deter access? 12 Or is maybe a closed gate and maybe a padlock all that's necessary to deter a problem? If we have the 13 14 information for the topography, the soils, the geology, the surface and groundwater hydrology and 15 16 the site requirements that we will determine here, 17 it seems to me that a layperson who is not a doctor in hydrology would be able to determine whether or 18 19 not there is reasonable protection of that 20 groundwater. 21 COMMISSIONER BALCH: There's an awful lot 22 of testimony given about siting criteria. 23 CHAIRWOMAN BAILEY: **An awful lot. And we

will make that decision on what that siting criteria should be, which includes depth to groundwater. It

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Page 2589 1 includes horizontal and vertical distances to areas 2 that may be more vulnerable. So at this point I will have to agree with the suggestions that have 3 4 been made that at this point we can delete "actual 5 and potential effects on soil, surface water and 6 groundwater" and require the detail on the site's 7 topography, soil geology, surface hydrology and groundwater hydrology to enable the appropriate 8 9 division district office to evaluate compliance with 10 the siting criteria that we will determine, and in 11 the absence of site-specific groundwater data, that 12 the operator can provide reasonable determination of 13 probable groundwater depth using data generated by models, cathodic well lithology, published 14 15 information or other tools as approved by the 16 appropriate district office. 17 COMMISSIONER BALCH: Maybe I can 18 interpret, Mr. Bloom, what I think the data are. For topography, what I think people will submit is a 19 20 topographic map. That's from the USGS. Accuracy, like I said, not perfect. Soils, there's a map of 21 22 surface soils generated by the New Mexico Bureau of 23 Minerals -- they changed the name a couple years 24 ago -- New Mexico Bureau of Geology and Mineral 25 They have a state geological map which Resources.

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tells you what the surface geologic unit is in a particular area. Again, that's state-wide. Accuracy, not super precise when you get down to where is the boundary between the Pennsylvania and

the Permian in a specific site.

5

6 Surface hydrology is going to be again a 7 USGS map of surface streams. Groundwater hydrology is going to be usually taken from the Office of the 8 State Engineer's groundwater well data, which in 9 10 some areas is dense and other areas is sparse. There's also some USGS groundwater data that people 11 can obtain. So unless you have a groundwater well 12 right near your site, you are making a guess as to 13 groundwater. 14

15 These are things that are listed here that someone can evaluate and say yes, the site is 16 greater than X feet from a river. It appears that 17 groundwater in the area is greater than 350 feet so 18 it's okay. But it does not, I think, allow them to 19 20 evaluate the actual potential effects on the soils, surface water and groundwater. You need much more 21 detailed information. You need soil sampling 22 23 specific to the site and you have to have test holes 24 drilling at a minimum to the water table to see 25 where it is.

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Page 2591 COMMISSIONER BLOOM: So you would end up 1 2 with a month's long study. 3 COMMISSIONER BALCH: More than that. 4 COMMISSIONER BLOOM: A master's thesis. 5 COMMISSIONER BALCH: For every well that you are going to drill. 6 7 COMMISSIONER BLOOM: Does this evaluation 8 ever meet any determinations different from what compliance with the siting criteria is? 9 10 COMMISSIONER BALCH: Well, there's testimony that not many or any exceptions have ever 11 been made. 12 13 COMMISSIONER BLOOM: No, I mean I just wondered if it's in practices, evaluation and actual 14 and potential effects of the soil surface water and 15 groundwater. 16 COMMISSIONER BALCH: 17 T think the evaluation is going through the checklist and making 18 sure it matches the siting criteria, from what I 19 20 understand. 21 CHAIRWOMAN BAILEY: I think that we need 22 to address the sources of information if we accept 23 that data generated by models, cathodic well 24 lithology, published information or other tools as 25 approved is appropriate for determining depth to

Page 2592 groundwater. Is modeling something that --1 2 COMMISSIONER BALCH: Well, I mean, in this case what is modeling? I think early on when we 3 were developing our software we wanted to take the 4 5 depth to groundwater from the ORC and create contour 6 maps. That requires a model. You are applying an 7 algorithm to the data to create some contours. The problem there is that becomes interpretative. 8 9 Somebody else might draw the contours differently. Models have some value. I think what you 10 are looking for is that the model is consistent with 11 the actual data that you have in any case, which is 12 brought up in multiple people's findings as well. 13 14 You may not always be able to match the real world but you would like to see some consistency. 15 Cathodic well lithology, I'm taking that to be some 16 17 kind of a simple electrical log taken from the water 18 well? I don't know. CHAIRWOMAN BAILEY: Cathodic wells are 19 regularly installed near other --20 21 COMMISSIONER BALCH: So they are permanently monitoring the characteristics of --22 CHAIRWOMAN BAILEY: Well, they determine 23 24 corrosion. 25 COMMISSIONER BALCH: Oh, okay.

Page 2593 CHAIRWOMAN BAILEY: They determine 1 corrosion of the oil and gas well. 2 They drill a well for 3 COMMISSIONER BALCH: that? 4 5 CHAIRWOMAN BAILEY: It's a shallow -- just 6 to the groundwater. 7 COMMISSIONER BALCH: Just to the groundwater? 8 9 CHAIRWOMAN BAILEY: But it's not drilled before a well is drilled, it's drilled after. 10 COMMISSIONER BALCH: You are drilling your 11 well, you find groundwater at this depth and the 12 characteristics of the water require you to deal 13 14 with whether your casing is going to corrode. 15 CHAIRWOMAN BAILEY: Yes. 16 COMMISSIONER BALCH: Again, after the 17 fact. CHAIRWOMAN BAILEY: I just question 18 whether or not the average operator out there is 19 20 capable of using modeling. COMMISSIONER BALCH: You know, I think a 21 lot of the alternative stuff comes into play or 22 should only come into play if you have -- and this 23 24 happens a lot up in the Northwest -- you go to look 25 for your groundwater data and your nearest water

Page 2594 1 well is ten miles from your site. How do you 2 determine what the groundwater depth is? You submit at this time a map that has a ten-mile scale that 3 shows your one point of data. At that point if they 4 have other information, the farmer next-door has a 5 undocumented water well or something like that, they 6 7 can put that in there. That's when somebody ought 8 to take a look at it, I suppose. That's where your 9 evaluation comes in.

10 But it still comes back to they are essentially evaluating the siting criteria which is 11 supposed to be the protective feature, but actually 12 coming up with a full-blown evaluation of everything 13 14 that could possibly go wrong is impractical. If you 15 always look at every worst case scenario you will never do anything because if you wait long enough, 16 17 anything will happen, which is why I tie the preface to this discussion to the closing arguments from 18 various parties, some of which favored a reasonable 19 20 protection and some of which favored a much more 21 active and restricted environment to achieve a 22 different level of protection. It's something that 23 I think we have to come to grips with. 24 CHAIRWOMAN BAILEY: So do we choose to 25 accept this proposed sentence on "in the absence of

Page 2595 site specific"? 1 COMMISSIONER BLOOM: How is the absence of 2 site specific groundwater data dealt with now at 3 4 OCD? 5 CHAIRWOMAN BAILEY: With just knowledge of the closest water wells, with what the operator has 6 7 submitted as part of their APD that they have 8 attested to. 9 COMMISSIONER BLOOM: So you are concerned 10 that modeling is impractical. The cathodic well lithology will be after the fact? 11 COMMISSIONER BALCH: We are talking here 12 about cathodic well lithology will probably be from 13 the offset location which will probably give you 14 15 maybe a better idea. Still, it's not site-specific. You don't know site-specific until you drill. 16 CHAIRWOMAN BAILEY: But it's the best 17 18 available information. 19 COMMISSIONER BALCH: Right. The current 20 rule doesn't allow anything except for OSC and USGS water well data, I believe. It's specifically 21 listed what and where you can get your data or 22 23 comply. 24 If anything, this COMMISSIONER BLOOM: 25 should get us a look at more data.

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Page 2596 COMMISSIONER BALCH: This gives you more 1 2 data. CHAIRWOMAN BAILEY: More and better 3 4 probably. USGS hasn't been updated for a long time. 5 COMMISSIONER BLOOM: I was going to 6 express my support for that as it stood. 7 COMMISSIONER BALCH: I think in 200 years the way the computers go, we will have all the 8 9 information that everybody wants now. The problem is you can't wait to do the development 200 years. 10 CHAIRWOMAN BAILEY: So we will accept this 11 proposed sentence, which is the last sentence of C. 12 13 COMMISSIONER BLOOM: I think it was the --I'm sorry. 14 15 COMMISSIONER BALCH: The second sentence -- are we talking now about the 16 17 standardized plans? CHAIRWOMAN BAILEY: "In the absence of 18 19 site-specific groundwater data." 20 COMMISSIONER BALCH: Oh, okay. I think opening the door for any additional data is a good 21 thing. 22 23 CHAIRWOMAN BAILEY: Yes. 24 COMMISSIONER BLOOM: Yeah. 25 COMMISSIONER BALCH: The more you have,

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1	the better the more data you have, the better
2	your model or any prediction. So that's what you
3	will likely see from the producer.
4	COMMISSIONER BLOOM: So we accept the
5	sentence in the absence of okay.
6	CHAIRWOMAN BAILEY: All I have done is put
7	off that discussion.
8	COMMISSIONER BLOOM: I know.
9	CHAIRWOMAN BAILEY: Letting it settle for
10	just a little bit.
11	COMMISSIONER BLOOM: That's fine.
12	CHAIRWOMAN BAILEY: Then the next area is
13	E, "The operator may utilize, with the approval of
14	the appropriate division district office,
15	standardized plans for pit closure and other plans
16	which will remain approved until a subsequent plan
17	is either required by the appropriate division
18	district office or is submitted by the operator and
19	approved by the appropriate division district
20	office."
21	COMMISSIONER BALCH: So in practice now,
22	are you getting a lot of basically repeat plans?
23	CHAIRWOMAN BAILEY: Over and over again.
24	COMMISSIONER BALCH: So once it's
25	accepted, they submit it with all their other

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1	applications. This just cuts out the paperwork and
2	documents.
3	COMMISSIONER BLOOM: Are there instances
4	where can you picture instances where the
5	standardized plan wouldn't be sufficient and we turn
6	back? Does that happen?
7	CHAIRWOMAN BAILEY: Standardized plan for
8	pit construction, pit closure and other plans. Yes,
9	there would be a denial of approval for certain
10	aspects of pit closure and pit construction. That
11	is looked at and approved.
12	COMMISSIONER BALCH: So I think maybe your
13	concern, Mr. Bloom, is that if we allow the
14	standardized plans that there may not be sufficient
15	oversight on things that we need a variation from
16	that?
17	COMMISSIONER BLOOM: Yeah, that's the
18	concern. I was wondering when a standardized plan
19	wouldn't be sufficient.
20	COMMISSIONER BALCH: Shifts the burden
21	from the division to the operator or the operator
22	to the division.
23	COMMISSIONER BLOOM: I understand that
24	currently people pound these out and use the same
25	plan over and over again anyhow. Would that

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Page 2599 standardized plan then be on file? 1. 2 COMMISSIONER BALCH: It would be part of the searchable documents, wouldn't it? 3 CHAIRWOMAN BAILEY: It would be associated 4 5 with the well probably, the online system. 6 COMMISSIONER BALCH: What would get a district officer to look at something and say, 7 "Wait, I don't think you can use your standardized 8 9 plan here"? COMMISSIONER BLOOM: That was my question. 10 11 CHAIRWOMAN BAILEY: Okay. If a pit would be constructed in violation of the siting criteria 12 and some amendment of that standard plan would 13 14 enable it to meet the criteria if it were amended, 15 that would be one way that it would be necessary. 16 COMMISSIONER BLOOM: Fencing could be 17 something? Proximity to a residence or something? 18 CHAIRWOMAN BAILEY: Yes. 19 COMMISSIONER BLOOM: Go back and show me the plan with a fence. 20 21 CHAIRWOMAN BAILEY: Or if it's next to a 22 school or something. 23 COMMISSIONER BALCH: Right. I know on other siting criteria do have proximity to 24 25 residences and other things like that.

Page 2600 1 COMMISSIONER BLOOM: Just pragmatically, would this be a plan that's on file with OCD and the 2 operator would simply say, "I'm going to use my 3 standardized plan" or would it still be attached to 4 5 the permit application? 6 CHAIRWOMAN BAILEY: I think we could make 7 that very clear that that would be an APD would require that, and I believe our rule on APDs --8 let's look at that. 9 10 COMMISSIONER BLOOM: Seems like there would be a question about that. 11 12 COMMISSIONER BALCH: Seems like tying 13 things to APD is --14 CHAIRWOMAN BAILEY: The division may impose conditions on approval to drill, and the 15 question is --16 17 COMMISSIONER BLOOM: Maybe I answered my 18 own question by re-reading the sentence above it. "The plan for a temporary pit may incorporate by 19 reference a standard design for multiple temporary 20 21 pits. The operator files with the application" --22 COMMISSIONER BALCH: So you could say this 23 temporary pit -- they would put it in the file. In their filing you would say this will incorporate the 24 25 standard design associated with APD No." -- and it

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Page 2601 1 would be traceable. 2 CHAIRWOMAN BAILEY: I think so. 3 COMMISSIONER BLOOM: Yeah. Does that make 4 the last sentence actually irrelevant or does it 5 still help? 6 COMMISSIONER BALCH: I think the last 7 sentence lists everything that they use in the plan 8 that's not in the above sentence. 9 COMMISSIONER BLOOM: Maybe provides a 10 little more clarity? 11 COMMISSIONER BALCH: Yeah. 12 COMMISSIONER BLOOM: I'm fine with that language. 13 14 CHAIRWOMAN BAILEY: So we can accept the 15 proposed language for Paragraph E, "The operator may 16 utilize with the approval of the appropriate division"? Are we okay with that? 17 18 COMMISSIONER BALCH: I think so. 19 COMMISSIONER BLOOM: Yes. 20 CHAIRWOMAN BAILEY: Okay. And then we come to the paragraph that has been deleted on 21 22 closed-loop systems. 23 MR. SMITH: May I interrupt? I already 24 have. I'm sorry. I had forgotten now. Are you voting on each paragraph as you go or are you going 25

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Page 2602 to wait and vote for this whole section? 1 2 CHAIRWOMAN BAILEY: The section. 3 COMMISSIONER BALCH: We are just trying to make sure we have gotten through each point 4 5 individually. 6 MR. SMITH: Okay. Okay. 7 CHAIRWOMAN BAILEY: There was a 8 finding by Dr. Neeper in his facts and conclusions that we should not delete this portion of the 9 10 closed-loop systems paragraph because of that sentence, "If the operator proposes" -- it's about 11 half-way through the deleted paragraph. 12 "If the operator proposes to bury the contents of a drying 13 14 pad associated with the closed-loop system in an on-site trench, the operator shall provide 15 16 sufficient information in detail on the site's topography, soils, etc." 17 If this paragraph is deleted, he points 18 19 out that chlorides would be left on the surface from 20 drying pads and that burial would not be -- or removal would not be required for the drying pads of 21 22 closed-loop systems. 23 COMMISSIONER BALCH: Is burial on-site in 24 general covered elsewhere? 25 CHAIRWOMAN BAILEY: We will get to burial

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Page 2603 1 on-site at a later session. 2 COMMISSIONER BALCH: So I think you can address that concern in that section. That would be 3 most appropriate to do so. 4 CHAIRWOMAN BAILEY: Right, but we need to 5 6 be aware that there has been a comment concerning 7 burial of drying pads. 8 COMMISSIONER BALCH: I already had it 9 tabbed. 10 CHAIRWOMAN BAILEY: Okay. So something for us to keep in mind along with everything else. 11 12 Do we want to delete that entire paragraph on 13 closed-loop systems since closed-loop systems don't 14 require registration or permitting, just simply notification of use? 15 16 COMMISSIONER BALCH: It seems redundant. 17 COMMISSIONER BLOOM: I think we could do that, and then later on deal with -- I think 18 actually a more appropriate place than it is now is 19 the question of burying contents. 20 21 CHAIRWOMAN BAILEY: Yeah, I wanted to 22 bring it out that this is where he talked about it. 23 MR. SMITH: I'm sorry? 24 CHAIRWOMAN BAILEY: So we are deleting 25 that entire Paragraph 3.

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Page 2604 1 MR. SMITH: What was the section that you want to reserve to talk about in another section? 2 3 CHAIRWOMAN BAILEY: "If the operator 4 proposes to bury the contents of a drying pad 5 associated with the closed-loop system in an on-site trench." 6 MR. SMITH: From there on? 7 8 CHAIRWOMAN BAILEY: Yes. His concern was 9 leaving chlorides on the surface. 10 COMMISSIONER BALCH: Right. 11 CHAIRWOMAN BAILEY: Then we go to 12 below-grade tanks. We have registration for below-grade tanks for the first proposal and the 13 second proposal. 14 15 COMMISSIONER BALCH: Appropriate engineering principles and practices. 16 CHAIRWOMAN BAILEY: Okay. Are you 17 proposing that we delete that language and say, "A 18 registered below-grade tank shall follow applicable 19 manufacturer's requirements" or just delete that 20 entire section? 21 22 COMMISSIONER BALCH: That's what we have been doing. 23 24 COMMISSIONER BLOOM: We could just say 25 with the first sentence and then say, "The

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Page 2605 registration of below-grade tanks shall include 1 operating and maintenance procedures and closure 2 plan and" --3 COMMISSIONER BALCH: Doesn't seem like 4 this adds anything. 5 6 CHAIRWOMAN BAILEY: I agree. 7 COMMISSIONER BALCH: Striking the second sentence in that section. No, the sentence above 8 "A registered below-grade tank shall use." 9 it. 10 There you go. 11 CHAIRWOMAN BAILEY: That introduction 12 needs to change to "The registration of a 13 below-grade tank shall include operating and 14 maintenance procedures, a closure plan and a hydrologic report that demonstrates compliance with 15 the siting criteria of 19.15.17.10" and deleting the 16 17 language regarding information and detail on site topography, soil geology, et cetera because we are 18 19 not permitting a below-grade tank. We are simply registering. Do you agree with that? 20 21 COMMISSIONER BALCH: Yeah, I think so. Ι mean, that should --22 COMMISSIONER BLOOM: It's the same 23 language that I had a question about above. 24 In this case we are registering but not permitting. 25 So yes,

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1 that's fine with me.

CHAIRWOMAN BAILEY: So Theresa, the 2 3 crossed-out language can be deleted. Then the next 4 suggestion is "The operator may utilize, with approval of the appropriate division district 5 office, standardized plans for below-grade tank 6 7 construction and other plans which will remain approved." So that is the same general language as 8 9 the temporary pit standardized plans as a registered 10 below-grade tank. Do you agree with using that sentence? 11 12 COMMISSIONER BLOOM: I agree with that. 13 COMMISSIONER BALCH: I think so, yes. 14 CHAIRWOMAN BAILEY: Yes. Okay. Then we get to multi-well fluid management pits. 15 16 COMMISSIONER BLOOM: May I request a 17 break? CHAIRWOMAN BAILEY: Let's take a break. 18 (Note: The hearing stood in recess at 19 4:11 to 4:25.) 20 21 CHAIRWOMAN BAILEY: Back on the record. We were about to go to Section Paragraph 4 on 22 multi-well fluid management pits. Right off the bat 23 24 we come across the appropriate engineering principles and practices again. Do we want to 25

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Page 2607 delete that language as we have for the other 1 facilities and have it read, "The plan for a 2 multi-well fluid management pit shall follow 3 applicable liner manufacturer's requirements"? 4 COMMISSIONER BLOOM: I would agree to 5 6 that. 7 COMMISSIONER BALCH: Yeah. CHAIRWOMAN BAILEY: Okay, Theresa? You 8 qot it? "The plan shall include operating and 9 maintenance procedures, closure, hydrologic data, 10 information in detail on topography, soils, geology, 11 hydrology to enable the appropriate division 12 district office to evaluate compliance." 13 14 COMMISSIONER BALCH: Essentially to where 15 it says NMAC is what we have for temporary pits? 16 CHAIRWOMAN BAILEY: Yes. And the next 17 sentence, "In the absence of site-specific groundwater data" is essentially the same that we 18 used there also. 19 20 COMMISSIONER BALCH: The language is essentially the same. Standardized plans. 21 CHAIRWOMAN BAILEY: Okay. So the very 22 last sentence there is a slight change that I think 23 we need to be aware of. The paragraph previously, 24 25 we had the plans approved until a subsequent plan is

Page 2608 either required by the division district office or 1 is submitted and approved. This language at the 2 very end doesn't talk about requirement by the 3 4 division district office that may be necessary. See what I'm saying? 5 6 COMMISSIONER BALCH: Yes, I do. I think 7 you want to adopt the language from Section 3. 8 CHAIRWOMAN BAILEY: So it would read, "The 9 operator may utilize, with approval by the 10 appropriate district office, standardized plans for pit construction, pit closure and other plans which 11 will remain approved until a subsequent plan is 12 either required by the appropriate division district 13 office or is submitted, " so we would be inserting, 14 15 Theresa, language -- the words "until a subsequent plan is either required by the appropriate division 16 district office." So the "either" goes 17 18 before "submitting." "Either required by the appropriate division district office or is 19 submitted." 20 21 COMMISSIONER BALCH: Change the appropriate -- right there, "either required by the 22 appropriate division district office, " not just 23 24 district office. Right there. Insert "division." That's essentially the same language we adopted. 25

Page 2609 1 CHAIRWOMAN BAILEY: Commissioner, Bloom, do you agree with this? 2 COMMISSIONER BLOOM: Yes, I agree with 3 4 that. 5 CHAIRWOMAN BAILEY: Now, the implication 6 is that multi-well fluid management pits are 7 approved at the district office level, not at the Santa Fe office level. Just pointing it out. 8 9 COMMISSIONER BLOOM: Yes. 10 CHAIRWOMAN BAILEY: So do we go to closure 11 plans? "A closure plan that an operator submits in 12 an application or a registration." Do you agree with that addition? 13 COMMISSIONER BLOOM: Application or 14 15 registration? CHAIRWOMAN BAILEY: Yes. Because it's 16 saying that we require closure plans for registered 17 18 facilities, which would include below-grade tanks. 19 COMMISSIONER BLOOM: I thought we were still dealing with the --20 21 CHAIRWOMAN BAILEY: Do we want to go back? 22 COMMISSIONER BLOOM: No, I still have my head wrapped around the multi-well fluid management 23 24 pits. I'm sorry. That sounds good, yes. 25 CHAIRWOMAN BAILEY: Well, as you are still

	Page 2610
1	mulling multi-well fluid management pits, do we want
2	a list of wells that are associated with those
3	multi-well fluid management pits as part of the
4	permit?
5	COMMISSIONER BALCH: We have already
6	decided that they have to have well, I'm not sure
7	if we decided, but we were talking about having it
8	tied to APDs so there's already a list of APDs.
9	Most of those will turn into wells. Do you think
10	it's important to track which ones actually were
11	drilled?
12	CHAIRWOMAN BAILEY: Well, we will do that
13	with the well reports, but it's a matter of do we
14	know at this plan, the permit application the list
15	of wells associated?
16	COMMISSIONER BALCH: I see.
17	COMMISSIONER BLOOM: Look at our working
18	definition of multi-well fluid management pits. Up
19	in the definitions, almost up to the very top.
20	CHAIRWOMAN BAILEY: So we say that the pit
21	permit has to list all the wells, but we don't put
22	that in this section concerning permitting.
23	COMMISSIONER BLOOM: Yes. I think that's
24	a point well taken there.
25	CHAIRWOMAN BAILEY: So we do need to

Page 2611 1 include that sentence that says that the permit 2 application. COMMISSIONER BALCH: You might want to 3 4 just copy that sentence from the definition. Ι 5 would start with "all wells with approved applications." 6 7 CHAIRWOMAN BAILEY: We can say it slowly 8 for her so she can write it. COMMISSIONER BALCH: We will do it fresh. 9 10 It's in C. CHAIRWOMAN BAILEY: At the top where it 11 says, "The plan shall include operating and 12 13 maintenance procedures, a closure plan and hydrogeologic data that provides sufficient 14 information in detail," what we will insert in there 15 is, "The plan shall include operating and 16 maintenance procedures, a list of wells associated 17 with the pit" --18 19 COMMISSIONER BALCH: Were we doing this in 20 the context of the closure plan? CHAIRWOMAN BAILEY: No, but the closure 21 22 plan needs to be included as part of the permit application. "A list of wells associated with" --23 24 okay. "The closure plan and hydrogeologic data." 25 Is that where it needs to go? Is that the language

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Page 2612 1 that we should use? 2 COMMISSIONER BLOOM: Do we want to 3 reference the APD as we did previously? CHAIRWOMAN BAILEY: A list of the wells 4 with approved APDs. 5 6 COMMISSIONER BALCH: Wells with approved 7 APDs. CHAIRWOMAN BAILEY: Associated with the 8 pit. 9 COMMISSIONER BALCH: With approved 10 applications for permits to drill. 11 COMMISSIONER BLOOM: Then that creates a 12 limit of two years; is that right? 13 14 CHAIRWOMAN BAILEY: An APD is approved for 15 two years. There's an expiration date. 16 COMMISSIONER BLOOM: And the associated plan. 17 18 CHAIRWOMAN BAILEY: Yes. COMMISSIONER BALCH: And if they want to 19 20 extend that they have to go to hearing. So 21 effectively there's a two-year limit without oversight, without direct oversight. 22 23 COMMISSIONER BLOOM: Yes. 24 CHAIRWOMAN BAILEY: So are we good with 25 that whole paragraph?

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Page 2613 1 COMMISSIONER BLOOM: They will still get the APD approved and then file the application for 2 3 the multi-well fluid management pits. Do we have 4 any sort of guesstimate of what timeline would look like for that? 5 6 COMMISSIONER BALCH: How long would it 7 take the process? 8 COMMISSIONER BLOOM: If it takes six 9 months to a year or something like that, it cuts 10 into the two years pretty hard. CHAIRWOMAN BAILEY: It sure does. 11 12 COMMISSIONER BLOOM: I was wondering if there's a way to -- if you want to do something 13 related to two years of the spud date of the first 14 well? 15 16 COMMISSIONER BALCH: No, regardless -well, I think regardless we are looking at that 17 18 two-year time of the APD without some sort of oversight. If you try and tie it to that, then you 19 have a situation where they have to be able to build 20 this pit. 21 22 COMMISSIONER BLOOM: Yes, they will have to apply, get the APD, apply and build it. 23 COMMISSIONER BALCH: But I think the idea 24 25 is this is not a semi-permanent thing. It's

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Page 2614 temporary for stimulation, for example, on X number 1 of wells in an area that can benefit from a single 2 large location of water. I think two years is still 3 quite reasonable even if it takes them six months to 4 5 get it going. Because every year has that two-year window, and you still have to do stuff before you 6 7 can drill it. You are never going to start on day one of the APD. You are never going to be drilling. 8 CHAIRWOMAN BAILEY: One of the things that 9 10 we will have to address in closure plans is how long after the last well is spudded do they have to close 11 the pit. That comes later when we deal with closure 12 plans so we can give them an additional six months 13 or whatever. I mean, whatever we come up with for 14 the time when do they have to begin closure of the 15 16 pit. COMMISSIONER BALCH: I think in the 17 definition we said "must be closed within the APD of 18 19 the last -- within the APD associated with it." 20 CHAIRWOMAN BAILEY: No, we say "may not be used -- and remain in use until all wells with 21 approved APDs identified in the pit permit are 22 23 completed." That doesn't give a deadline of closure. 24 25 COMMISSIONER BALCH: Okay.

Page 2615 1 CHAIRWOMAN BAILEY: Which we will deal 2 with in a later section. 3 COMMISSIONER BLOOM: I just don't want to 4 add some language here which would burn the time 5 that the operator has, burn up some of their two I don't know if there's any other way to do 6 years. 7 it though. 8 COMMISSIONER BALCH: As far as operating the pit, I don't know if there is. If we want to 9 use the APD timeline, which is easily regulated, and 10 I think two years is still generous even if it turns 11 into a year and a half. Now, telling them it must 12 be closed at that date -- like with the closure plan 13 you can add some time after the last well is 14 stimulated. 15 CHAIRWOMAN BAILEY: Okay. So we have 16 17 accepted that whole Paragraph 4? 18 COMMISSIONER BALCH: For the second time. 19 COMMISSIONER BLOOM: Yes. 20 CHAIRWOMAN BAILEY: Okay. C, Closure 21 Plans. Closure plan that an operator submits in an 22 application or registration? We agree that that is 23 necessary language? 24 COMMISSIONER BLOOM: Yes. 25 CHAIRWOMAN BAILEY: Okay. Paragraph 1,

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Page 2616 "Closure plans for multi-well fluid management pits 1 shall describe the proposed procedures and protocols 2 for the removal of all unused stimulation liquids 3 4 and the disposition of liner materials and other 5 contents." Do we accept that? 6 COMMISSIONER BLOOM: That looks good. 7 CHAIRWOMAN BAILEY: Okay. COMMISSIONER BALCH: Yes. 8 9 CHAIRWOMAN BAILEY: The next section, "Closure plans shall be filed with the appropriate 10 division district office and in accordance with 11 19.15.17.13." On Page 26 that's the closure and 12 site reclamation requirements. 13 14 COMMISSIONER BALCH: Okay. 15 CHAIRWOMAN BAILEY: So we are all good 16 with that? Okay. 17 COMMISSIONER BLOOM: I was just wondering for the sake of consistency -- I don't know if it's 18 worth the time, but we are looking at permanent 19 20 pits, for example. It has the closure plan underneath it and then temporary pits. I don't know 21 if they have a closure plan specified. Actually, 22 23 that does mention pit closure. So is C really only addressing multi-well fluid management pits? 24 25 CHAIRWOMAN BAILEY: Yes. Required in

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Page 2617 Subsection B. Subsection B deals with all permit 1 applications. 2 3 COMMISSIONER BLOOM: Okay. Most of the 4 other ones have -- I think maybe except for 5 below-grade tank mention a closure plan. I was 6 wondering why C exists because permanent pit and 7 temporary pit are already mentioned there on closure 8 plans, right? 9 CHAIRWOMAN BAILEY: Well, we get into the details of closure in Section 13. 10 COMMISSIONER BALCH: Before that we are 11 just saying you need a closure plan. Now we are 12 telling you what has to be in it. 13 14 COMMISSIONER BLOOM: That's fine. 15 CHAIRWOMAN BAILEY: Okay. Then there's the suggestion deletion of paragraph, "If the 16 operator proposes an on-site closure." 17 COMMISSIONER BALCH: This is being 18 19 scratched because on-site disposal is being 20 addressed in a separate section? 21 CHAIRWOMAN BAILEY: That's right. So do 22 we want to reserve discussion or do we want to --23 COMMISSIONER BALCH: We can reserve 24 discussion. 25 COMMISSIONER BLOOM: I think reserve

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Page 2618 discussion there. 1 CHAIRWOMAN BAILEY: We will come back to 2 3 this one. 4 COMMISSIONER BALCH: We only have 15 minutes. 5 CHAIRWOMAN BAILEY: Yeah. 6 7 COMMISSIONER BLOOM: No. 2, I don't know if we can agree to delete that now. It's 8 9 unnecessary. COMMISSIONER BALCH: If all of the unlined 10 pits have been resolved. 11 12 CHAIRWOMAN BAILEY: They should have been. COMMISSIONER BALCH: 2008 I think was the 13 deadline. 14 15 CHAIRWOMAN BAILEY: So we can agree to go 16 ahead and delete Paragraphs 2 and 3 completely? COMMISSIONER BLOOM: Yes. Unlined 17 temporary pits have to be terminated by 2008? 18 19 COMMISSIONER BALCH: Six months or a year 20 after the --COMMISSIONER BLOOM: Same with unlined 21 22 permanent pits? COMMISSIONER BALCH: Therefore no unlined 23 24 permanent pits. 25 CHAIRWOMAN BAILEY: So that leaves us with

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Page 2619 1 filing of permit application that we can talk about tomorrow along with coming back to C1, whether or 2 3 not to delete it and coming back to the language under temporary pits, which is B2, whether or not to 4 5 delete the language "actual or potential effects of soil and surface water," etc. So other than those 6 7 three areas do we have a motion to --COMMISSIONER BALCH: I think 1 and 2 8 should be highlighted. And then D2. 9 10 CHAIRWOMAN BAILEY: Under temporary pits, 2C. Next page. Yes, up above. 11 COMMISSIONER BALCH: I don't have a 2C. 12 Т just have a 2. It's that paragraph that you are 13 14 scrolling through right now. CHAIRWOMAN BAILEY: We will come back and 15 16 discuss that. So other than those three, is there a motion to approve the agreements that we reached in 17 the other paragraphs? 18 19 COMMISSIONER BLOOM: I got lost. We have a number of things pending. 20 21 CHAIRWOMAN BAILEY: We have the language 22 in temporary pits. 23 COMMISSIONER BALCH: That was the --24 COMMISSIONER BLOOM: Low chloride fluids. 25 CHAIRWOMAN BAILEY: That goes back to

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Page 2620 1 the --COMMISSIONER BLOOM: I'm sorry, we are 2 3 talking about this current --4 CHAIRWOMAN BAILEY: Talking about this 5 section, Section 8 and Section 9. We are going to 6 work those together. So we made agreements for 7 19.15.17.8 and 19.15.17.9 reserving certain sections 8 for further discussion, particularly concerning language in Section 9B2C. In C --9 10 COMMISSIONER BLOOM: I don't have that. 11 COMMISSIONER BALCH: I think I am working from a different version than you. Maybe Mr. Bloom 12 is as well. 13 14 COMMISSIONER BLOOM: Yeah. 15 COMMISSIONER BALCH: For us it's just Section 2 and D1 and 2. 16 17 COMMISSIONER BLOOM: Section 2 is the one phrase, right? 18 19 CHAIRWOMAN BAILEY: Yes. Then the 20 paragraph --21 COMMISSIONER BALCH: The paragraph above 22 Section D. 23 CHAIRWOMAN BAILEY: So we have highlighted those that we need to come back to. 24 25 COMMISSIONER BLOOM: Correct.

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Page 2621 1 CHAIRWOMAN BAILEY: Do we have a motion to 2 accept the other portions that we made agreements 3 on? COMMISSIONER BLOOM: I would so move. 4 COMMISSIONER BALCH: I would second. 5 6 CHAIRWOMAN BAILEY: All in favor? 7 COMMISSIONER BLOOM: Aye. 8 COMMISSIONER BALCH: Aye. CHAIRWOMAN BAILEY: Aye. No one opposed. 9 We will resume tomorrow at 9:00 o'clock. Mr. Smith, 10 you look like you are about to say something. 11 12 MR. SMITH: Just to Theresa. COMMISSIONER BLOOM: I have one request. 13 If you could E-mail us our progress to date on this? 14 Thank you. 15 (Note: The hearing was adjourned for the 16 17 day at 4:50). 18 19 20 21 22 23 24 25

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2	I, JAN GIBSON, Certified Court Reporter for the
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8	I FURTHER CERTIFY that I am neither employed by
9	nor related to any of the parties or attorneys in
10	this case and that I have no interest in the final
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