

IN RE: WATER QUALITY DIVISION

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WYOMING WATER AND WASTE ADVISORY BOARD

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IN RE: WATER QUALITY DIVISION  
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TRANSCRIPT OF MEETING PROCEEDINGS

Pursuant to notice duly given to all parties in interest, this matter came on for meeting on the 18th day of April, 2014, at the hour of 1:13 p.m., at the Herschler Building, Room B-63, 122 West 25th Street, Cheyenne, Wyoming before the Wyoming Water and Waste Advisory Board, Ms. Marjorie Bedessem, Chairman, presiding, with Ms. Lorie Cahn, Mr. Cal Jones, and Mr. Klaus D. Hanson, in attendance

Mr. Kevin Frederick, Water Quality Division Administrator; Mr. William Tillman, Regulatory Engineer; Mr. Rich Cripe, Waste and Wastewater Program Manager; and Ms. Gina Thompson, Water Quality Division, were also in attendance.

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

2 (This portion of meeting proceedings  
3 commenced 1:13 p.m., April 18, 2014.)

4 CHAIRMAN BEDESSEM: We're going to  
5 reconvene the Water and Waste Advisory Board. We're going  
6 to continue with the agenda.

7 And so Water Quality Division is up, proposed  
8 changes to the Water Quality Rules and Regulations Chapter  
9 15 and 25.

10 BOARD MEMBER JONES: Madam Chair, before  
11 they begin, I'd like to alert the board I will have to  
12 depart at 2:00.

13 CHAIRMAN BEDESSEM: Thank you.

14 The floor is yours.

15 MR. TILLMAN: Madam Chair, thank you for  
16 the opportunity to present the chapter -- Chapter 25 again.  
17 We've presented it in the past, I believe on two other  
18 occasions, the December meeting --

19 BOARD MEMBER CAHN: Can you speak up and --

20 MR. TILLMAN: We presented the chapter on  
21 two other occasions. At the December meeting we did not  
22 present the chapter per se. We took care of some issues  
23 that were of concern to the Board and to some of the  
24 commenters. Particularly we talked about greywater and  
25 tank access, so hopefully we've resolved those concerns at

1 that time. And we'd like to go over -- what we'd like to  
2 present today is the changes that we've made to the chapter  
3 from our September meeting that was in Jackson. So that's  
4 what we'd like to do today.

5 After that, we'd like to get through this --  
6 through those changes. After that, if we have questions or  
7 any other additional comments or whatnot, we can do those  
8 at that time.

9 Just to note to the Board, as of now we had not  
10 received any comments from the public. I don't know if  
11 you've received any. But we haven't had any comments to  
12 any of the changes that we made to the current draft.

13 If everybody's okay, I'd like to proceed.

14 CHAIRMAN BEDESSEM: Uh-huh. Thank you.

15 BOARD MEMBER CAHN: I don't know if  
16 everybody knows you, but maybe you could reintroduce  
17 yourself.

18 MR. TILLMAN: Okay. My name is Bill  
19 Tillman. I work with the water and wastewater program. I  
20 guess regulatory engineer is my title.

21 CHAIRMAN BEDESSEM: Proceed.

22 MR. TILLMAN: Okay. Again, we're just  
23 going to go over the changes from what we did from the  
24 September meeting to the current meeting. And first off  
25 that you might note is that we changed the title back to

1 what it is currently, Chapter 25. The reason that we  
2 needed to do that is the Underground Injection Control  
3 Program. They reference our chapter for part of their  
4 construction concerns for flows greater than 2,000 gallons,  
5 and also for some of the commercial and industrial  
6 applications, and, therefore, we needed to have their parts  
7 for them to reference in our chapter, so the title was  
8 converted back to what it was, because now we will address  
9 some flows over 2,000 gallons.

10 Moving on next, also in -- Section 2, we added  
11 objective statement basically identifying that the UIC  
12 Class V facilities with flows greater than 2,000 gallons  
13 are now also included in these regulations, or they refer  
14 to these regulations in their rules.

15 BOARD MEMBER CAHN: Bill, can you speak up?  
16 I don't know if you need to tilt the microphone up more  
17 or -- I'm not sure.

18 MR. TILLMAN: Is that -- hello?

19 CHAIRMAN BEDESSEM: Oh, that sounds really  
20 good.

21 BOARD MEMBER CAHN: Yeah, that sounds  
22 better.

23 BOARD MEMBER HANSON: Are you using the  
24 version that has the strikeouts in it or the --

25 MR. TILLMAN: I'm using the clean version.

1 BOARD MEMBER HANSON: Clean version. Okay.

2 BOARD MEMBER CAHN: Can you repeat that  
3 about the Section 2, please?

4 MR. TILLMAN: Section 2, we added a  
5 paragraph, basically a statement that the UIC Class V  
6 facilities also use our regulations in performing their  
7 duties, and, therefore, we just added a section -- or,  
8 excuse me, a condition paragraph stating which UIC Class V  
9 facilities also use our minimum standards of design.

10 We also changed or added requirement to where  
11 before in the PE requirement, it was for flows greater than  
12 60 minutes per inch. We also now include flows less than  
13 5. And the reason being for that is that those flows that  
14 are less than 5 are -- with fast percolation rates also  
15 need, you know, special consideration on a case-by-case  
16 basis. So we feel that a professional engineer should also  
17 identify and should look at those applications on a  
18 case-by-case basis.

19 And we also added an explanation as to the  
20 permits and the references to Chapter 3 as far as the  
21 general -- general permits, individual permits and permits  
22 by rule, just for clarification.

23 Moving on into Section 3. And in Section 3, we  
24 fixed some inconsistent numbering that was going on there.  
25 We removed the definition of saturation -- saturated

1 thickness. That was associated with some other -- with the  
2 worksheet, and being that we no longer had those former --  
3 or, excuse me, those tables in the chapter, we felt that  
4 definition was no longer necessary.

5 Moving on to Section 4. In line 154 we changed  
6 the word "quantity" to the word "volume." We had received  
7 some comment that volume would be better understood, so we  
8 changed that accordingly.

9 Moving on to Section 6. In Section 6,  
10 part (d) -- or paragraph (d), we added the statement "for  
11 all treatment systems except pressure distribution."  
12 Basically in that section we had a caveat, and we did some  
13 research internally, that on certain systems, mainly  
14 pressure distribution systems, that are -- you force the  
15 wastewater out into the absorption field, that we have seen  
16 studies that indicate that in those cases where you have  
17 that sort of system, 3-foot separation is adequate to  
18 get adequate treatment above groundwater, whereas other  
19 systems that are gravity fed require that extra foot to get  
20 a little bit of assurance that we will have treatment --  
21 adequate treatment of the wastewater. And, therefore,  
22 that -- that statement "for all treatment systems except  
23 pressure distributions."

24 And then the final sentence in that -- in that  
25 condition that states for pressure distribution systems,

1 the depth of the high groundwater shall be 3 feet below the  
2 bottom of the absorption surface, if the percolation rate  
3 is 5 minutes per inch or greater. So again, giving some  
4 leeway to that 3-foot separation for certain treatment  
5 systems.

6 Also on Table 4, in subscript 2, we added the  
7 reminder that any systems that discharge to aquifers that  
8 supply public water, that there is additional requirement  
9 for a PE, and reminds that the systems are more complex and  
10 gives a little -- leaves more room for complicated terms  
11 and explains the treatment that's required for those types  
12 of applications.

13 Questions?

14 CHAIRMAN BEDESSEM: This is just a -- a  
15 question --

16 MR. TILLMAN: Yes.

17 CHAIRMAN BEDESSEM: -- for my own  
18 edification. When you said Section 6, when you talk --  
19 6(d), where you said that you've found information that  
20 said that -- whether it was pressure dosed or not, that  
21 there was a -- a -- you could do a different distance  
22 between the groundwater table and the bed. So why is it  
23 that -- for pressure system that you need a shorter  
24 distance?

25 MR. TILLMAN: Because a --



1                   CHAIRMAN BEDESSEM: Just curious.

2                   MR. TILLMAN: -- pressure system, you're  
3 forcing that wastewater out across entire absorption field,  
4 so you're getting the entire area involved in the  
5 treatment, and, therefore, it's in a gravity system.  
6 You're relying on gravity to kind of migrate out.

7                   CHAIRMAN BEDESSEM: Okay.

8                   MR. TILLMAN: And, therefore, you can have  
9 an instance where it might load up on one end, and,  
10 therefore, you need more vertical distance for treatment  
11 whereas a pressure distribution system, you're spreading it  
12 out and, therefore, that treatment -- that vertical  
13 separation distance is less to get adequate treatment.

14                   CHAIRMAN BEDESSEM: Okay. Thank you.

15                   MR. TILLMAN: And Section 7, we moved Table  
16 5 from under 7(c) to further up in the section under 7(a),  
17 just because we referenced that table. So we thought it  
18 should be closer to the paragraph where it's referenced.

19                   In 7(b), there was a comment -- comment in Part 2  
20 that we had a narrative describing the calculation, and  
21 that that was rather confusing, so we changed that to an  
22 equation form. And once we did that, we felt like we  
23 needed to change basically the other -- the other  
24 narratives also to equation form to make it easier to  
25 follow.

1           Moving on to Section 9. In Section 9(a)(iii)(B)  
2 we changed from -- the word from "peak flow" to "design  
3 flow" for consistency with the rest of the chapter. In  
4 9(iii) -- or excuse me, 9(a)(iii)(C), we changed "less  
5 than" and -- excuse me, we changed "less than" and "nor  
6 greater than" to "between" and "and" in part C, "Where the  
7 liquid depth shall be between 3 feet and 6 feet."

8           BOARD MEMBER CAHN: Say where you are  
9 again. I'm sorry.

10           CHAIRMAN BEDESSEM: The last line.

11           MR. TILLMAN: In line 481.

12           BOARD MEMBER CAHN: Okay.

13           MR. TILLMAN: We changed from "the liquid  
14 depth shall be between 3 feet and 6 feet," and the previous  
15 wording was "less than and nor -- nor greater than."

16           BOARD MEMBER CAHN: Thank you.

17           BOARD MEMBER HANSON: Liquid depth. Okay.  
18 481.

19           MR. TILLMAN: Paragraph (E), lines 486  
20 through 488 was rewritten to alleviate some confusion.  
21 Also lines 505 to 507, (v)(A) was also rewritten.  
22 Hopefully, that's clear. And 9(b)(i), we've added the word  
23 "minimum" to the 20-inch diameter opening. And also added  
24 the intro to the tables saying, "The following tables shall  
25 be used to calculate the size of the dosing tank," and that

1 is now Table 6.

2 And 9(c)(v), lines 563 through 505 (sic), we  
3 again changed some language to alleviate confusion.

4 And in 9(c)(vi), we changed paragraph to call out  
5 the reference to a general permit and eliminating confusion  
6 over whether the system required a general permit or permit  
7 by rule.

8 And in 9(d)(xiv)(A), we moved that sentence to  
9 below the calculations as to more appropriate place for  
10 that -- for that to be --

11 CHAIRMAN BEDESSEM: Can you say the line  
12 number.

13 MR. TILLMAN: It would be line 638.

14 CHAIRMAN BEDESSEM: Thank you.

15 BOARD MEMBER HANSON: Yeah.

16 MR. TILLMAN: Further down that page, on  
17 line 654, we changed where the interceptor must -- we  
18 changed that word "must" to "shall" to be more definitive  
19 as to what needs to take place.

20 And on line 673 on the next page -- hang on. No,  
21 no, I'm in the right spot. Got off track. We changed the  
22 word "utilizing" to "using." Excuse me, line 673, "Where  
23 automobiles are washed (including detail shops using hand-  
24 wash practices)..."

25 In Section 10 --

1                   BOARD MEMBER CAHN: Did you see that? What  
2 line were you on, the last one? I'm sorry.

3                   MR. TILLMAN: The last one was --

4                   BOARD MEMBER HANSON: 673.

5                   MR. TILLMAN: -- 673. And the word that  
6 was changed in the parentheses, it used to be utilized --  
7 excuse me, "utilizing," and we changed it to "using."

8                   In Section 10, line 710, we changed the word  
9 "ensure against" to "prevent" so that now it reads, "The  
10 distribution box shall be installed on a level, stable base  
11 to prevent tilting or settling..."

12                   In Section 11, line 732, we inserted the word  
13 "the" in front of below. I believe -- excuse me, that is  
14 line 733, where it says "is effectively filtered and  
15 retained below the ground surface." The word "the" was  
16 inserted there.

17                   On the next page, in Section 11(a)(vi)(F), line  
18 775 -- excuse me, line 777, we inserted the words "more  
19 than." So for clay loam soils that have a percolation --  
20 that have percolation rates more than 60 minutes per inch.  
21 Again, just for consistency within the chapter.

22                   In part -- in Section 11(a)(vii)(A), we removed  
23 the words "absent of clay width," and we changed the word  
24 "faster than" to "less than." And those were per the  
25 Board's comments.

1 BOARD MEMBER HANSON: What line?

2 MR. TILLMAN: Line 784, "The soil shall  
3 have percolation rates less than 60 minutes per inch.

4 BOARD MEMBER HANSON: Yeah.

5 MR. TILLMAN: And -- okay. On line 813  
6 through 815, that's 11(a)(viii)(E), that paragraph was  
7 reworded per stakeholder and board comments. The new  
8 language explains the width of the bottom of the absorption  
9 is 3 foot for -- excuse me, 3 foot for chambered trench,  
10 but the excavation can be larger than that. There was some  
11 comment as to being able to install that, so we want to  
12 make clarification the 3 foot is bottom. You can make it  
13 as wide as you need to to install it.

14 And part 11(b), again, we have paragraph we  
15 changed to make reference to the general permit and to  
16 eliminate confusion over what type of permit is required  
17 for this absorption system. And that's something that's  
18 for -- basic through all the sections. We're going to have  
19 that same comment as far as that clarification on the  
20 general permit as to permit by rule. It was brought up by  
21 the Board during that September meeting.

22 In Section 12(a)(iii), line 858 and 859, there  
23 was a change where we added the word "and" between "switch"  
24 and "high liquid alarm." So the control system for the  
25 pump and dosing tank shall at a minimum consist of a pump

1 off switch, a pump on switch, and a high level -- high  
2 liquid alarm.

3 Okay. On 12(a)(v), it was a paragraph that was  
4 added. And basically noting that pressure distribution  
5 systems shall have at least three feet of vertical sand  
6 filter and -- there was a typo in the copy that you have --  
7 that should read and/or unsaturated native soil above the  
8 groundwater level. I believe your copy probably just has  
9 "and."

10 CHAIRMAN BEDESSEM: What line is that?

11 MR. TILLMAN: It's line 886. Vertical feet  
12 of filtered sand and/or unsaturated native soil.

13 And, again, 12(b), just calling out reference to  
14 the general permit required.

15 Section 13, we removed, "The pressure  
16 distribution shall be used in conjunction with the sand  
17 mound." Basically through internal discussion we  
18 required -- thought that was not necessary.

19 In 13(c)(1)(A) -- excuse me, (c)(i)(A), we  
20 spelled out 2 percent, again, to be consistent with the  
21 number in the rest of the chapter.

22 In Section 13(c)(i)(F), it was added that the  
23 slope shall be graded to prevent seepage and/or ponding at  
24 the bottom of the slope.

25 BOARD MEMBER CAHN: Where is that?

1 CHAIRMAN BEDESSEM: 935.

2 BOARD MEMBER HANSON: Which line?

3 CHAIRMAN BEDESSEM: 935.

4 BOARD MEMBER HANSON: 935. Okay.

5 CHAIRMAN BEDESSEM: And 936.

6 BOARD MEMBER HANSON: Yeah.

7 MR. TILLMAN: Okay. On 13(c)(i)(G), line  
8 939, we changed the word "infiltrative" to "infiltration"  
9 per the Board's comments. And also on line 957, the same  
10 change was made there, "infiltration" as opposed to  
11 "infiltrative."

12 And 13(d), again referencing the general permit  
13 required for this type of treatment system.

14 In Section 14, we removed the requirement that a  
15 lagoon shall be installed on this -- shall not be installed  
16 on a property less than 3 acres. And that was per the  
17 Board's comments.

18 And 14(b)(i), we corrected the references to  
19 6(d) -- excuse me, from 6(d) to 6(g). That's line 993.

20 And line 1002, we added 5 percent, again to be  
21 consistent with how we called out numbers.

22 And 147, line 1010, we revised that A equals area  
23 of the lagoon -- excuse me. From -- excuse me. To area of  
24 lagoon in square feet at a maximum operating depth of 5  
25 foot. And, again, that was per the Board's comments.

1           We also did the same thing on line 1021, and the  
2 seepage rate in decimal form in inches per day was added.

3           In part 14(c), again calling out reference to the  
4 general permit.

5           In Section 15, again, all that was changed there  
6 was calling out reference to the general permit in 15(g)  
7 that's required.

8           In Section 16, there was several changes there.  
9 The majority of the changes in Section 16 was basically  
10 rearranging it into what we consider to be more -- a better  
11 order to make it more understandable. We also, per the  
12 Board's comments, moved the restrictions further up into  
13 the chapter, so that, again, when people are considering  
14 clear water systems, they know the things they're not  
15 allowed to do first and foremost. And, again, that was per  
16 the Board's comments.

17           And then the rest of the section was basically  
18 rearranged and reworded. We did find some -- one  
19 duplication that was eliminated, but other than that,  
20 Section 16 was basically just reorganized.

21           And Section C -- 16(c), we also changed the  
22 wording there, that the number of bedrooms -- excuse me,  
23 the number of occupants in each dwelling shall be  
24 calculated at two occupants per bedroom. Again, that was  
25 clarification per the Board's comments. And that's line



1 1153 and 54.

2 Section 18 was -- Madam Chair, you have any  
3 questions?

4 CHAIRMAN BEDESSEM: Oh. The reason I just  
5 looked quizzically, was just a formatting thing. I just --  
6 I was confused as to -- most of these things, when they --  
7 when it goes onto a second line, it goes all the way over  
8 to the left-hand side of the page. But line 1147, for some  
9 reason, doesn't go over to the left-hand side of the page.

10 MR. TILLMAN: Oh.

11 CHAIRMAN BEDESSEM: Sorry. Looks like  
12 something missing. That's why I had that look on my face.

13 MR. TILLMAN: The facial expression was  
14 like, wait, something wrong.

15 CHAIRMAN BEDESSEM: Wasn't anything wrong  
16 with the comments. Just a formatting blip.

17 BOARD MEMBER CAHN: Good. One of my  
18 comments is taken care of.

19 CHAIRMAN BEDESSEM: Apparently she knows  
20 something.

21 MS. THOMPSON: I'm looking at that. I  
22 don't know.

23 CHAIRMAN BEDESSEM: I don't know why it did  
24 that. Anyway, sorry. Go ahead.

25 BOARD MEMBER HANSON: Since you stopped,

1 you -- you mentioned in 1010, 5 foot. Shouldn't it be 5  
2 feet? If you make a correction.

3 MS. THOMPSON: Yeah.

4 CHAIRMAN BEDESSEM: Uh-huh.

5 BOARD MEMBER HANSON: Should be feet,  
6 shouldn't it.

7 MS. THOMPSON: Yeah.

8 CHAIRMAN BEDESSEM: Yeah.

9 MR. TILLMAN: An operating depth of  
10 5 foot, 5 feet. Some say Smith, some say Smyth.

11 BOARD MEMBER HANSON: I think the plural is  
12 feet. I used to teach English for a while. I didn't know.

13 CHAIRMAN BEDESSEM: Okay. Carry on.

14 MR. TILLMAN: Let's see. Check to make  
15 sure I didn't forget something in Section 16.

16 I think, just to clarify, that we consider drip  
17 irrigation to be subsurface. I think that was a question  
18 that was brought up by the Board before.

19 CHAIRMAN BEDESSEM: Yes.

20 MR. TILLMAN: And it is under that  
21 subheading now, so there shouldn't be any confusion as to  
22 that.

23 We removed from section (d)(iii) and (d)(iv) the  
24 requirement for pumps and filters, per the Board's  
25 comments.

1 CHAIRMAN BEDESSEM: What line?

2 BOARD MEMBER CAHN: Where are you? What  
3 line?

4 MR. TILLMAN: We're at line 1223 and 1235.  
5 Those are Sections (iii) and (iv). We removed the pumps  
6 and filters from those sections, from the piping and the  
7 disinfection part. And those were per the Board's  
8 comments.

9 BOARD MEMBER CAHN: I just want to comment  
10 right at this point, that Gina, the version that you have  
11 up there is not the same version that we got clean --

12 MS. THOMPSON: Yeah. I --

13 BOARD MEMBER CAHN: -- on 3/18/2014.

14 MS. THOMPSON: I have no explanation for  
15 that, because I printed those out from a Word document, and  
16 then I printed the Word document into Adobe, and I have --  
17 they're the same file, so I don't know -- I'm a little  
18 confused as well. I don't have a good explanation for  
19 that. And so I apologize for the confusion. I literally  
20 have no explanation. It should be the same number.

21 BOARD MEMBER CAHN: Gremlins.

22 MS. THOMPSON: Yes, don't feed them after  
23 10:00, whatever, so...

24 BOARD MEMBER HANSON: Weird things happen.

25 MR. TILLMAN: Line 1253, we changed

1 manufacturers to "manufacturer." Recommendations, again,  
2 per the Board's comments.

3 Also on section (e)(i), we clarified in the last  
4 sentence that the use of subsurface drip irrigation would  
5 satisfy the buffer zone requirement.

6 BOARD MEMBER CAHN: Where are you on that  
7 one?

8 MR. TILLMAN: Section 16(e)(i), lines 1263  
9 to 1265. And the last sentence, the buffer zone  
10 requirement may be met by the use of subsurface drip  
11 irrigation system, just to clarify that.

12 And in section (g), again, reference to the  
13 design package and the use of general permit required  
14 there.

15 Section 18 was basically left in in the chapter.  
16 It was not in the previous drafts, but it is in the current  
17 copy of Chapter 25, and, again, refers to the UIC use of  
18 our chapter.

19 BOARD MEMBER CAHN: Why did you put that in  
20 there?

21 MR. TILLMAN: Basically the UIC program,  
22 the Underground Injection Control Program, references our  
23 design standards for the parts of their program. And it  
24 was in the original Chapter 25. It's in there currently.  
25 And it had been taken out, I think in the effort to maybe

1 make this chapter strictly small wastewater system for  
2 commercial. But the fact they reference our chapter, we  
3 need to have that in there, otherwise there is no design  
4 criteria for them to design by. And it is in the current  
5 Chapter 25.

6 MR. CRIPE: Board Member Cahn, when they  
7 rewrote and readdressed this, as we were going through  
8 this, we didn't catch that until now. But it's a vital  
9 function of what -- what the UIC program uses as far as the  
10 commercial and that, as well as the delegated counties and  
11 these subact distances. So when that got removed, this  
12 makes it difficult for the UIC program, because it was  
13 originally in the 11, part D, to do their job. There's  
14 been some discussion when the UIC reg gets rewritten, that  
15 maybe this -- it might be better suited there. But for --  
16 for the interim, we needed to put it back in here, or  
17 they're kind of dead in the water to be able to do anything  
18 with that, so...

19 And that's what was listed up in Section 2, when  
20 you -- when it identified all of those types that use this.  
21 And it was just an oversight, for whatever reason, that it  
22 got pulled out and wasn't in.

23 MR. TILLMAN: And changes made in Appendix  
24 A, which goes back to our percolation test for sizing  
25 absorption systems, we did some internal discussion and

1 some research, and before we had in there that it was  
2 arranged, the size of the hole could be 4 to 12 inches.  
3 Well, it does make a difference the size of the hole and  
4 the results that you get. And basically, long story short,  
5 we would require that they dig a 12-inch hole, because that  
6 is more in line with the original percolation tests that  
7 were designed, and you get a more consistent sizing of the  
8 absorption field, if you have a smaller-size hole, a 4-inch  
9 diameter hole, you're typically going to undersize the  
10 absorption field by a significant amount. And so, again,  
11 that was internal discussion we decided that was a  
12 necessary change to make that a 12-inch hole.

13 MR. CRIPE: Madam Chairman, Board members,  
14 we actually took the question and the suggestion that you  
15 guys brought up on that and actually modeled that out to  
16 see do we have a -- you know, a problem. And so we -- we  
17 addressed both the size of the hole and looking at when it  
18 went from -- and he'll cover that later -- 12 to 1. And  
19 the results did indicate that you would -- like he said,  
20 you would get a change. The 12 to the 1 allows all soil  
21 types to be adequately sized by this, so that -- that's --  
22 the result came from a model that we actually sat down and  
23 did many calculations to address that so that we were  
24 consistent in what you got with your perc.

25 BOARD MEMBER CAHN: Yeah, I still question

1 the following head going from 12 to 6, when the original  
2 test was 6 to 5. And I was told at the last meeting, oh,  
3 no, that doesn't matter. But if you run some calculations  
4 on it, it does matter. So...

5 MR. CRIPE: Board Member Cahn, I appreciate  
6 your comments, and we actually did compare that -- there  
7 are two different methods that are going on. And granted,  
8 New York uses that kind of method. But when we did  
9 comparing and go through that, we'd be more than happy  
10 to -- you know, we don't have that with us at the moment,  
11 but we'd be more than happy to present that to you guys.

12 BOARD MEMBER CAHN: Yeah, I would like to  
13 see that, because...

14 MR. CRIPE: It did show that we were  
15 consistent in what we were getting when we ran through  
16 that.

17 BOARD MEMBER CAHN: Yeah. I'm not so  
18 concerned about what New York did, as just more in terms of  
19 the original perc tests that have been around since the  
20 1920s. And, you know, how did you decide it had to be from  
21 12 to 6, other than, you know, falling from 6 to 5, falling  
22 an inch. So -- and -- you know, what is the effect on  
23 the acc -- no, not the accuracy -- but what's the effect on  
24 the results when you change -- you know, where are you  
25 getting that from? I mean, is it some published

1 engineering study somewhere, where you -- you know, you  
2 deviate from sort of a standard perc test or -- you know,  
3 kind of the original, I think, 1920s type -- I think that's  
4 about when it was first introduced.

5 MR. CRIFE: Well, there were actually a lot  
6 of calculations -- not to get in the weeds, but, I mean,  
7 there was the -- and there's a lot of things we can go into  
8 that discussion. However, from our original presentation  
9 and stuff that we were doing, the intent to what changed  
10 there was to make it easier for the homeowner to do and not  
11 be so -- you know, if you're going from 6 to 5, that  
12 person's got to be sitting there doing. And that's very  
13 difficult to even, you know, do that at that depth that  
14 they're trained to do it. So even the 12-inch-diameter  
15 hole, which our calculations show that in the model, makes  
16 that a little more easier. Plus when you're going from 12  
17 to 1, that's easier to accomplish that and several other  
18 perks at the same time, instead of just sitting, you know,  
19 on one hole.

20 We actually did go through all that calculations,  
21 and it is legitimate. It's not something that we were  
22 trying to make it easier for the homeowner to accomplish  
23 that and be consistent in what they were doing, because the  
24 other one is so far down in the hole and you're trying to  
25 measure that and look and -- that was what was behind that.



1 And we did prove that through engineering calculations that  
2 it is valid. It does give you the same results, and that's  
3 what that model would show.

4 BOARD MEMBER CAHN: Yeah. I'd like to see  
5 those, because it's just -- I'll be a Doubting Thomas, I  
6 guess, because there's a big difference with a head that's,  
7 you know, 12 inches versus a head of 6 inches. I mean,  
8 that's double the head. And I'd like to see that carried  
9 through in the calculations, because to me that sounds like  
10 it's going to have a significant difference.

11 MR. CRIPE: And we'd be more than happy,  
12 Board members, to give you that, because your thing was --  
13 you know, the head was considered in there. There were  
14 several things in it.

15 BOARD MEMBER CAHN: Yeah.

16 MR. CRIPE: So I know that is a concern,  
17 and we don't take that very lightly, so...

18 BOARD MEMBER CAHN: Okay.

19 MR. TILLMAN: And as Rich just stated, in  
20 Appendix A, 2(d)(iv), basically we changed that to before  
21 the water level drops below 1 inch above the gravel, refill  
22 the test hole to 12 inches. Again that's part of the  
23 explanation that I just gave.

24 And also we changed in 2(d)(vi), line 1523, from  
25 the slowest rate, that is changed to the largest rate, and

1 so it reads more absorption system is the largest rate from  
2 all the test hole tested -- holes tested.

3 Those were all of the changes that were made to  
4 the chapter from the September meeting to the current  
5 meeting.

6 CHAIRMAN BEDESSEM: Thank you.

7 MR. TILLMAN: And we did not have any  
8 comments, so if there are any comments that the Board  
9 received --

10 CHAIRMAN BEDESSEM: So thank you for going  
11 through those by line. Appreciate that.

12 So any comments from the Board?

13 BOARD MEMBER CAHN: Do we have -- is there  
14 any members of the public that --

15 CHAIRMAN BEDESSEM: Yes. Any members of  
16 the public would like to make comment on this.

17 Thank you, Lorie.

18 MR. KROEGER: Madam Chairman, Board, my  
19 name is Roy Kroeger. I'm with the Cheyenne Laramie County  
20 Health Department, and we basically are the delegated  
21 authority here in Laramie County. And we've watched these  
22 reg changes very closely, because they will affect our  
23 program quite extensively. And at this point we are very  
24 confident that the thought and effort that's gone into  
25 these rewrites have been very well done.

1           I would like to say the greywater changes are  
2 especially important to us, because currently, with the  
3 permit by rule, our county attorney is not real comfortable  
4 enforcing that, and so we are not allowing greywater period  
5 in Laramie County. And so when we have an adopted rule  
6 that we can work off, and we may decide to be a little more  
7 stringent in the rule, but at least the rule gives us the  
8 ability to do that and to actually have a greywater system  
9 that we currently don't have. So we do appreciate  
10 everything that they've done.

11           CHAIRMAN BEDESSEM: Thank you. It's good  
12 to hear that a rulemaking will actually encourage that kind  
13 of --

14           BOARD MEMBER HANSON: Yeah.

15           CHAIRMAN BEDESSEM: -- development.

16           MR. TILLMAN: Board, Madam Chair, we also  
17 submitted with this package, we updated our responses to a  
18 variety of comments that we had in prior presentations, and  
19 if there were any comments or questions as to those  
20 upgrades or modifications, we'd field those at this time.

21           CHAIRMAN BEDESSEM: So I'll put that to the  
22 Board and see if there's particular comments or lines in  
23 the rule that we want to readdress.

24           BOARD MEMBER CAHN: Since you have to  
25 leave, do you have any --

1                   BOARD MEMBER JONES: I don't have any other  
2 comments.

3                   BOARD MEMBER HANSON: One observation,  
4 which is sort of in this document, is to -- I find it very  
5 good in this whole era of recycling, et cetera, to permit  
6 using greywater, again, for purposes of irrigation wherever  
7 possible. And I thought you said that wasn't possible  
8 ahead of time, and I think it's a good thing that it  
9 happened here. Thank you.

10                   (Phone line goes dead.)

11                   MR. TILLMAN: Thank you.

12                   CHAIRMAN BEDESSEM: I think we timed out  
13 on --

14                   BOARD MEMBER HANSON: It doesn't like me.

15                   CHAIRMAN BEDESSEM: -- Mr. Applegate.

16                   MR. TILLMAN: Modern technology.

17                   CHAIRMAN BEDESSEM: So it may be taking him  
18 longer and have to sign on again.

19                   MS. THOMPSON: I don't know what it's  
20 doing.

21                   CHAIRMAN BEDESSEM: So thank you.

22                   So, Lorie.

23                   BOARD MEMBER CAHN: Okay. I guess some of  
24 the stuff in this rule, you know, I -- I feel like we're  
25 now at 40-something pages, and the original rule was maybe

1 20.

2 MR. TILLMAN: Yes.

3 BOARD MEMBER CAHN: So in terms of the  
4 governor's request to reduce the number of pages and to  
5 simplify, I think we can probably do it in less than 40  
6 pages. That's quite a jump from 20 to 40. So that's  
7 just -- I'll just note that as something that I'm concerned  
8 about.

9 MR. TILLMAN: Yeah, we recognize that. But  
10 at the same time, we felt that the pages that were added  
11 were necessary to make the rule clearer and to make the  
12 understanding of what we were requiring also clearer. And  
13 I think the blanket reduction, without thought of what the  
14 consent is, should be considered also.

15 BOARD MEMBER CAHN: And I'll have some  
16 suggestions as we get into it in places where I think some  
17 of the stuff that's in the rule probably should be in the  
18 package that goes along with it, the design, like a  
19 worksheet-type package that helps the person do their work.  
20 So I think there's some places where there's, I think, too  
21 much detail, and I'll point those out as we get there.

22 So I think -- you know, I understand why you have  
23 added in the lagoons. I think that we need to look at the  
24 objective and maybe change the objective to broaden that to  
25 include the chapter -- what was it -- remind the chapter

1 number, that UIC -- Section 18. And so commercial/  
2 industrial waste and waste greater than 2,000 gallons per  
3 day, the objective in -- the first paragraph objective says  
4 this chapter contains the minimum standards, the 2,000  
5 gallons or less defined in the statute shall be the flow of  
6 domestic sewage per day. So right up front in the  
7 objective we have it as 2,000 or less, but we're -- and I  
8 understand why you're including the 2,000. So it's almost  
9 like --

10 CHAIRMAN BEDESSEM: But isn't that because  
11 it's small wastewater systems, and that the fourth  
12 paragraph addresses the -- the new fourth paragraph  
13 addresses the UIC application?

14 The 2,000, the first one, just replaces small  
15 wastewater.

16 MR. TILLMAN: Yes. And that's just the  
17 difference between small wastewater and industrial  
18 wastewater system.

19 BOARD MEMBER CAHN: I guess it's a matter  
20 of introduction of the topic, what is this whole thing  
21 going to be about. It's about less than 2,000 and greater  
22 than 2,000, so I found it surprising, kind of, when I got  
23 there, other than the warning that -- not the warning, but  
24 the new information that was added. So I'm just wondering  
25 if we need a broader objective statement to start with, to

1 just say this isn't just about less than 2,000 gallons per  
2 day. This is also about greater than 2,000. So -- I don't  
3 know. It's just a -- you know, this chapter contains the  
4 minimum standards for the design and construction of small  
5 wastewater systems, which are defined by statute, and  
6 systems greater than 2,000 gallons per day that -- or  
7 something. I mean, we --

8 MR. CRIPE: Board Member Cahn, I appreciate  
9 the comment. Here's -- here's what lies within that --  
10 that statement there in that paragraph. First of all, when  
11 you go and look at the UIC program, those flows are all  
12 over the place. There are some by house, they're defined  
13 by whether it's a 5(c) -- you know, all of those there --  
14 that sometimes they might be less than 2,000. There would  
15 be things that are over 2,000.

16 And so this was the best way we could try to  
17 capture what directly it was addressing so that we didn't  
18 eliminate anything, because really there is another -- and  
19 I'm not sure why this was done this way, but there's  
20 another regulation that lays out the UIC. And they refer  
21 to our chapter to address their facilities in -- in the  
22 various things what -- dependent on the classification it  
23 is. So it may be somewhere in there. And this was the  
24 best way we could come up with a broad enough or general  
25 comment to address all these different things and not

1 eliminate something.

2 BOARD MEMBER CAHN: Okay. I'm fine with  
3 that.

4 You know, maybe -- maybe you eliminate line 16 so  
5 that there's no gap between those two, so, you know -- I  
6 mean, I understand you're caught between a rock and a hard  
7 place. I'm just trying to make it clear in the very  
8 beginning what this -- because people go to the --

9 CHAIRMAN BEDESSEM: Perhaps just lining the  
10 paragraph would be just fine.

11 MR. CRIPE: Board Member Cahn, we can do  
12 that. We can eliminate that line.

13 (Board Member Jones leaves the room.)

14 BOARD MEMBER CAHN: Greywater definition on  
15 page 25-3 -- and, Marge, if you want to -- I think I'll  
16 just go subsequently. So if you have comments on the pages  
17 we're on, just bring them up.

18 We've got the word "bathroom" in there, and I  
19 know we don't want to use "toilets," which are in  
20 bathrooms, and so I thought are we -- if we strike the word  
21 "bathroom" from that list, are we missing anything in the  
22 bathroom? Because we have bathtubs, we have showers, we  
23 have washbasins, so...

24 MS. THOMPSON: Are you saying that seems  
25 like a redundant word in that series, is that what I'm



1 hearing?

2 BOARD MEMBER CAHN: It's just not  
3 redundant. Yes, it's redundant, but it also is too  
4 inclusive, because bathrooms include toilets, and we don't  
5 want toilets. So I'm wondering if we strike the word  
6 "bathroom," are we missing everything, or have we included  
7 everything in a bathroom if we strike that.

8 CHAIRMAN BEDESSEM: Bidet.

9 MR. CRIPE: That's a very good comment. We  
10 don't have a problem removing that, because as you  
11 described --

12 BOARD MEMBER CAHN: We don't want bidet in.

13 THE REPORTER: One at a time, please.

14 MR. CRIPE: -- that's very accurate, so we  
15 don't have a problem removing that word.

16 BOARD MEMBER CAHN: I would suggest,  
17 since -- on page 25-4, after line 143, I would add in the  
18 definition of septage, because we do talk about septage,  
19 which is different than, you know, sewage. So I think it  
20 would be helpful, since this is for the homeowner, to have  
21 a definition of septage so it's clear that we're talking  
22 about the solids, not some --

23 CHAIRMAN BEDESSEM: S-E-P-T-A-G-E.

24 BOARD MEMBER HANSON: Septage, T-A --

25 CHAIRMAN BEDESSEM: T-A-G.

1 BOARD MEMBER HANSON: A-G.

2 BOARD MEMBER CAHN: On page 25-7, line 210,  
3 the "which" should be a "that."

4 MR. CRIPE: I didn't catch that.

5 BOARD MEMBER CAHN: Excuse me? Oh, it's  
6 line 210, "Data obtained from the theoretical evaluation of  
7 the design" -- it should be "that demonstrates a reasonable  
8 probability."

9 MR. CRIPE: Okay.

10 BOARD MEMBER CAHN: Starting at line 237,  
11 where we're talking about pressure-dosed soil absorption  
12 systems and pressure distribution systems. I believe we're  
13 talking about the same thing, and so I would think, since  
14 this is for the homeowner, it would be nice to choose  
15 one -- one name or another.

16 MR. CRIPE: Okay.

17 BOARD MEMBER CAHN: And I don't care which  
18 you use, but I think we should try to be consistent.

19 Now -- okay. I guess the first question I have,  
20 I'm -- I was one of the people that was concerned about  
21 when we talk about greater than so many MPIs and less than  
22 so many MPIs, that's confusing because if you're talking  
23 about a faster rate, that's different. If you're talking  
24 about greater -- are you talking about a greater  
25 percolation rate or are we talking about a greater number?

1 And since they're opposites, the greater the number, the  
2 slower the percolation.

3           So I think that the changes that have been made  
4 to make it be less than and greater, we should really stick  
5 to faster and slower for all of them, because I just  
6 think -- I know, I had to laugh, because I'm the one  
7 brought up how confusing they are. But I think the answer  
8 was to change all the ones I like to the ones I don't like,  
9 and change all the ones I don't like to the ones -- so I  
10 just think if you say greater than 5 MPI, and somebody  
11 knows that's percolation rate, then are we talking about a  
12 greater percolation rate, which is 1 to 5, or are we  
13 talking about a number that's greater than 5, that's 5 to  
14 60.

15           So if you say faster than five MPI, everybody  
16 knows we're talking about a smaller number. We're talking  
17 about faster percolation rate. So -- so I would actually  
18 suggest you go in and -- I'd like to see it all scrubbed  
19 the opposite way. So -- I'm sorry. I know that's  
20 frustrating to you.

21           MR. TILLMAN: I'm confused as to -- because  
22 before I thought the issue was no one would understand if  
23 we said faster and slower. They wouldn't understand that  
24 that was, you know, a percolation rate number. And so  
25 I'm -- I'm a bit confused as to what you're --

1                   BOARD MEMBER CAHN: The issue was -- sorry.  
2 I maybe miscommunicated, but the issue -- what I was trying  
3 to say is the issue is when you say greater than, smaller,  
4 less than, you know, that it's not clear are you talking  
5 about the perc rate or are you talking about the number.  
6 So I was hoping for fasters and slowers, rather than  
7 greater and less thans. Or biggers and -- smaller and  
8 biggers, largers. I'm looking for fasters and slowers, but  
9 I'll --

10                   MR. CRIPE: Board Member Cahn, that was our  
11 intent on what we were trying to accommodate your  
12 suggestion on there.

13                   BOARD MEMBER CAHN: Okay.

14                   MR. CRIPE: It -- when you have something  
15 that's faster than 5, it's going to be a number less.

16                   BOARD MEMBER CAHN: Right.

17                   MR. CRIPE: And if you have something  
18 that's got a perc rate slower than 5, the number's going to  
19 be bigger.

20                   BOARD MEMBER CAHN: I understand that.

21                   MR. CRIPE: So I would ask for some  
22 clarification exactly as to what, so we're --

23                   BOARD MEMBER CAHN: Okay.

24                   MR. CRIPE: -- so we're on the same page.

25                   BOARD MEMBER CAHN: I understand. So in

1 this way, where it says the line 242, if the percolation  
2 rate of the soil is 5 minutes per inch or faster, and I  
3 think in that case you really only mean 1 to 5. So that's  
4 another question I have is if you pressure dose, you don't  
5 ever want to see it greater than -- I'm sorry, faster than  
6 1. You don't want to see any number less than 1.

7 CHAIRMAN BEDESSEM: See --

8 MR. TILLMAN: But --

9 BOARD MEMBER CAHN: Less than.

10 CHAIRMAN BEDESSEM: I have an issue in  
11 that. You understand what's faster and slower.

12 BOARD MEMBER CAHN: Yeah.

13 CHAIRMAN BEDESSEM: I'm not sure the  
14 homeowner knows.

15 BOARD MEMBER CAHN: Yes.

16 CHAIRMAN BEDESSEM: They'll know if that  
17 number is bigger or not. But the concept of faster and  
18 slower they may not get. So I'm thinking if -- or 5  
19 minutes per inch or a greater number, you know, that they  
20 have to look at the number, so --

21 BOARD MEMBER CAHN: As long as we -- I'm  
22 okay with greater if we refer to the number. So you say (5  
23 to 60) or something. If you put in there a parenthetical  
24 that tells you what -- are we looking at? Are we looking  
25 at 1 to 5? Are we looking 5 to 60? Are we looking 60

1 plus? Or are we looking at less than 1? So -- so I'm okay  
2 if you've got some parenthetical in there, so...

3 MR. CRIPE: That's a good suggestion.

4 BOARD MEMBER CAHN: Okay.

5 MR. CRIPE: What it boils down to here,  
6 Board Member Cahn, is one thing is you'll find that we're  
7 consistent now with our 5. And there's various reasons  
8 where we got to that 5. If you've got questions, I'd be  
9 more than happy to clarify that. But that communicates the  
10 same message to the homeowner and simplifies it and it  
11 basically boils down to treatment.

12 BOARD MEMBER CAHN: Right.

13 MR. CRIPE: If you have a professional  
14 engineer, he can do a lot of things that might treat that.  
15 A homeowner has only these tools at their hands. But our  
16 intent was a number greater than 5 works. Anything less  
17 than that, we're not getting that treatment.

18 BOARD MEMBER CAHN: And that's fine. I  
19 don't -- I don't object --

20 MR. CRIPE: So we'll do your suggestion to  
21 clarify.

22 BOARD MEMBER CAHN: Okay. And then the  
23 question that I have in terms of the language in that last  
24 sentence, it's -- the question I would have is if you  
25 pressure dose, can you do a 1 to 5 MPI and 4-foot

1 separation? If you pressure dose, what's the answer to  
2 that question?

3 MR. CRIPE: If you pressure dose the way we  
4 got the regulation written, the conditions that you've  
5 indicated, Board Member Cahn, that would require a  
6 professional engineer to address that.

7 BOARD MEMBER CAHN: Okay.

8 MR. CRIPE: So the answer would be yes, but  
9 not for a homeowner.

10 BOARD MEMBER CAHN: Okay.

11 MR. CRIPE: The home -- what we have here,  
12 we feel comfortable you're going to get the treatment as it  
13 is in here.

14 MS. THOMPSON: Homeowners can start at 5.  
15 Nowhere in here should we be saying -- and to my  
16 understanding we haven't said -- anything less than 5 is  
17 sort of off limits for a homeowner.

18 BOARD MEMBER CAHN: Okay. Okay. So let me  
19 just ask one more question. If -- if you have 5 -- the  
20 perc rate is 5 minutes per inch or faster or greater, do  
21 you have -- you don't have to -- when you're pressure  
22 dosing the system, you wouldn't have to have the depth to  
23 groundwater be exactly at 3 feet. It could be -- has to be  
24 at least 3 feet below. So I think we -- you might want to  
25 add in the word just at least. So it would now read for

1 pressure distribution systems, the depth to high  
2 groundwater shall be at least 3 feet below the bottom of  
3 the absorption surface if the percolation rate of the soil  
4 is 5 minutes per inch or greater (5 to 60). Okay.

5 Okay. On the soil texture, I know we've had this  
6 discussion before. On page -- it's 25-8, starting on line  
7 273. And, again, you know, I think somebody should be able  
8 to do either a soil texture or a perc test. I think if we  
9 leave it as you have it, that it's an additional tool to do  
10 soil texture. We're never going to get forward movement in  
11 the field, moving to soil texture from perc tests, which  
12 can be a lot more accurate. And so I just -- you know, I  
13 don't see the incentive for anybody -- I know you said  
14 you're not that familiar with the soil texture  
15 classification, and that you're not that experienced at  
16 using it, but there is training. There are people that are  
17 getting trained on it. And I think if we do -- I mean,  
18 it's not an improper tool, and so I don't see the  
19 hesitation to allow either, because it helps us move  
20 forward. If you say you have to do both, who's going to do  
21 it? And you may find you really like soil texture, that  
22 it's a better, more accurate tool.

23 MR. TILLMAN: Madam Chair. I think part of  
24 that comfortability with soil texture comes from  
25 experience, and we have a responsibility, I feel, to the



1 state to be more sure that they're going to have an  
2 absorption system that will work, as we see -- as we see  
3 it. And if we were to step into that and it were to fail  
4 and people misuse or didn't correctly texture their soil  
5 properly, they're going to look to us as, well, you guys  
6 said this. And I think there's some responsibility there  
7 that that's why we're hesitant to use soil texturing until  
8 we get more experience with it, and we can make more of a  
9 correlation between the perc rate and the soil texturing.

10 BOARD MEMBER CAHN: But you do say it's by  
11 a person experienced in soil classification. You can add  
12 the word certified or --

13 CHAIRMAN BEDESSEM: You don't have  
14 certification process.

15 BOARD MEMBER CAHN: Not in the state.

16 CHAIRMAN BEDESSEM: Correct. So I don't  
17 know that you can do that.

18 BOARD MEMBER CAHN: I just don't see us  
19 moving forward with, you know, soil texturing if we're  
20 going to say do it both.

21 MR. CRIPE: Madam Chairman. Board Member  
22 Cahn, I would put the focus back on a couple of things.  
23 This is for a homeowner to do, okay? I've personally done  
24 a soil texture, so I'm well aware what they are. I even  
25 have messed one up, not intentionally, trying to do that.

1 For a homeowner they're not going to get that. It requires  
2 you to have that kind of knowledge. We are not -- not  
3 considering that. Like we said, we are going to move  
4 forward. We are going to address the policy as a tool, as  
5 a means to check that. And down the road, if that's  
6 something that we can get to a position where we can  
7 educate the homeowners and get them to understand, we'd be  
8 more than happy. But at this stage, that's why we've not  
9 approached that at the moment.

10 BOARD MEMBER CAHN: Okay. I'm --

11 CHAIRMAN BEDESSEM: And I apologize. I  
12 wanted to go back for a second.

13 BOARD MEMBER CAHN: Okay.

14 CHAIRMAN BEDESSEM: So you kind of moved on  
15 to the texturing, but back on line 239, 240. This is a  
16 sentence I've seen a couple of places, and I didn't  
17 understand what it meant, so maybe you can help me out  
18 here. In (d) where it says depth to high groundwater at  
19 least 4 feet for all systems except for pressure  
20 distribution. The next sentence, in areas of high  
21 groundwater, this vertical separation can be satisfied by a  
22 pressure-dosed soil absorption system. What does that  
23 mean? And do we need that sentence in there?

24 BOARD MEMBER CAHN: So we can leave that  
25 sentence out and go to the next sentence.

1                   CHAIRMAN BEDESSEM: That says when you have  
2 pressure, then you can do 3 feet.

3                   BOARD MEMBER CAHN: Yep.

4                   CHAIRMAN BEDESSEM: Why do we need a  
5 sentence in between the two? Because when I read that  
6 sentence, that means to me that to get to this vertical  
7 separation, all I have to do is elect to use a pressure-  
8 filled soil absorption, then I've met the vertical  
9 separation requirement. That's what that sentence means to  
10 me, and I find it confusing. And so do we really need to  
11 have that? I mean, does it say something important that  
12 I'm not getting? There's a similar sentence like this  
13 somewhere else I saw.

14                  BOARD MEMBER CAHN: Yeah.

15                  CHAIRMAN BEDESSEM: Can you do a search  
16 that says can be satisfied by, and I didn't know what it  
17 meant in that location either.

18                  MS. THOMPSON: Okay.

19                  CHAIRMAN BEDESSEM: If you can do a word  
20 search to find that.

21                  BOARD MEMBER CAHN: Yeah. I think you can  
22 lose that sentence.

23                  And then in your definitions you have a pressure  
24 distribution definition, so you're using pressure  
25 distribution systems, so you -- you could either -- you

1 could go parentheses -- or maybe in the definition say  
2 these are also referred to as pressure-dosed soil  
3 absorption or something. I don't know, but I think you  
4 could lose that sentence and not --

5 CHAIRMAN BEDESSEM: So that's just my  
6 question, is there some meaning I'm not getting there, that  
7 they mean, because if it doesn't say something critical,  
8 I'd get rid of it, because I think it's a little confusing.

9 And if you could do a word search to find the  
10 other place I saw, because it may not -- it may have not  
11 fit there either.

12 BOARD MEMBER HANSON: I thought the  
13 sentence before defined that you have to have at least  
14 4 feet below the bottom -- the groundwater be at least 4  
15 feet below the bottom --

16 CHAIRMAN BEDESSEM: But then the next  
17 sentence says --

18 BOARD MEMBER HANSON: And then the next one  
19 says the area of high groundwater where it's less than  
20 4 feet. That's how I read that.

21 CHAIRMAN BEDESSEM: But then the next  
22 sentence after that says if you use pressure, then you can  
23 do a minimum of 3.

24 MS. THOMPSON: So that -- what I'm hearing  
25 is that if we take that sentence out, does that bit about

1 high groundwater, do we lose something there?

2 CHAIRMAN BEDESSEM: Right. Do we lose  
3 something? Alls it's saying is that, you know -- if you  
4 read it, that you're in a situation where you need to have  
5 3 feet instead of 4, consider a pressure distribution  
6 system, does that sentence tell you something that you  
7 wouldn't come to that conclusion anyway?

8 MR. TILLMAN: No, I don't think so, ma'am.

9 MS. THOMPSON: And I'm going to defer to  
10 Rich, because he's the trained civil engineer.

11 MR. CRIPE: I think you guys have a very  
12 valid point that I can't argue against.

13 MS. THOMPSON: Okay.

14 MR. CRIPE: I think it doesn't lend any --  
15 I mean, I -- when I read it, I agreed with Board Member  
16 Hans --

17 BOARD MEMBER HANSON: Hanson.

18 MR. CRIPE: -- Hanson. Sorry.

19 However, because we've got both of those  
20 sentences there --

21 CHAIRMAN BEDESSEM: That would probably --

22 MR. CRIPE: -- it's a little redundant, I  
23 think.

24 BOARD MEMBER CAHN: If you -- and we do  
25 have the word "high groundwater" in the second sentence.

1 If you wanted to start it off with in areas of high  
2 groundwater, you could say the depth to high groundwater  
3 shall be at least three feet below the bottom of the  
4 absorption surface if the percolation rate of the soil is  
5 5 minutes per inch or greater (5 to 60), and the --  
6 pressure-dosed --

7 CHAIRMAN BEDESSEM: Pressure-dosed soil  
8 absorption system is used.

9 BOARD MEMBER CAHN: -- soil absorption  
10 system in use.

11 MR. CRIFE: Yeah, we can combine that.

12 CHAIRMAN BEDESSEM: I think I would be  
13 thrown off by the can be satisfied -- vertical distance can  
14 be satisfied by. If you use this system, then you don't  
15 have to worry about the vertical distance.

16 BOARD MEMBER CAHN: Then you --

17 CHAIRMAN BEDESSEM: That's the thing  
18 that --

19 BOARD MEMBER CAHN: You can't go from --

20 CHAIRMAN BEDESSEM: It's a different  
21 number.

22 BOARD MEMBER CAHN: -- 1 to 0 --

23 THE REPORTER: One at a time, please.

24 CHAIRMAN BEDESSEM: Thank you.

25 And if you would look, too, I'm pretty sure it's

1 somewhere else, so...

2 Okay. Carry on.

3 BOARD MEMBER CAHN: All right. I have so  
4 many comments on page 25-9 I'm going to have a hard time  
5 reading them all.

6 CHAIRMAN BEDESSEM: And for the record, on  
7 the texturing thing, that's a system that they -- they used  
8 in Maine, and people -- and when I lived there, you  
9 definitely had to go through the certification process, and  
10 it was not that easy. And I -- I like that system, but I  
11 don't know that definitely we need to burden the rule with  
12 making it a way to promote the development of that, because  
13 right now, since there's no certification system, it's hard  
14 for me to be comfortable with it being an alternative to --  
15 to a way of evaluating that you know works. So that's --

16 BOARD MEMBER CAHN: Who would offer  
17 certification in the -- in the state? What kind of a group  
18 offers that? Is it DEQ that offers it?

19 MR. TILLMAN: I don't know.

20 CHAIRMAN BEDESSEM: It may have something  
21 to do with the Public Health Department, or something like  
22 that. So you'd have to look to the -- develop a program by  
23 some agency or county, but since that's not at this time, I  
24 don't think we can sort of jump-start it by including it in  
25 here.

1                   BOARD MEMBER CAHN: I'm just wondering if  
2 it's something DEQ would offer. Who would typically offer  
3 certification classes in the --

4                   CHAIRMAN BEDESSEM: Yeah, I don't recall.

5                   BOARD MEMBER CAHN: Where did you get your  
6 certification?

7                   MR. CRIFE: I didn't get a certification.  
8 I actually took, Board Member Cahn, coursework at the  
9 University of Wyoming. And part of what you do, when  
10 you're doing soils and that, you run through that training  
11 of how to do one of those. We -- you know, as far as the  
12 certification, I'm not aware of where that is in our state.  
13 You know, if there is, the first thing I could think would  
14 maybe be Colorado might be a neighboring state that might  
15 have something in that nature.

16                   CHAIRMAN BEDESSEM: I know Maine does it,  
17 but I don't recall. I haven't lived there for 20 years, so  
18 I don't remember what -- who ran the certification program.  
19 But I guess I'm just suggesting that it's, you know,  
20 something that might happen in the future, but I can  
21 understand why you don't have it in the reg at the moment,  
22 so just my two cents. Move forward.

23                   BOARD MEMBER CAHN: All right. Well, the  
24 first thing -- I'll start with the easy one. On line 300  
25 we're missing -- or the liters and milligrams per liters



1 should be capitalized.

2 BOARD MEMBER HANSON: 300. Nitrates, you  
3 mean.

4 CHAIRMAN BEDESSEM: Yeah, usually got a  
5 capital L.

6 BOARD MEMBER CAHN: I tried to Google this  
7 Source Water Assessment, and that was not available  
8 anywhere that I could find. So I'm wondering how does the  
9 public access this document, Source Water Assessment 2004.

10 CHAIRMAN BEDESSEM: What page are you on?

11 BOARD MEMBER CAHN: I'm on line 296. It's  
12 basically footnote 2.

13 CHAIRMAN BEDESSEM: Yeah. Okay.

14 BOARD MEMBER CAHN: I wanted to see what  
15 was in that, and I couldn't access that anywhere.

16 MS. THOMPSON: Board Member Cahn, I'm  
17 wondering if maybe a link has been broken, because when we  
18 first put this footnote in, I Googled it and was able to  
19 find it. But we've been -- this isn't a document that our  
20 program manages. I believe it's managed in the watershed  
21 program. And if they've moved it or if they it got  
22 adjusted --

23 MR. CRIPE: Board Member Cahn, it's  
24 actually something that falls in our program, but currently  
25 we were going through some updates on our Web page, and so,

1 as she has indicated, maybe something has --

2 MS. THOMPSON: I think there's a broken  
3 link.

4 MR. CRIPE: Broken link or something of  
5 that nature. But that has been around for how long, Kevin?  
6 2002.

7 CHAIRMAN BEDESSEM: 2004. 2004.

8 MR. CRIPE: When that was developed. And  
9 it's also my understanding that most of the municipalities,  
10 that information was shared with them as well. But we can  
11 ensure that link and check it. It was there for a number  
12 of years. I'm not sure what occurred there, so -- it was  
13 done and developed for all of these communities through  
14 Wyoming.

15 BOARD MEMBER CAHN: Okay. So I'm -- I'm a  
16 little bit confused about this whole Table 4 and the public  
17 water supply well. With footnote 1, "For disposal of  
18 nondomestic wastewater, the setback distance shall be  
19 determined by a hydrogeological study in accordance with  
20 Section 17(b) of Chapter 3..." So I guess I'm wondering  
21 why -- why -- if this is covered by Chapter 3, why do we  
22 have this in here? That's kind of -- why is this in  
23 Chapter 25, if the requirements here are in Chapter 3? So  
24 I guess I'm wondering why it's in here, is one question.

25 MR. CRIPE: In chapter --

1                   BOARD MEMBER CAHN: Why do we even need  
2 footnote 1, because we're not talking about that disposal  
3 of nondomestic wastewater?

4                   MR. TILLMAN: It could possibly be the UIC  
5 program that also references our chapter.

6                   BOARD MEMBER CAHN: Because of UIC, okay  
7 that answers my question. That might take care of most of  
8 my questions. Let me -- give me a few minutes just to read  
9 through, because I had a lot.

10                  And then I guess with footnote 2, which has to do  
11 with public water supply wells, minimal -- minimum  
12 horizontal setbacks from public water supply wells, is  
13 this -- isn't this addressed through zoning through county  
14 commissioners, this -- I'm just -- I mean, don't we have,  
15 you know, protection of water supply wells and other  
16 regulations? So, again, I'm kind of wondering what's in  
17 here.

18                  MR. TILLMAN: I don't think it's always  
19 taken care of that way. I know somebody in Torrington,  
20 they want to put an absorption system right next to where  
21 they have public water supply, and that's prime reason why  
22 they wanted that separation.

23                  BOARD MEMBER CAHN: Okay.

24                  MR. CRIPE: Board Member Cahn, I would even  
25 suggest Laramie has had this same situation occur.

1 Sometimes your homeowners are not educated enough to  
2 understand that this is not healthy for them, and they've  
3 had that that occur there as well.

4 BOARD MEMBER HANSON: Yeah.

5 BOARD MEMBER CAHN: And I think I had this  
6 question before about the 4-log removal of pathogens. I  
7 know that it's not a test that somebody needs to do. It's  
8 a treatment system that's capable of showing that, but  
9 again, this is something for homeowners, and it's starting  
10 to get a little complicated. Is there any way we can, you  
11 know, do with -- I mean, you're not having them check for  
12 indicator --

13 MS. THOMPSON: Right. If I might  
14 interject. That particular subscript, we've added a line  
15 that additionally explains that systems that fall under  
16 that subscript 2 are required to obtain an individual  
17 permit and will require a PE. So a homeowner will not be  
18 applying for that type of system. It will have to be  
19 applied for under the guidance of a PE.

20 BOARD MEMBER CAHN: Okay.

21 MS. THOMPSON: Uh-huh.

22 BOARD MEMBER CAHN: Okay.

23 MS. THOMPSON: And we felt by leaving in  
24 that technical term, since we've kind of cleared up that  
25 this isn't homeowner territory anymore, this is PE

1 territory, we felt like it was appropriate to leave that  
2 term, because we still wanted them to understand that was  
3 the standard we wanted them to remove to.

4 BOARD MEMBER CAHN: Okay. Okay. Then I  
5 had another question about if you have let's say a  
6 business, small business like a restaurant, that's going to  
7 put in a septic system, and restaurant, could you explain  
8 how that fits in this table?

9 MR. CRIPE: What table?

10 MS. THOMPSON: We're still on Table 4,  
11 correct?

12 BOARD MEMBER CAHN: Yeah, correct. Still  
13 on Table 4.

14 MR. CRIPE: Well, Board Member Cahn, first  
15 of all, if it's a restaurant, you're a commercial system  
16 that is addressed by the UIC program. We also have  
17 delegated counties that get involved with that. Are you  
18 referring to setback distances or are you referring to the  
19 design?

20 BOARD MEMBER CAHN: The set -- the setback  
21 distances.

22 MS. THOMPSON: So are you kind of comparing  
23 Tables 1 and 2, where we have -- we have those split up  
24 between residential and nonresidential, and you're  
25 wondering is Table 4 for residences or is it for both

1 residential and nonresidential?

2 I think that's her question, Rich.

3 MR. CRIPE: Okay. If Table 4 is for  
4 residential, okay? Non -- or for domestic waste. If you  
5 go to Section 18, I believe is where that is, there is  
6 where your commercial and industrial wastewaters and all of  
7 that fall. So that --

8 BOARD MEMBER CAHN: Where is that? I  
9 didn't hear you, Rich.

10 MR. TILLMAN: Section 18.

11 BOARD MEMBER CAHN: Which one?

12 MR. TILLMAN: Section 18.

13 BOARD MEMBER CAHN: Okay.

14 MR. CRIPE: Page 25-35, that table would  
15 apply to your scenario as you've indicated, or it would  
16 apply to the other scenarios that would be listed in  
17 Section 2 as far as the different types of UICs. They  
18 would go to that -- the Table 4 that we're looking at here  
19 is just for homeowners and residential that --

20 BOARD MEMBER CAHN: So do we need to say  
21 for residential in the title, minimum horizontal setback?

22 CHAIRMAN BEDESSEM: So then -- go back to  
23 the question of why we've got footnote 1. If footnote 1,  
24 disposal of nondomestic wastewater, and Table 4 is just for  
25 residential domestic.

1                   MR. TILLMAN: The UIC program, they permit  
2 systems that are over 2,000.

3                   BOARD MEMBER CAHN: So should that be under  
4 Table 7? Should that footnote then come out of this table  
5 and be in Table 7? Maybe we should address the UIC  
6 commercial/industrial waste as homeowners are not going to  
7 be doing UIC, so...

8                   MR. TILLMAN: I'm saying the UIC program  
9 references our chapter, so we don't know exactly as to what  
10 extent they may --

11                   BOARD MEMBER CAHN: But if it's in Table 7,  
12 then --

13                   MR. CRIPE: Well --

14                   BOARD MEMBER CAHN: -- on page 25-35, which  
15 is Section 18, commercial/industrial waste, waste greater  
16 than 2,000 -- sorry. I'm just very confused. We have --  
17 we have this UIC stuff that we all sort of agree doesn't  
18 really belong here, but we have to have it in here. So I'm  
19 just trying to make clear it's not a thing that got stuck  
20 on, it's something that's integral with --

21                   MR. CRIPE: Board Member Cahn, it didn't  
22 get stuck on. I apologize in the clarification of my  
23 answer to you. There --

24                   CHAIRMAN BEDESSEM: I get it now.

25                   MR. CRIPE: The note is appropriate where

1 it is. There are UICs that address this. However, the  
2 lion's share of other UIC address this other table, and it  
3 specifies that in that note. But the UIC does use this.

4 CHAIRMAN BEDESSEM: Right.

5 MR. CRIPE: And we're trying to give them  
6 clarification so they know what they need to do to ensure  
7 they're not going to -- you're not going to affect the  
8 groundwater. And that's addressed in Chapter 3, Section  
9 17, that goes in great detail all of the stuff they've got  
10 to do. So the note is appropriate. It's just the nature  
11 of what --

12 CHAIRMAN BEDESSEM: It's a confusing  
13 overlap.

14 MR. CRIPE: Yes.

15 BOARD MEMBER CAHN: Yeah. Yeah.

16 MR. CRIPE: So it is appropriate note.

17 I --

18 CHAIRMAN BEDESSEM: But I can see where you  
19 don't have it saying it's residential, because domestic is  
20 greater than 2,000, then it has to go on this table as  
21 well.

22 MR. CRIPE: Yes.

23 CHAIRMAN BEDESSEM: That's what --

24 MR. CRIPE: It's domestic, and you guys  
25 have domestic.



1                   CHAIRMAN BEDESSEM: I got it. It was  
2 complicated to get there, but I got it.

3                   BOARD MEMBER CAHN: I still haven't gotten  
4 there. You're going to have to help me out.

5                   CHAIRMAN BEDESSEM: There's a reason.  
6 There's a reason.

7                   MR. CRIPE: Board --

8                   BOARD MEMBER CAHN: Yes.

9                   MR. CRIPE: Board Member Cahn, the water  
10 administrator made an awesome suggestion. We can clarify  
11 that by probably putting domestic waste in the title and  
12 that would probably clear up the confusion.

13                   CHAIRMAN BEDESSEM: Right. Because it's  
14 not necessarily residential, but the thing that's in common  
15 is it's domestic wastewater.

16                   MR. CRIPE: Correct.

17                   CHAIRMAN BEDESSEM: Whether it's greater  
18 2,000 through the UIC, or whether it's through this --

19                   BOARD MEMBER CAHN: So what happens if it's  
20 a restaurant?

21                   CHAIRMAN BEDESSEM: Then it's not on that  
22 table.

23                   BOARD MEMBER CAHN: Then it's on the  
24 other --

25                   MR. TILLMAN: Yes.

1                   BOARD MEMBER CAHN: Even if it's less than  
2    2,000.

3                   MR. CRIPE: Yes.

4                   CHAIRMAN BEDESSEM: Yes?

5                   MR. CRIPE: Yes.

6                   CHAIRMAN BEDESSEM: Thank you for that  
7    suggestion, because it was very confusing.

8                   BOARD MEMBER CAHN: Yeah. No, that sounds  
9    good.

10                  BOARD MEMBER HANSON: So where have we  
11   added it, just afterwards?

12                  BOARD MEMBER CAHN: It's going to be in the  
13   title, minimal horizontal setback.

14                  CHAIRMAN BEDESSEM: For domestic wastewater  
15   disposal.

16                  MR. TILLMAN: For domestic waste, something  
17   like that.

18                  BOARD MEMBER CAHN: Yeah, for domestic  
19   waste.

20                  Okay. Great. Okay. Back to Table 5. And I  
21   understand you want to use the table rather than the graph,  
22   and I'll give up on this one. But I do think since there  
23   are a lot of numbers that are the same as you get higher  
24   and higher, like 56 to 60 is all .3, 51 to 55 is all .31, I  
25   would think if you have the same number, you could just

1 shorten up this table a little bit by just combining those,  
2 and that would be preferable. And, you know, I still don't  
3 like having to the hundredth of a gallon per day per square  
4 foot, but I just don't think perc tested that accurate,  
5 and, you know, I guess I would ask you one more time if you  
6 would consider doing it to a tenth rather than a hundredth.

7 MR. CRIPE: Board Member Cahn, I appreciate  
8 your thoughts and concerns on that. We will entertain the  
9 reducing of the table. My experience and knowledge on  
10 that, I have a differing opinion on that, so I will say  
11 that the tenth is inappropriate here. The hundredth is  
12 appropriate here, but we will entertain the reducing of  
13 that so that we're not taking up more space. We can do  
14 that.

15 BOARD MEMBER CAHN: We can shorten it up a  
16 little bit.

17 Okay. I'm -- in a lot of responses to comments,  
18 the responses to comments said that you chose to do things  
19 a certain way because it was more restrictive, more -- more  
20 conservative and more protective. When I get to including  
21 sidewalls on -- starting on page -- where are we -- 25-11,  
22 I feel like we're really unconservative by including the  
23 sidewalls in here.

24 And I think we can really simplify this by just  
25 having the area be -- just ignore the sidewalls and not

1 have to have all these different formulas. Because if  
2 you -- and if you look at other states, I think you'll find  
3 that -- I think I looked at Utah, Colorado, Montana, Idaho  
4 and Wyoming was considerably less conservative than all of  
5 the surrounding states by you -- the number of chambers  
6 that this would calculate. And the fact that the length of  
7 the -- or the spacing between trenches is only three feet  
8 where the other states are using between 4 and 6.

9           And so by the time you start doing the math, I  
10 think if you compared -- I think you'd find that you were  
11 much less conservative on the order of sometimes, you know,  
12 the infiltrative area is more than a hundred percent times  
13 larger in other states than our infiltrative area. So I  
14 really take issue with including the sidewalls on here and  
15 having 3-foot separations.

16           Then when we get to -- so that's kind of one  
17 comment. Second one is with chamber trenches, a chamber is  
18 not really doing anything for you in terms of slowing  
19 down -- or, you know, changing your infiltrative surface.  
20 So to give credit for having a chambered trench to give you  
21 additional sidewall credit, you're not -- a chamber's not  
22 really doing anything for you. It's sort of easier to  
23 install, it's cheaper for a homeowner, but in terms of  
24 protectiveness, I don't think you should get any extra  
25 credit for sidewalls and -- and -- because you're not

1 getting anything in the sidewalls.

2           So I really -- I really have a problem with when  
3 you look at other states, particularly surrounding the  
4 states around us, with being much less conservative -- or  
5 being much less protective and being significantly  
6 different than the states around us. So I guess I would --  
7 I don't know where we're going to go on this one, because I  
8 really -- I guess my recommendation is going to be we  
9 just -- we -- I'd like to see us increase the -- the  
10 separation from 4 to 6 and not have 3-foot separation.  
11 Nobody seems to do that but us. And also not counting the  
12 sidewall. So I don't know where we're going to go on this  
13 one, because I know you disagree, but...

14           MR. TILLMAN: We've done extensive looking  
15 at it at the sidewall, and trench configuration does do  
16 treatment and needs to be considered. And we don't  
17 consider that to be conservative, but as a necessary part  
18 of that technology, that type of system. Rich can  
19 elaborate more on that, but we have gone round and round  
20 through many discussions on that, and just including the  
21 bottom area is something that we've collectively decided it  
22 wasn't appropriate in certain instances. In a bit  
23 configuration, bottom area is all you have. But in a  
24 trench system you have to consider the sidewall as part of  
25 that surface, that infiltrative surface. And to neglect

1 that, now you're going to increase the size of this thing,  
2 the length of the trench, the number of chambers  
3 significantly.

4 And some people don't have that room, as has been  
5 stated on other things we brought, that area and usable  
6 space, the lots that people have, you have to take that  
7 into consideration.

8 BOARD MEMBER CAHN: I don't know. We're  
9 going to be on an impasse on this one, you know, because  
10 I -- I am in favor of protectiveness on that, and we're  
11 significantly different than other states around us.

12 MR. TILLMAN: I guess I'm not sure where  
13 we're not protective of the environment by including the  
14 sidewall?

15 BOARD MEMBER CAHN: Because you're coming  
16 up with a smaller number of chambers, and you're -- you  
17 have less area for infiltration. The more area you have  
18 for infiltration, the more protective, there's more area  
19 for treatment, there's more -- so I don't know where we're  
20 going to end up on this one, but --

21 CHAIRMAN BEDESSEM: So you spoke about  
22 including the sidewalls. What about Board Member Cahn's  
23 bringing up a point about the distances between the  
24 trenches?

25 MR. TILLMAN: Again, you can increase that

1 spacing, but, again, you require the footprint required,  
2 then, is going to be larger. And now you require the  
3 homeowner has more area to put in a given amount of  
4 surface.

5 BOARD MEMBER CAHN: But if --

6 MR. TILLMAN: Does that 3 foot, does that  
7 4 foot, what is that buying you, I guess? In that case,  
8 what is it -- what's it doing for you?

9 BOARD MEMBER CAHN: It's giving you more  
10 infiltrative area. I mean why --

11 MR. TILLMAN: But is that not a sidewall,  
12 then?

13 BOARD MEMBER CAHN: That's not sidewall?

14 MR. CRIPE: You know, that has been done  
15 for a number of years in the state of Wyoming, and there is  
16 a proven record that we have done well. You did mention  
17 some areas, and we can have that discussion on that areas.

18 BOARD MEMBER CAHN: Yeah. We've got some  
19 areas in Teton County where we've got some problems.

20 MR. CRIPE: Well, that's a whole different  
21 topic, and -- but the whole point is we have had success  
22 doing what we are doing. And there's a different  
23 philosophy, I guess, that you're throwing out there. But  
24 this does take that into account. We have, you know,  
25 success in getting those sized properly. One thing that we

1 have done with the chambers, because we reevaluated that,  
2 it used to, at one point when those were introduced, that  
3 they were giving them 50 percent. That's been reduced down  
4 to 30. That's very consistent with the plumbing code  
5 that's out there, the International Plumbing Code. They  
6 come up with the same thing.

7           This does lay out the safe and adequate thing.  
8 As far as indicating whether you're getting treatment or  
9 not, you are. The distances between those, even in EPA's  
10 manual, indicates, you know, you want to have the 3 feet  
11 off the side of each of those trenches, which we are. Plus  
12 we're allowing another 3 feet in between where, say, the  
13 life of that leach field is -- you know, moves on, you have  
14 a replacement area in between those that you can put in a  
15 new field to treat. So...

16           BOARD MEMBER CAHN: But you have more  
17 reserve and more of that reserve if you have a bigger  
18 separation between trenches.

19           MR. CRIPE: We have 9 feet as it is, so you  
20 do have --

21           BOARD MEMBER CAHN: How are you getting  
22 9 feet? I'm getting 3 feet and 3 feet.

23           MR. CRIPE: If you read in the design  
24 manual, it does indicate 9 feet from one to the other. So  
25 you have 9 feet in there. The replacement area could fall



1 in between those trenches.

2 BOARD MEMBER CAHN: I'm not getting it.

3 CHAIRMAN BEDESSEM: I think you need to  
4 clarify for her where you're measuring.

5 BOARD MEMBER CAHN: Yeah.

6 CHAIRMAN BEDESSEM: She's got a knitted  
7 brow, so I think you're not on the same page.

8 MR. CRIPE: I'll draw a picture, if that's  
9 helpful. I wish I had --

10 MS. THOMPSON: There's a whiteboard, but we  
11 don't have any markers with us.

12 MR. CRIPE: Your trench layout as I've  
13 drawn here, the distance that the regulation shows  
14 currently here is 9 feet. What they say is you need to  
15 have -- and this is according to the EPA, and a lot of  
16 those things out there, that you need to have 3 feet at  
17 least. Some of them even indicate a foot and a half.  
18 Three is being conservative. If you do that, then that  
19 allows you at a later point, when this life is done on this  
20 field, to either put a trench here and one out here --  
21 whoops, I've drawn this upside down, I apologize -- and  
22 have the proper spacing. But with -- what we have found in  
23 our research is that you typically only need a foot and a  
24 half, but you can go as far as 3. We have in our  
25 regulation that these are separated by 9 feet. Is that --

1                   BOARD MEMBER CAHN: And other states have 4  
2 to 6, which wouldn't allow for --

3                   MR. CRIPE: Them to put something in  
4 between.

5                   BOARD MEMBER CAHN: Yeah.

6                   MR. CRIPE: That's what we're allowing to  
7 do so that you're making the use of their land -- you're --  
8 they can come in and not have to tear up the rest of their  
9 land. It's in a smaller footprint in the area that you've  
10 identified.

11                   BOARD MEMBER HANSON: Wyoming has more.

12                   BOARD MEMBER CAHN: What's that?

13                   BOARD MEMBER HANSON: We have more land in  
14 Wyoming.

15                   BOARD MEMBER CAHN: We have more land in  
16 Wyoming.

17                   BOARD MEMBER HANSON: We have more land in  
18 Wyoming, so we can make it wider.

19                   BOARD MEMBER CAHN: Yeah, I'm -- I don't  
20 think we're going to get anywhere on this one, so I'll  
21 just -- I mean, we'll just move on, but --

22                   CHAIRMAN BEDESSEM: Move to your next.

23                   BOARD MEMBER CAHN: Yeah.

24                   On line 398, we're talking about coarse sand or  
25 soils having a percolation rate less than, we have 1 minute

1 per inch. Shouldn't that be 5 minutes per inch? I thought  
2 essentially if we're between 5 and 60, we don't need a  
3 professional engineer, but if we're less than five --

4 CHAIRMAN BEDESSEM: This is flat-out  
5 banning it. It's unsuitable.

6 MR. TILLMAN: Yeah, it's -- yeah.

7 CHAIRMAN BEDESSEM: If you have a PE, it  
8 means, period, you can't do it. So 1 is cutoff, for  
9 period, you can't do it.

10 BOARD MEMBER CAHN: Oh. Okay.

11 Now we're -- I'm sorry. Okay. Well, so if --  
12 again, I get confused with percolation rates. Coarse sand  
13 or soils, so now we've got it's faster than --

14 CHAIRMAN BEDESSEM: Right, uh-huh.

15 BOARD MEMBER CAHN: -- 1.

16 CHAIRMAN BEDESSEM: Right. So if it's  
17 really, really fast, you can't do a subsurface disposal.

18 BOARD MEMBER CAHN: I guess I  
19 misunderstood. I thought one of the changes you made was  
20 to make it 5 to 60 throughout this --

21 MR. CRIPE: Right.

22 CHAIRMAN BEDESSEM: I thought 1 to 5 meant  
23 you need to have a PE.

24 MR. CRIPE: Right. 1 to 5 --

25 MR. TILLMAN: Correct.

1 MR. CRIPE: And then --

2 CHAIRMAN BEDESSEM: And this is to  
3 explain --

4 MR. CRIPE: Less than 1.

5 CHAIRMAN BEDESSEM: Less than 1 --

6 THE REPORTER: One at a time, please.

7 BOARD MEMBER CAHN: Okay.

8 CHAIRMAN BEDESSEM: -- you can't at all.

9 MR. CRIPE: That is correct, actually.

10 BOARD MEMBER CAHN: Okay. All right. On  
11 line 407, it's -- first it talks about the IPC, and then it  
12 says in the absence of an approved plumbing code and in  
13 addition to IPC. So what kind of a plumbing code are you  
14 talking about? Is this a county-, city-, town-type code?

15 MR. TILLMAN: Yes.

16 CHAIRMAN BEDESSEM: So should it say an  
17 approved local plumbing code?

18 BOARD MEMBER CAHN: Yeah. Something that  
19 says what it is.

20 MR. CRIPE: I think it was wording that was  
21 brought in by Connor, I believe somewhere up in your neck  
22 of the woods. That's what they suggested and we used their  
23 wording.

24 CHAIRMAN BEDESSEM: I would put local  
25 so --

1 BOARD MEMBER CAHN: Yeah.

2 CHAIRMAN BEDESSEM: -- because otherwise it  
3 implies the International Plumbing Code isn't approved.

4 BOARD MEMBER CAHN: Yeah. That's exactly  
5 what --

6 MR. CRIPE: We can add that word "local."

7 BOARD MEMBER CAHN: Okay. On line 410,  
8 "suitable sewer pipe materials are PVC." I think instead  
9 of "and" it should be "or" ABS. They're not --

10 CHAIRMAN BEDESSEM: No.

11 BOARD MEMBER CAHN: They're not both.

12 CHAIRMAN BEDESSEM: Oh. Gotcha.

13 BOARD MEMBER CAHN: And then the next line  
14 has a proper septic tank inlet and outlet pipes shall be  
15 schedule 40 PVC or ABS. So I think you mean "or."

16 CHAIRMAN BEDESSEM: Uh-huh.

17 MR. CRIPE: Okay.

18 BOARD MEMBER CAHN: On line 417 I want to  
19 reverse the order of the sentence so that the "not be  
20 smaller than 4 inches in diameter" is at the end of the  
21 sentence, so that the "not" doesn't apply to size to handle  
22 the peak hourly flow. So I think we were also -- weren't  
23 we going to use design flows, not peak -- I forget which  
24 one we're using.

25 CHAIRMAN BEDESSEM: You were using design.

1 BOARD MEMBER CAHN: Design, yeah.

2 CHAIRMAN BEDESSEM: But I agree the  
3 sentence is little confusing --

4 BOARD MEMBER CAHN: So it should read --

5 CHAIRMAN BEDESSEM: -- as far as should not  
6 apply to.

7 BOARD MEMBER CAHN: My proposed wording  
8 would be building sewer pipes shall be sized to handle the  
9 design hourly flow from the building and not be smaller  
10 than 4 inches in diameter. The problem is having the not  
11 first.

12 CHAIRMAN BEDESSEM: Is that an appropriate  
13 interpretation?

14 MR. TILLMAN: Excuse me?

15 CHAIRMAN BEDESSEM: Is that a suitable  
16 interpretation, that the not doesn't apply to that other  
17 half of that sentence? Clearly, I mean --

18 MR. TILLMAN: Yeah.

19 MS. THOMPSON: You know, that's an old  
20 sentence. That's existing language.

21 BOARD MEMBER CAHN: I know.

22 MS. THOMPSON: It's been awful the whole  
23 time.

24 BOARD MEMBER CAHN: I don't look through  
25 when I read it to see just the changes. I just look at the

1 whole package again.

2 MS. THOMPSON: Yeah.

3 BOARD MEMBER CAHN: So I may be bringing up  
4 something I haven't brought up before, but --

5 MS. THOMPSON: That's okay. I just wanted  
6 to point out that that's in there because that was one of  
7 the few things we didn't change. So we liked the standard  
8 that was setting up. So I think that we can adjust that to  
9 eliminate that confusion.

10 BOARD MEMBER HANSON: Sort of the cart  
11 before the horse.

12 CHAIRMAN BEDESSEM: Yeah, in the peak  
13 issue.

14 BOARD MEMBER CAHN: On page -- are you guys  
15 okay? Page 25-13 --

16 CHAIRMAN BEDESSEM: We just want to make  
17 sure we can get to 15 and then --

18 MS. THOMPSON: And 24, yeah.

19 CHAIRMAN BEDESSEM: -- and then 24.

20 BOARD MEMBER CAHN: Well, I have a lot on  
21 this one. There are sections.

22 Okay. I'm on line 25-13 -- or page 25-13, line  
23 450. When you talk about overexcavating because of an  
24 obstruction, it -- I think for a homeowner, if you're  
25 adding the word after as needed to remove obstruction, if

1 you add that word, and then I think that will be clear that  
2 overexcavating isn't just making it a bigger area. It's  
3 removing the obstruction is the important part. So it's --

4 MR. TILLMAN: Is that always an  
5 obstruction? Can it just be for convenience of installing?

6 BOARD MEMBER CAHN: Can it be --

7 MR. TILLMAN: Can it be just to give you  
8 room? Not just get around something --

9 CHAIRMAN BEDESSEM: Well, not necessarily  
10 to remove the obstruction.

11 MR. TILLMAN: It's just to have more room  
12 to work in.

13 BOARD MEMBER CAHN: Oh. Well, okay. So  
14 maybe -- I guess what was unclear is what over -- because  
15 when the rock or other undesirable protruding obstructions  
16 are encountered.

17 CHAIRMAN BEDESSEM: Yeah. I think it's  
18 okay as is, because I think they're trying to cover the  
19 situation where they need to get around the protruding  
20 obstruction.

21 BOARD MEMBER CAHN: Oh, okay.

22 CHAIRMAN BEDESSEM: Not necessarily remove  
23 it, but to facilitate the installation of --

24 BOARD MEMBER CAHN: I get it. Okay.

25 BOARD MEMBER HANSON: You could -- probably



1 instead of shall be overexcavated, may have to be  
2 overexcavated, because then it goes with as needed.

3 CHAIRMAN BEDESSEM: Right. May be  
4 overexcavated instead of shall be, if that's appropriate.

5 MS. THOMPSON: Okay.

6 MR. CRIPE: We can do that.

7 MS. THOMPSON: Yep.

8 BOARD MEMBER CAHN: Okay. On line 490, I  
9 think in -- and I appreciate your trying to reword this to  
10 incorporate my concerns of the wording, but I think it's  
11 still kind of muddled. I think we can still improve on the  
12 wording. I think we need to talk about the outlet in a  
13 separate way from the inlet and not try to put it all  
14 together.

15 So if we said the upper part -- so on line 490,  
16 if we say talk about the inlet first, the upper part of the  
17 inlet tee should extend 8 to 9 inches below the top of the  
18 liquid level.

19 CHAIRMAN BEDESSEM: Where? What line is  
20 this?

21 BOARD MEMBER CAHN: Line 490.

22 BOARD MEMBER HANSON: No. The tees?

23 CHAIRMAN BEDESSEM: The tees or baffles --

24 BOARD MEMBER CAHN: Yeah. I think we still  
25 have a problem by trying to have both the inlet and the

1 outlet in the -- and the tees and baffle -- or baffles are  
2 all in the same thing. So I think we want to talk about  
3 the requirements for an inlet tee and then talk about the  
4 requirements for an outlet tee.

5 CHAIRMAN BEDESSEM: When I read it, the  
6 part that says the upper part shall be, you know, 6 inches  
7 above the liquid level --

8 BOARD MEMBER CAHN: That's only for --  
9 isn't that only for the inlet, or is that for both? That  
10 might be -- is that for both?

11 MR. TILLMAN: Be for both. Yeah, it would  
12 be both.

13 CHAIRMAN BEDESSEM: Both.

14 BOARD MEMBER CAHN: But then it says the  
15 part below the liquid level shall be 30 to 40 percent of  
16 the total liquid that only applies to the outlet, not to  
17 the inlet.

18 MR. TILLMAN: No. You can have --

19 BOARD MEMBER CAHN: No, because the inlet  
20 is done by 8 inches into the liquid level -- or 6 inches  
21 into the liquids level. Sorry. 6 inches. I'm sorry. My  
22 eyes are getting tired. I'm seeing 6s and 8s.

23 So if we said the inlet tee should extend  
24 6 inches below the top of the liquid level, or the inlet  
25 tee or baffle shall extend 8 to 9 inches -- I'm sorry,

1 6 inches below the top of the liquid level, and then --

2 CHAIRMAN BEDESSEM: My only suggestion on  
3 that line is for the second line in (I) where it says, "The  
4 part below the liquid level shall be 30 to 40 percent of  
5 the total liquid depth, can you just say the part below the  
6 liquid level shall extend 30 to 40 percent of the total  
7 liquid depth.

8 (Mr. Tillman and Mr. Cripe  
9 have a conversation.)

10 THE REPORTER: Is this going to be on the  
11 record or --

12 BOARD MEMBER CAHN: This goes 30 to  
13 40 percent down into this level, otherwise you're going to  
14 get stung out into here. It has to extend 30 to  
15 40 percent -- can't be right there, like this drawing.

16 MR. TILLMAN: Well this is just a drawing  
17 just to show that the tee goes two ways, the upper and  
18 lower referring to an above and below, not necessarily  
19 inlet and outlet. They both have an upper --

20 BOARD MEMBER CAHN: But the requirements  
21 for an inlet tee are going to be different than where the  
22 requirements for the outlet tee.

23 MR. TILLMAN: The location, yes.

24 BOARD MEMBER CAHN: In terms of where they  
25 are. This one -- the bottom going to be 30 perc --

1 40 percent into the liquid level, and this one's got to be  
2 6 -- what is it, 6 inches above the liquids level?

3 MR. TILLMAN: No. Ma'am, I think what  
4 we're saying is that the inlet -- the inlet and outlet are  
5 going to be at different elevations. The inlet tee has a  
6 part that extends 6 inches above -- the upper part 6 inches  
7 above. The lower part is some percentage of the level.  
8 It's going to be in a different location, correct, because  
9 the outlet's going to be in different locations. So,  
10 therefore, it's going to be somewhat lower into the liquids  
11 than that. But the percentage is still of the level. Not  
12 of the liquids in the tank, of the liquid level that's  
13 possible in the tank. So there is an upper and a lower  
14 part of that tee that applies to both the inlet and the  
15 outlet.

16 BOARD MEMBER CAHN: But --

17 CHAIRMAN BEDESSEM: So -- so is the problem  
18 here that we need to say the upper part should be a minimum  
19 of 6 inches above the maximum liquid level, or -- there  
20 just seems to be a lack of clarity. If we're confused,  
21 we're not going to be the only ones that are confused.

22 BOARD MEMBER CAHN: The liquid level is  
23 going to be determined on the outlet, so that shouldn't be  
24 changing. The liquid level, right? That's going to be  
25 determined on your outlet.

1 MR. TILLMAN: Somewhat, yes.

2 BOARD MEMBER CAHN: Okay. So -- well --

3 CHAIRMAN BEDESSEM: So the part below the  
4 liquid level shall extend 30 to 40 percent of the total  
5 liquid depth. So essentially it's -- water's this deep,  
6 then it's going 30 to 40 percent below the top of the  
7 water --

8 MR. TILLMAN: Yes.

9 CHAIRMAN BEDESSEM: -- of that total depth.

10 So can we just say shall extend to 30 to  
11 40 percent of that total liquid depth?

12 MR. TILLMAN: Yes.

13 CHAIRMAN BEDESSEM: And it shouldn't say --  
14 excuse my language. It shouldn't say "shall extend to."  
15 It should say "shall extend."

16 MR. TILLMAN: Shall extend.

17 CHAIRMAN BEDESSEM: Right. Because "extend  
18 to" would mean it would go down 70 percent. So you just  
19 want -- right? So you just want "shall extend 30 to 40  
20 percent" --

21 MR. CRIPE: Yes.

22 CHAIRMAN BEDESSEM: -- "of the total liquid  
23 depth."

24 MR. CRIPE: Yes, Madam Chair.

25 CHAIRMAN BEDESSEM: Okay.

1                   MR. CRIPE: The liquid level shall extend  
2 30 to 40 percent of the depth of the total liquid depth.

3                   CHAIRMAN BEDESSEM: I think I can  
4 understand it from there. It's a confusing scenario.

5                   However, it seems to me that -- that this is a  
6 requirement of the -- of the tank that, most tanks are  
7 constructed this way. The typical homeowner is probably  
8 not getting into this level of detail, so --

9                   BOARD MEMBER CAHN: So you're saying --

10                  CHAIRMAN BEDESSEM: I'm saying that the  
11 lower --

12                  BOARD MEMBER CAHN: -- lower part of the  
13 tees and baffles extends to the same 30 to 40 percent? I  
14 think that -- isn't that last sentence only applying 30 to  
15 40 percent total liquid depth, isn't that only for the  
16 outlet?

17                  MR. TILLMAN: No. It's 30 to 40 percent of  
18 the total liquid depth. You're going to have to -- again,  
19 you have an inlet and outlet that's going to be at  
20 different levels. And 30 percent -- 30 to 40 percent of  
21 the liquid depth for the first one is going to be a  
22 different height than that of the outlet, but they're both  
23 going to have that same requirement.

24                  BOARD MEMBER CAHN: All right. I'm -- I'll  
25 just move on, because I still find it confusing.

1 All right. I'm going to --

2 CHAIRMAN BEDESSEM: Yeah, let's --

3 BOARD MEMBER CAHN: Let's move on.

4 CHAIRMAN BEDESSEM: Let's try to move on.

5 BOARD MEMBER CAHN: Okay.

6 CHAIRMAN BEDESSEM: Kind of prioritize  
7 what's important.

8 BOARD MEMBER CAHN: I had heard from a  
9 member of the public that most tanks aren't going to meet  
10 this 3 -- in line 494, a minimum of 3 inches of clear space  
11 should be provided --

12 THE REPORTER: I'm sorry. Can you repeat  
13 that.

14 BOARD MEMBER CAHN: Sorry. It's line 494,  
15 "A minimum of 3 inches of clear space shall be provided  
16 over the tops of the baffles or tees." And that's for  
17 venting of gases. And I'm hearing from a member of the  
18 public that works with these that most are not -- tanks are  
19 not going to meet that, that they'll have 1 to 2 inches and  
20 not 3. And so since this is just for gas venting, I think  
21 I want -- would ask you to please check, because I'm  
22 hearing that this is not -- the manufacturers are not --  
23 tanks are not going to have that, that it's only going to  
24 be 1 or 2 inches for gas venting. So I would ask that.

25 And since we're only talking about a minimum, can

1 we say a minimum of 1 inch of clear space, and then tanks  
2 that are 2 inches will meet it, tanks that are 1 inch will  
3 meet it?

4 CHAIRMAN BEDESSEM: What line are we on,  
5 Lorie?

6 BOARD MEMBER CAHN: We're on line 494.

7 MR. TILLMAN: We can check that with tanks  
8 that we've already approved and see where that lines out.

9 BOARD MEMBER CAHN: Yeah. Yeah. Please  
10 do. And if you find any that are 1-inch approved, then  
11 change that to 1 inch, then --

12 MR. TILLMAN: Sure.

13 BOARD MEMBER CAHN: Okay. All right. Back  
14 to the rewording of 509. We had this talk before about I  
15 still have a problem with the first tank or the first  
16 compartment of the first tank shall be equal to 50 percent.  
17 I think it's really at least 50 percent. And so we're  
18 talking -- first sentence we're really talking about if  
19 there's more than one tank, the first tank -- and I would  
20 get rid of the "or the first compartment of the first  
21 tank" -- shall be at least 50 percent of the total septic  
22 tank system volume.

23 Because I still think this prevents two tanks in  
24 series, and then have -- so I almost think we need a B and  
25 a C in here. And I would propose that B would read if a



1 tank has more than one compartment, the first  
2 compartment -- so I think -- let me back up. I would talk  
3 about a single tank and then a series of tanks. So B would  
4 say if a tank has more than one compartment, the first  
5 compartment shall be 50 percent -- should be at least  
6 50 percent of the tank volume. And then C, a new C, would  
7 say if there's more than one tank, the first tank shall be  
8 at least 50 percent of the total septic tank system volume.  
9 Or we --

10 CHAIRMAN BEDESSEM: I guess.

11 BOARD MEMBER CAHN: I'm sorry. Sorry. Not  
12 total septic tank. Sorry. Of the tank volume. We don't  
13 want to prevent two tanks in series.

14 MR. TILLMAN: Ma'am --

15 CHAIRMAN BEDESSEM: I guess I don't  
16 understand how this -- it seems to me like what you said  
17 was exactly the same thing it says here. I don't see how  
18 this prevents two tanks in a series. I'm confused, Lorie.

19 BOARD MEMBER CAHN: Because if each tank  
20 has to be greater than 50 percent of the total tank system  
21 volume, the first compartment in any tank, you can't stick  
22 them in series because --

23 CHAIRMAN BEDESSEM: Oh, oh. So your  
24 concern is -- I see what you're saying. You're talking  
25 about as if you have a tank that has two compartments, that

1 the first tank you've got two requirements on the same  
2 thing, the first compartment and the first tank both have  
3 to be -- is that what you're saying? I just can't --

4 MR. CRIPE: No, that's --

5 MR. TILLMAN: I guess we're saying if you  
6 have two tanks in series, the first tank has to be at least  
7 50 percent of the total tank volume of all that you're  
8 required. If you have one tank, the first compartment  
9 needs to be at least 50 percent.

10 BOARD MEMBER CAHN: Say that -- if you  
11 could say that, that's exactly -- I don't think this says  
12 it.

13 BOARD MEMBER HANSON: Suggestion. If you  
14 add at the beginning of the sentence, the first compartment  
15 of the first tank or the first compartment -- no, the --  
16 the first compartment of a tank or the first compartment of  
17 the first tank of a multi, whatever, system --

18 CHAIRMAN BEDESSEM: No, that says something  
19 different.

20 BOARD MEMBER CAHN: That's different.

21 BOARD MEMBER HANSON: No, it isn't.

22 BOARD MEMBER CAHN: My problem is I think  
23 the way it's worded prevents two tanks in series or three  
24 tanks.

25 BOARD MEMBER HANSON: Yeah.

1                   BOARD MEMBER CAHN:  If the first tank is  
2 greater than 50 percent of the entire septic -- I mean, are  
3 you interested in it being 50 percent within a tank, the  
4 first compartment of the tank has to be greater than  
5 50 percent.

6                   MR. TILLMAN:  No.  50 percent -- if the  
7 total value that you're requiring, whatever that -- if it's  
8 1500 gallons, the first tank needs to be at least  
9 50 percent.

10                  CHAIRMAN BEDESSEM:  So that --

11                  MR. TILLMAN:  Or if you have one tank, and  
12 you split it into two compartments, the first compartment  
13 needs to be at least 50 percent.

14                  BOARD MEMBER HANSON:  That's what I'm  
15 saying.

16                  MR. TILLMAN:  And so you can have multiple  
17 tanks in series.  It doesn't prevent --

18                  BOARD MEMBER CAHN:  It's just getting  
19 smaller and smaller.

20                  MR. TILLMAN:  Yes, it's just getting  
21 smaller, that's all.  But you can have multiple tanks in  
22 series.

23                  CHAIRMAN BEDESSEM:  They just -- just the  
24 remaining tanks are going to be less than 50 percent.

25                  MR. TILLMAN:  Yeah.

1                   CHAIRMAN BEDESSEM: You add up the volume  
2 of the remaining tanks --

3                   MR. TILLMAN: Exactly.

4                   CHAIRMAN BEDESSEM: -- it will be less than  
5 50 percent.

6                   MR. TILLMAN: Yes.

7                   CHAIRMAN BEDESSEM: I don't think there's  
8 really any advantage of rewording that. I think it's okay.

9                   BOARD MEMBER HANSON: We can add a  
10 statement at the beginning, "if there's only one tank."

11                   BOARD MEMBER CAHN: Okay. So if a tank is  
12 more than one compartment --

13                   BOARD MEMBER HANSON: Yeah.

14                   BOARD MEMBER CAHN: -- we're just trying to  
15 say the first compartment --

16                   BOARD MEMBER HANSON: Yeah.

17                   BOARD MEMBER CAHN: -- should be at least  
18 50 percent of the tank volume, not of the system volume.  
19 So you couldn't have --

20                   MR. TILLMAN: But we say the system volume,  
21 just to give you that latitude. Rather than just saying of  
22 that tank, it's of the system, so that you can have one or  
23 two tanks; one tank with no -- with no divider, and just  
24 have two tanks in series with just a tank, no walls, or you  
25 can have one tank with a divider in it so you have two

1 compartments in that tank. This allows a flexibility to  
2 have either one of those situations. And you can still put  
3 them in series. But like you said --

4 CHAIRMAN BEDESSEM: I think the "or" is  
5 really helpful.

6 MR. TILLMAN: An "or" where at?

7 CHAIRMAN BEDESSEM: No, no. It's right  
8 where you have it.

9 MR. TILLMAN: All right. Sorry.

10 CHAIRMAN BEDESSEM: I don't think it  
11 precludes --

12 BOARD MEMBER CAHN: I'm too confused. I'm  
13 going to back off.

14 Okay. On page 25-15, I have two places where I  
15 really, based on what we heard from Dwight Reppa, I want to  
16 see 24 inches for the dosing tank rather than 20-inch  
17 minimum. And also the grease interceptor when we get to  
18 that.

19 You know, your information that you provided was  
20 very helpful, that you looked at 60-some-odd -- 60, let's  
21 say, manufacturers, and over 50 percent of them had 20-inch  
22 openings. So it's not like it's not available out there.  
23 And correct me, Frank, go ahead -- not Frank, sorry --  
24 Rich, go ahead and correct me, with the numbers if you  
25 want, but there definitely was a large percentage of

1 manufacturers out there that made 24-inch openings. And  
2 from my perspective, you know, when I talked to somebody --  
3 and you talked to Dwight as well -- you've got a large  
4 person going in to clean out -- in a confined space to  
5 clean out a tank, and -- and if it's a safety thing to  
6 get -- to be able -- one, it's ease of being able to do  
7 business in the tank; and, two, it's a safety thing to be  
8 able to get a ladder in there and get the person out. I'm  
9 not going to be okay with 20-inch in those two instances.  
10 I'm fine with all the other places, but on that one I'm  
11 not, and we're not going to see eye to eye on this.

12 MR. TILLMAN: Madam Chair. Madam Cahn, I  
13 understand Dwight's perspective, but we have a lot of  
14 people that have a lot of experience in that same area.  
15 Hardly anyone puts a person through that access hole into a  
16 tank to do work.

17 BOARD MEMBER CAHN: I think they can.

18 MR. TILLMAN: They don't put someone  
19 through a 20-inch or 24-inch hole to go inside of that tank  
20 to work. That's the exception rather than the rule. Most  
21 people uncover it, pull the lid off of it and have -- do  
22 your work. You're not going through that access hole  
23 because it's not meant to be an egress or ingress point.

24 And the fact that he's putting people in there,  
25 that's his perspective and his prerogative, but I also

1 think that brings up an OSHA safety concern, because it is  
2 a confined space that is not normally meant to be occupied.  
3 And increasing that size of 24 inch doesn't take away that  
4 concern or safety factor.

5 CHAIRMAN BEDESSEM: Perhaps it might make  
6 it more likely that somebody would go down in there --

7 BOARD MEMBER CAHN: Make it 6 inches.

8 CHAIRMAN BEDESSEM: -- when they shouldn't  
9 be.

10 MR. TILLMAN: Secondly, we have that  
11 minimum of 20 inch -- Teton County is a delegated county.

12 BOARD MEMBER CAHN: Right.

13 MR. TILLMAN: 24 inch is their standard.

14 BOARD MEMBER CAHN: Right.

15 MR. TILLMAN: I don't understand why the  
16 rest of the state -- if he's the only one that has that  
17 concern that we've been aware of, and he has that in his --

18 BOARD MEMBER CAHN: I guess it was when we  
19 met the last time -- or the time before, you guys said you  
20 would look into it and see whether or not -- because you  
21 didn't know if 24-inch openings were even available. And  
22 they are available by the manufacturers, and so -- and I  
23 would think that a -- that somebody servicing the tank -- I  
24 mean, are you going to come in and service the tank by  
25 taking off the entire lid, or are you going to service it

1 by -- because that's all buried in soil, so you've got to  
2 dig it out?

3 MR. TILLMAN: Right. Right.

4 BOARD MEMBER CAHN: Otherwise you have a  
5 manhole that's access. You open up the manhole, do your  
6 work and be done. So I don't -- I don't do this kind of  
7 work myself, so I --

8 MR. TILLMAN: But, again, I beg to differ.  
9 That is not normally what people do. They don't normally  
10 go in there to do that type of work through that hole.  
11 They will -- they will uncover it and pull the lid if it's  
12 necessary to do maintenance in there. That is the  
13 exception, not the rule.

14 BOARD MEMBER CAHN: There's such a thing  
15 called a manhole opening, though.

16 MR. TILLMAN: Right.

17 MR. CRIPE: Board Member Cahn, I might  
18 bring to your attention -- I don't know how recent this has  
19 been, but it was up around Devil's Tower, if you keep up on  
20 things -- there were actually two individuals that were  
21 killed in this very instance, because you're dealing with  
22 the confined space. And you're supposed to get a permit,  
23 you're supposed to have all that training. And they  
24 actually had two people killed that actually went down in  
25 and didn't -- so that's --



1                   BOARD MEMBER CAHN: People are going to be  
2 doing it, the chance they're going to get killed is going  
3 to be higher with a 20-inch opening than a 24 inch. I  
4 don't know.

5                   MS. THOMPSON: I'd like to go ahead and  
6 point out, too, we're calling them access risers or  
7 clean-out risers. So on -- in our regs, we're not calling  
8 that particular space a manhole. It looks like they're  
9 calling that access risers and clean-out risers. So  
10 hopefully -- not putting manhole right next to that.  
11 Hopefully we're not insinuating that we think you should go  
12 in there, because, again, like Bill said, it's not --  
13 that's not standard operating practice for most of the  
14 folks that we're dealing with. We want them to have access  
15 to do work as best they can, but if they need to get in  
16 there, like he said, they're pulling it. They're --  
17 they're pulling the lid off.

18                   MR. TILLMAN: Most of those holes are meant  
19 to stick a hose or light or something else in, not to stick  
20 a person in.

21                   BOARD MEMBER CAHN: Right. But this is a  
22 dosing tank, so you have pump, if you have to service the  
23 pump.

24                   MR. TILLMAN: Right. But you would pull  
25 the lid and go down and do that work.

1 BOARD MEMBER CAHN: Right. We'll --

2 MR. TILLMAN: Again, might I reiterate that  
3 the minimum size is 20. They can make -- if they want 24,  
4 they can have 24. We're just saying that the minimum is  
5 20.

6 BOARD MEMBER CAHN: Well, we'll move on,  
7 because it's another one I think we're not going to -- I  
8 mean, I understand his point, and it's a point well taken,  
9 so...

10 MR. TILLMAN: Okay.

11 BOARD MEMBER CAHN: There's this thing  
12 about the dosing tank volumes, Table 6 on line 536. This  
13 is something that I'm wondering if perhaps that table  
14 belongs in a -- some kind of technical guideline or  
15 worksheet or something along those lines.

16 So I just throw that out there. I'm not sure  
17 that's really that kind of level of detail. The  
18 homeowner's not designing the dosing tank pump off alarm  
19 switches, things like that. So I would maybe put that in a  
20 design package and not have it part of this regulation.

21 And then I will add that the average wastewater  
22 flows, are you -- do you mean that's not defined anywhere,  
23 so, again, are you talking about that being the design  
24 flow? The very first column heading.

25 MR. CRIPE: Correct. That should be

1 design.

2 Board Member Cahn, I -- I like your suggestion;  
3 however, these regs get used by manufacturers, and how --  
4 how are they going to, you know, have enough in front of  
5 them to, you know --

6 BOARD MEMBER CAHN: Isn't the worksheet or  
7 guideline, whatever you're going to have, going to be going  
8 with it?

9 MR. CRIFE: Correct. For a homeowner, and  
10 we can provide that, but this has some there that they have  
11 to do that, so...

12 CHAIRMAN BEDESSEM: I don't think it hurts  
13 the rule to have it in there.

14 BOARD MEMBER CAHN: Okay.

15 MR. TILLMAN: I believe infiltrator -- Dick  
16 Bachelder called me, and they've got a new poly tank  
17 that's -- you know, that they're in. Again, they can use  
18 that to look to see whether or not it's considered one or  
19 the other.

20 BOARD MEMBER CAHN: I'm fine with leaving  
21 it in. I just thought -- I was trying to make suggestions  
22 where you might shorten things up. But if you don't want  
23 to, that's fine.

24 I'm a little confused about having the  
25 recommended pump capacity in there when we have dosing tank

1 volumes. Is that -- it's not related to the flow rate.

2 MR. CRIFE: I'm not sure --

3 MR. TILLMAN: The very last line says  
4 recommended pump capacity. I think that's in there just to  
5 give an idea what the pumping rate should be for a size  
6 pump for a given size tank.

7 BOARD MEMBER CAHN: Okay.

8 MR. TILLMAN: It's not an absolute design  
9 criteria, but just to give them an idea what size pump  
10 they're looking at.

11 BOARD MEMBER CAHN: Okay. So I'll just  
12 make the comment I'd like to see 597, the next page, be  
13 24 inches for grease interceptors, and we'll move on,  
14 because I know you disagree.

15 And then on 775, we already talked about minimum  
16 spacing of trenches. I disagree. And there's a lot of  
17 language in the rest of this page on less than 60 minutes.  
18 We'll put the parenthetical in.

19 Okay. For a bed system you got -- you have less  
20 than 60 minute -- or faster than 60 minutes per inch. Is  
21 less than a 5 MPI going to be okay? You say, "The soils  
22 shall have percolation rates less than 60 minutes per  
23 inch," but is less than 5 going to be okay, or do we want  
24 to do parenthetically?

25 MR. TILLMAN: Less than 5 MPI will be taken

1 care of by a PE.

2 BOARD MEMBER CAHN: But is that okay in the  
3 bed, where you -- I mean --

4 MR. DOCTOR: Yes, as long as a PE has  
5 looked at it.

6 BOARD MEMBER CAHN: Really? I would  
7 think --

8 CHAIRMAN BEDESSEM: But then --

9 BOARD MEMBER CAHN: -- in a bed you would  
10 want to constrain that number -- you know, the percolation  
11 rates, like constrain it to be a 5 to 30 or something, and  
12 not have less than -- faster than 5 or slower than 30. But  
13 because you've got your --

14 CHAIRMAN BEDESSEM: I think it's fine to  
15 have the PE evaluate less than 5, to be consistent.

16 BOARD MEMBER CAHN: Okay. So on 25-21,  
17 line 818, we're talking about 60 minutes per inch, that  
18 we're greater than 60 minutes per inch for clay loam soils.  
19 Is this outside of the scope of this, or is that, again, a  
20 situation where you need a PE? Should we -- could we just  
21 re -- delete that last line?

22 MR. CRIPE: Well, no. Again, it's the  
23 understanding of the -- of the numbers again.

24 BOARD MEMBER CAHN: Right. Greater.

25 MR. CRIPE: So it's -- yes. So it's

1 something that's going --

2 BOARD MEMBER CAHN: Slower.

3 MR. CRIPE: -- a lower number.

4 BOARD MEMBER CAHN: Well, you -- but in  
5 this case you're talking about something that's an MPI is  
6 greater than 60 minutes. So you're talking about saying 62  
7 or 70 or 80 or a hundred MPI -- you're talking about clay  
8 loam soils, so you're talking about very slow percolation.  
9 Do you -- is this outside the scope of this --

10 MR. CRIPE: No.

11 MR. TILLMAN: We're talking about the  
12 spacing, this spacing requirement, that if you have  
13 spacing -- if you have a percolation rate that's greater  
14 than 60 or slower than 60, that 9-foot spacing is not going  
15 to be considered reserve area. That's all that's saying.  
16 You're still going to look at it from a PE, but all it's  
17 saying is that that spacing now is going to be taken up by  
18 absorption, because you're not going back, you're going to  
19 be going horizontal.

20 CHAIRMAN BEDESSEM: You can't count on it  
21 for a reserve area.

22 MR. TILLMAN: Exactly.

23 CHAIRMAN BEDESSEM: In those situations  
24 it's a very slow perc rate.

25 BOARD MEMBER CAHN: Okay. So now we're in

1 a PE --

2 MR. TILLMAN: The PE will still look at it,  
3 but we're just telling him that the space and the footprint  
4 that you're looking at is going to be taken up by required  
5 area, not a choice.

6 BOARD MEMBER CAHN: Okay.

7 CHAIRMAN BEDESSEM: We're not that far from  
8 the end.

9 BOARD MEMBER CAHN: What?

10 CHAIRMAN BEDESSEM: It's 3:30.

11 BOARD MEMBER CAHN: I'll try to speak  
12 faster.

13 THE REPORTER: No.

14 CHAIRMAN BEDESSEM: No?

15 BOARD MEMBER CAHN: Okay. Line 886, I  
16 think you want at least 3 vertical feet of filter sand, and  
17 you have "and unsaturated native soil."

18 CHAIRMAN BEDESSEM: It's supposed to be  
19 and/or. They corrected.

20 BOARD MEMBER CAHN: Oh, right. Right.

21 CHAIRMAN BEDESSEM: They had -- that was a  
22 typo, so it's supposed to be and/or.

23 BOARD MEMBER CAHN: Right.

24 BOARD MEMBER HANSON: 886?

25 CHAIRMAN BEDESSEM: Uh-huh. Right. It's

1 supposed to be and/or.

2 BOARD MEMBER HANSON: And/or.

3 BOARD MEMBER CAHN: On 5 -- line -- page  
4 25-24, line 927. I think if it's pressure dosed you can  
5 reduce it to 3-foot, so -- no?

6 MR. TILLMAN: A sand mound --

7 MR. CRIPE: This is sand mound.

8 MR. TILLMAN: -- doesn't have pressure  
9 dosed. It can be gravity.

10 BOARD MEMBER CAHN: Can you pressure dose a  
11 sand mound?

12 MR. TILLMAN: Yes, you can, but it can also  
13 be gravity fed.

14 MR. CRIPE: And that's --

15 MR. TILLMAN: And that's assuming it's  
16 gravity.

17 BOARD MEMBER CAHN: Is it obvious, though,  
18 that's it's gravity? I was just going to add in this may  
19 be reduced to 3 feet with pressure dosing?

20 MR. TILLMAN: See, we took out -- in the  
21 original criteria, we took out the part that a pressure  
22 dosing system is required for a sand mound.

23 BOARD MEMBER CAHN: I know, but we've lost  
24 sight of the fact you don't need a 4-foot vertical  
25 separation if you have pressure dosing. So it seems like



1 we're missing the --

2 MR. TILLMAN: We can add that in there.

3 BOARD MEMBER CAHN: Yeah, I think we  
4 should.

5 25-24, lines 957 through 959, I guess I thought  
6 maybe that's some stuff that could be handled by the  
7 worksheet. Are we talking about loading rates of .8 gallon  
8 per day per foot? I don't -- I'm not going to die on my  
9 sword on that one.

10 CHAIRMAN BEDESSEM: Yeah. I think it's  
11 fine. And it's equivalent to G in section above, and  
12 they're comparable sections.

13 BOARD MEMBER CAHN: Page 25-26, top of the  
14 page, there's no line number where you've added in the  
15 formula.

16 MR. TILLMAN: Oh.

17 BOARD MEMBER CAHN: I think that the line  
18 that separates the numerator from the denominator should  
19 extend out over the plus E minus P. It's not clear where  
20 the plus E minus P --

21 CHAIRMAN BEDESSEM: Whether it's the  
22 denominator or --

23 MR. CRIPE: Correct. Correct.

24 BOARD MEMBER CAHN: I think it's a  
25 denominator.

1                   BOARD MEMBER HANSON: Or, yeah, the line  
2 next to -- yeah.

3                   CHAIRMAN BEDESSEM: That would be  
4 confusing.

5                   BOARD MEMBER HANSON: Yeah.

6                   BOARD MEMBER CAHN: Okay. With the -- we  
7 are talking about small wastewater in Section 14. When we  
8 get to line 1034, "The influent line into the lagoon must  
9 discharge near the center onto a concrete apron at least 2  
10 feet square." Is that -- isn't that really more like a  
11 bigger system? We're not talking about small wastewater  
12 lagoons. That's more like a municipality with high flow  
13 rates. So it doesn't seem like that would be necessary.  
14 We're talking about small lagoons here, small wastewater  
15 lagoons.

16                   And with septic tanks, you're not getting the  
17 high flow volume. So is -- is scour velocity really an  
18 issue in this? I mean, this looks like a holdover from --

19                   MR. TILLMAN: I don't think it's scouring.  
20 I think it's splash. It's getting it to go --

21                   BOARD MEMBER CAHN: Well, it's discharging  
22 near the center onto a concrete -- I guess I'm not  
23 questioning the center, it's onto the concrete apron. Is  
24 that necessary for small systems? I mean, it seems  
25 pretty --

1 MR. TILLMAN: I suppose we can take that  
2 out.

3 BOARD MEMBER CAHN: Yeah. 25-27, on  
4 privies. You have a design package for privies is provided  
5 on line -- I guess my question is whose -- is that design  
6 package going to come before the Board for us to review it,  
7 or is that just -- I mean, we don't know what's in there,  
8 so we're sort of buying off on this stuff on privies  
9 without knowing sort of what's in there, you know. So  
10 by --

11 MR. TILLMAN: A PE or one -- a PE on our  
12 staff will design that worksheet.

13 BOARD MEMBER CAHN: I just was wondering --  
14 I guess my question is does that come -- if we look at  
15 those, does our board look at those worksheets?

16 CHAIRMAN BEDESSEM: Those typically are  
17 like a guideline, which we don't normally --

18 BOARD MEMBER CAHN: Okay. Sometimes we  
19 look at policies and guidelines. We looked at a guideline  
20 today.

21 CHAIRMAN BEDESSEM: Yeah. And we did that  
22 because -- one of the reasons we did that is because that  
23 was part of the rule and we excerpted it from the rule on  
24 the condition that they would make a guideline.

25 BOARD MEMBER CAHN: Okay.

1                   CHAIRMAN BEDESSEM: So this is a past  
2 practice, I mean, we've done, having the design package.

3                   MR. TILLMAN: Yes.

4                   BOARD MEMBER CAHN: I'll just make a  
5 comment again, very quickly, that I still am concerned  
6 about the greywater systems, that we're not encouraging and  
7 facilitating greywater reuse with our disinfection systems,  
8 but in the interest of making those shorter, I would  
9 suggest that all of page 25-29 could -- you could start --  
10 some of that stuff could then be estimating greywater  
11 discharges. You could include it in your technical  
12 guideline and maybe get rid of a lot of these. That might  
13 be a place where we're getting beyond sort of philosophical  
14 introduction to a lot of the details. So that -- I would  
15 just suggest that look at the shortening -- putting that  
16 stuff into your guideline might shorten it up.

17                   On page 25-33, line 1354 -- oops. No. We  
18 already -- we have "coliform levels is." So there's -- I  
19 don't know if it's coliform level is -- let's take off the  
20 S.

21                   BOARD MEMBER HANSON: Yeah.

22                   BOARD MEMBER CAHN: On 25-34, with the  
23 composting toilet, line 1398. If they're going to have to  
24 take their waste to a permitted wastewater treatment  
25 facility or landfill, then I would think that would

1 discourage anybody from having a composting toilet. I  
2 would think that -- you know, I thought some of those  
3 composting toilets are supposed to make dirt, essentially,  
4 that can be put out not where you're growing vegetables,  
5 but out someplace else. And so if you have to take it to a  
6 permitted wastewater treatment facility or a landfill,  
7 who's going to bother with a composting toilet?

8 MR. TILLMAN: Well, I think that's just to  
9 protect -- you know, for the people that may put it in  
10 places where they shouldn't or not take care of it as such.  
11 It's just a safety factor. Is it encouraging them, maybe  
12 not. But, again, our --

13 BOARD MEMBER CAHN: The whole point is to  
14 avoid, you know, not using the sewer, not, you know, going  
15 to a wastewater treatment facility or something. So now  
16 you've got to pick up your compost that you've now made in  
17 your toilet and you have to cart it off to some treatment  
18 facility. I mean, I just don't think it's going to  
19 encourage use of a composting toilet. I thought the whole  
20 point for a composting toilet would be people would compost  
21 it and then you would end up with some kind of compost, not  
22 for your vegetable garden, but for some other place on your  
23 property.

24 CHAIRMAN BEDESSEM: For landscaping?

25 BOARD MEMBER CAHN: Yeah. You know, where

1 there's no dogs and no -- no vegetables being grown or  
2 harvesting crops, so -- I just think that discourages using  
3 composting toilets.

4 CHAIRMAN BEDESSEM: Were you just trying to  
5 cover that with the "or in the manner approved by the  
6 Division"?

7 MR. TILLMAN: (Nods head.)

8 BOARD MEMBER CAHN: Can it be just --

9 CHAIRMAN BEDESSEM: Yeah.

10 BOARD MEMBER CAHN: Okay. I didn't catch  
11 that nuance. So somebody's going to come to you, say I  
12 have a composting toilet and I want to use it on this  
13 corner of my property, and you're going to say that's fine?

14 MR. TILLMAN: Possibly.

15 BOARD MEMBER CAHN: What's that?

16 MR. TILLMAN: Possibly.

17 BOARD MEMBER CAHN: Possibly. Okay.

18 All right. Line 1442, there's liters should be  
19 capitalized. Okay. Okay. I'm done.

20 CHAIRMAN BEDESSEM: Down to the last page.

21 BOARD MEMBER CAHN: Go ahead. I don't  
22 have --

23 CHAIRMAN BEDESSEM: No, we're good.

24 (Off-the-record discussion.)

25 (Meeting proceedings recessed)

1 3:37 p.m. to 3:53 p.m.)

2 CHAIRMAN BEDESSEM: The Water and Waste  
3 Advisory Board hereby reconvenes after our afternoon break.

4 I'll give the floor to Gina Thompson.

5 MS. THOMPSON: So our question is we are  
6 wondering if we have the authority to request that you vote  
7 to forward our rules, so the rule we just discussed and  
8 then the rule that we'll be presenting, because we're not  
9 administrators or program managers. So.

10 MR. CRIPE: Kevin is on his way back in.  
11 I've got to go deal with a slide so I apologize.

12 BOARD MEMBER CAHN: Oh, are you dealing  
13 with the slide in Jackson?

14 MR. CRIPE: Yes.

15 BOARD MEMBER CAHN: Oh, the land. That's  
16 what I was wondering that's what he was --

17 BOARD MEMBER HANSON: Oh, the landslide.

18 MS. THOMPSON: If Kevin's on his way back,  
19 then my concern of terror is alleviated, because I wasn't  
20 sure if we could act on his behalf, if he hadn't said that  
21 we could. I just -- the wording in the Environmental  
22 Quality Act is kind of specific, and I didn't want us to  
23 have trouble later on because we were brief here. So sorry  
24 about the confusion there. So --

25 CHAIRMAN BEDESSEM: Well, shall we have

1 Board discussion about Chapter 25?

2 BOARD MEMBER CAHN: What's the next chapter  
3 we're looking at, 24?

4 CHAIRMAN BEDESSEM: 25, remember, we've got  
5 a companion Chapter 15 that sort of would have to be passed  
6 as a package with 25, since it's the -- since it's being  
7 rescinded.

8 MS. THOMPSON: And we're removing the  
9 contents. So we're removing the regulations, but we're  
10 reserving the chapter. So it will still exist as a number,  
11 it just won't have anything in it.

12 MR. TILLMAN: The EPA has primacy over  
13 that, over bio solids. We don't regulate that. So that's  
14 why we're rescinding it. We took the appendix, which the  
15 land application of septage, added it to end of 25, and  
16 that way we can get rid of 15. That's the only --

17 CHAIRMAN BEDESSEM: But it's a companion  
18 because --

19 MS. THOMPSON: Yes.

20 MR. TILLMAN: Yes. Yes, it's a package  
21 together.

22 CHAIRMAN BEDESSEM: Because that --

23 THE REPORTER: One at a time, please.

24 CHAIRMAN BEDESSEM: That material has to go  
25 into Chapter 25 -- the remaining material from Chapter 15



1 has to be moved into Chapter 25 so they're a package.

2 MR. TILLMAN: Yes.

3 MS. THOMPSON: Yes.

4 CHAIRMAN BEDESSEM: Okay. Thank you.

5 BOARD MEMBER CAHN: And that was in the  
6 version we looked at.

7 MS. THOMPSON: Yes. The land application  
8 of septage has been removed from 15 and it is now proposed  
9 to you as Chapter 25, Appendix B.

10 CHAIRMAN BEDESSEM: Uh-huh. That has  
11 something to do with the length.

12 BOARD MEMBER CAHN: Two pages.

13 CHAIRMAN BEDESSEM: Yeah, I know it's only  
14 two pages, but...

15 MS. THOMPSON: But we killed like a whole  
16 bunch of others pages, so...

17 CHAIRMAN BEDESSEM: Okay.

18 BOARD MEMBER CAHN: Okay.

19 CHAIRMAN BEDESSEM: So discussion about  
20 Chapter 25. Do we need a formal -- your question for  
21 process was do we need a formal request for -- from your  
22 administrator to move that forward?

23 MS. THOMPSON: Right.

24 CHAIRMAN BEDESSEM: I don't know the answer  
25 to that question, so maybe you should make the request just

1 in case.

2 MR. FREDERICK: Kevin Frederick, Water  
3 Quality Division Administrator.

4 BOARD MEMBER CAHN: Speak into microphone  
5 better, Kevin. Thanks.

6 MR. FREDERICK: I'll try. My -- I've got  
7 just a little bit of my voice left here.

8 CHAIRMAN BEDESSEM: That sounded good,  
9 though.

10 MR. FREDERICK: That sounded okay?

11 BOARD MEMBER HANSON: As you lower  
12 yourself.

13 CHAIRMAN BEDESSEM: Get lower, sounds good.

14 MR. FREDERICK: Kevin Frederick, Water  
15 Quality Division Administrator.

16 Madam Chair, members of the Board, we certainly  
17 appreciate your working with us on this -- this regulation  
18 Chapter 25 today. And certainly the recommendations that  
19 you provided to us today are -- are surely going to improve  
20 the regulation.

21 There were, in my opinion, several  
22 recommendations for changes in the regulation you would  
23 like us to consider. We've had a lot of discussion with  
24 respect to some things in a regulation that I understand  
25 not -- not all members of the Board agreed with, and that's

1     okay.

2                     I guess I would suggest at this time, Madam  
3     Chair, that staff take the regulation back and address the  
4     recommendations and suggestions that you offered to them  
5     here today, and we will then incorporate those into a final  
6     rule that we will come before you during the second quarter  
7     advisory board meeting and request that at that time that  
8     with your approval, to move the regulation to the  
9     Environmental Quality Council.

10                    I believe the comment period -- did that close?

11                    MS. THOMPSON: It closes at the end of this  
12     meeting.

13                    MR. FREDERICK: At the end of this meeting?  
14     I would certainly support closing the comment period at the  
15     end of the meeting as well. Thank you.

16                    CHAIRMAN BEDESSEM: As far as closing the  
17     comment period, help me with this, is that something we  
18     need to vote on to approve?

19                    BOARD MEMBER CAHN: It's already closed.

20                    CHAIRMAN BEDESSEM: No, I mean --

21                    BOARD MEMBER CAHN: Sorry.

22                    CHAIRMAN BEDESSEM: I'm not thinking we  
23     need to extend that, so unless we have a motion to extend,  
24     the comment period's closed. And so sounds to me like  
25     you'll do some consideration of comments. There's some --

1 a number of technical and also as well as some minor  
2 grammatical changes I think will make the rule more clear.  
3 So that you'll end up with a better final product in the  
4 long run.

5 I am pleased to say, though, that I know this is  
6 the third time we've gone through this rule, you know,  
7 which we're -- if you're spending the time preparing it  
8 might be painful to some extent; however, the nice thing is  
9 through this process, from the discussions we've had, it  
10 looks like you've discovered things -- you know, in  
11 addition to, you know, what our comments were -- things  
12 that were missing that needed to be included. And so it  
13 sounds to me like the delay in timing actually has worked  
14 to the benefit of coming up with a -- with a very sound  
15 rule.

16 So based on that, we will table voting on this  
17 rule until the next meeting and look forward to be able to  
18 pass that forward with, you know, finalizing all these  
19 details and move on at that time.

20 MR. FREDERICK: Great.

21 CHAIRMAN BEDESSEM: So any other remarks  
22 from the remaining Board?

23 BOARD MEMBER HANSON: Just a question.  
24 This Chapter 25, this version seems to indicate -- this is,  
25 of course, the strike-through, and whatever, version, that

1 15 is already rolled into this at this point; is that  
2 correct?

3 MS. THOMPSON: Yes. Yes.

4 BOARD MEMBER HANSON: Is that right?

5 MR. FREDERICK: Yes.

6 BOARD MEMBER HANSON: And what was  
7 discussed today was also in essence 15?

8 MS. THOMPSON: Yes.

9 MR. FREDERICK: Yes.

10 BOARD MEMBER HANSON: Ah, thank you.

11 CHAIRMAN BEDESSEM: Okay. Good. So you  
12 have this package.

13 BOARD MEMBER HANSON: I'm up to speed.

14 CHAIRMAN BEDESSEM: Okay. So if you want  
15 to proceed forward with 24, that would be wonderful.

16 MR. FREDERICK: Thank you, Madam Chairman.

17 And, again, I appreciate the Board's dedication  
18 and persistence in working with us on some difficult rules  
19 here today that, as you've noted, are important. And it's  
20 important for us to get those rules and regulations as  
21 clear as possible, so thank you all for that.

22 I will start off by saying to you, Madam Chair,  
23 and members of the Board, that we certainly aren't here  
24 today to request your recommendations and approval for  
25 moving to Chapter 24 ahead. Chapter 24 has been some time

1 in the making as you -- as some of you know who have  
2 been on the Board for several years. And it's probably  
3 one of the more important rules and regulations, I think,  
4 that Water Quality Division is working on in anticipation  
5 of someday permitting Class VI wells for carbon  
6 sequestration.

7 And as you may recall, the majority of Chapter 24  
8 has been before the Advisory Board and through the Council  
9 and signed off on by our former governor, Governor Dave  
10 Freudenthal. And if you would like, I'm certainly prepared  
11 to review a little bit of that chronology with you. In  
12 fact, it might be important for me to take a few minutes to  
13 do so.

14 The proposed changes that we're here to discuss  
15 and review with you really relate to the final pieces of  
16 the Class VI regulation that weren't in place at the time  
17 we drafted the current rule that deals primarily with  
18 permitting requirements. So, unfortunately, they're  
19 important -- they're an important part of the regulation,  
20 but, in my opinion, in retrospect, they probably are going  
21 to be one of the more challenging parts of this rule to  
22 articulate in a regulation, given what I perceive to be the  
23 Board's interest in trying to make regulations as clear as  
24 possible.

25 That said, let me take a few minutes to just kind

1 of review with you the chronology of events on how we got  
2 to this point with our Chapter 24 on Class VI wells. In  
3 Spring of 2008, the Wyoming legislature promulgated  
4 statutes authorizing the DEQ to proceed with rulemaking for  
5 permitting Class VI carbon sequestration wells and  
6 directing the DEQ -- excuse me. Ignore that last half  
7 sentence, please.

8 In July of 2008, EPA published its proposed Class  
9 VI rule titled Federal Requirements Under the Underground  
10 Injection Control Program for Carbon Dioxide (CO2) Geologic  
11 (GS) Wells. Approximately nine months later, March 2009,  
12 DEQ presented its draft rule the first time before the  
13 Water and Waste Advisory Board at a public meeting in  
14 Laramie. The title of our regulation, based upon the  
15 federal rule, was Chapter 24 Class VI Injection Wells and  
16 Facilities Underground Injection Control Program.

17 Approximately six months later, in September  
18 of 2009, a working group established by the legislature led  
19 by the director of DEQ and supervisor of the Oil & Gas  
20 Conservation Commission established to develop appropriate  
21 bonding procedures and other financial assurance methods to  
22 assure adequate financial resources are provided to pay for  
23 mitigation of reclamation costs associated with Class VI  
24 wells was completed.

25 The final report was titled Report and

1 Recommendations of the Carbon Sequestration Working Group  
2 to the Joint Minerals Business and Economic Development  
3 Committee and the Joint Judicial Committee of the Wyoming  
4 State Legislature. Please keep in mind that as of this  
5 point in time, September of 2009, both the draft regulation  
6 that DEQ had developed and presented to the Board earlier  
7 that year and the working group's final report did not have  
8 the benefit of understanding or knowing what the financial  
9 assurance requirements would be in the final federal rule.

10           The financial assurance requirements in the  
11 proposed rule were somewhat nonspecific. And, in general,  
12 in DEQ's draft regulation we essentially deferred proposing  
13 financial assurance requirements until we had an  
14 opportunity to do a couple of things. First and foremost,  
15 see what the recommendations were that came out of the DEQ  
16 working group to develop recommendations for financial  
17 assurance, and also to see what the financial assurance  
18 requirements would look like in EPA's final rule. Also, in  
19 September of 2009, we went before this Board again for  
20 second public hearing on our draft Chapter 24. Three  
21 months later, in December of 2009, we were back before the  
22 advisory board, this Board, again for a third time, at  
23 which time the Board recommended moving the rule before the  
24 Environmental Quality Council.

25           In the spring of 2010, the Wyoming legislature



1 amended its statutes relating to carbon sequestration Class  
2 VI wells to provide for financial assurance requirements,  
3 several of which were based upon the recommendations that  
4 came out of the carbon sequestration working group to the  
5 Joint Business Economic Development Committee and Joint  
6 Judicial Committee of the Wyoming State Legislature.

7           In July of 2010, we held our first public hearing  
8 with the Environmental Quality Council on our proposed  
9 Chapter 24 regulation, and in September of 2010, we had our  
10 second hearing before the Environmental Quality Council  
11 wherein they recommended the adoption of Chapter 24. In  
12 November of 2010 the rule was signed by former Governor  
13 Dave Freudenthal, and in December of 2010, EPA published  
14 its final federal regulation on Class VI wells. So  
15 there's been a period of time in the interim between  
16 publication of the final rule, promulgation of additional  
17 Wyoming statutes with respect to financial assurance  
18 requirements for carbon sequestration wells and where we  
19 stand today.

20           During this interim, the Department engaged in a  
21 couple of activities. Primarily myself and a consultant  
22 that had been formerly on former Governor Dave  
23 Freudenthal's policy staff, Miss Laura Ladd from Jackson,  
24 Wyoming. Both Laura and myself participated with a small  
25 national work group that was comprised primarily of

1 representatives from the power industry, the mining  
2 industry, not only here in the United States, but also in  
3 Canada, and a contractor with experience in evaluating and  
4 monetizing various types of risk scenarios. The name of  
5 that group is Industrial Economics Consulting out of  
6 Washington, D.C.

7           The purpose of the work group was essentially to  
8 evaluate potential risks associated with carbon  
9 sequestration. And to try and develop a model approach for  
10 monetizing those risks for the purposes of establishing  
11 financial assurance amounts, financial assurance  
12 requirements.

13           As I say, that report was completed in June of  
14 2012, and it was certainly a useful and beneficial effort  
15 for us to participate on that work group. By the way, we  
16 were the only state invited to and did participate in that  
17 work group.

18           However, it, too, the report, essentially became  
19 one of several moving pieces in the whole deliberation of  
20 what the financial assurance requirements for the State of  
21 Wyoming would look like based upon what we understood the  
22 final federal rule to say, what we understood the Wyoming  
23 statutes to say, and how we might inform our understanding  
24 with respect to the information in the IEC final report.

25           Subsequently, both Laura and I also participated

1 to a lesser degree in a working group -- a small working  
2 group established by the Interstate Oil & Gas Compact  
3 Commission that consisted of representatives from the legal  
4 profession familiar with carbon sequestration projects, as  
5 well as representatives from the power generation industry  
6 primarily in Canada. There may have been some U.S. ties  
7 there as well. And also participation from the state of  
8 North Dakota.

9           That effort was essentially designed to help  
10 develop a guideline that the Interstate Oil & Gas Compact  
11 Commission could present to states for consideration as  
12 they worked through and developed financial assurance  
13 requirements for Class VI wells. I think primarily with  
14 respect to injection of CO2 for enhanced oil recovery  
15 purposes, that then ultimately at the end of the life of  
16 the EUR project would result in carbon sequestration within  
17 those diminished oil reservoirs.

18           So at the present time we don't have what I would  
19 consider to be a model of financial assurance regulations  
20 that have been developed by other states. To my knowledge,  
21 only the state of North Dakota has progressed to the point  
22 that the state of Wyoming is at with respect to developing  
23 regulations for Class VI wells. Indeed, North Dakota's  
24 gone a little bit further. They've essentially completed  
25 financial assurance requirements for the regulations, and

1 have those regulations before EPA now under review in  
2 obtaining primacy or delegation to implement the Class VI  
3 permitting program. So North Dakota is a little farther  
4 than along than we are.

5 I'm not aware of any other states that are ready  
6 at this time to provide draft rules or final rules to EPA  
7 for consideration in order to take primacy of the Class VI  
8 program. I do know that at least a few states are working  
9 on them, however, working in that direction. I believe  
10 Kansas, Oklahoma and Texas are all interested in developing  
11 Class VI rules and regulations and taking primacy for the  
12 program.

13 There doesn't seem to be a lot of -- a lot of  
14 interest from many other states. And I suspect that has to  
15 do in part with interest coming certainly from those states  
16 that have got abundant oil and gas resources and reserves  
17 that can be used for essentially enhanced oil recovery  
18 through the injection CO2, similar to what's creating Salt  
19 Creek field now, by Midwest. Also I believe the Beaver  
20 Creek field over by Riverton.

21 But as I said, that leaves -- that leaves it to  
22 us to, I guess, take a harder path than -- than we may be  
23 taking in situations where others have gone before us and  
24 others have crafted rules and regulations such as Bill and  
25 Rich and Gina mentioned today in evaluating the rules and

1 regulations for Chapter 25 that they're working on with  
2 respect to small wastewater systems.

3           So it's become a little bit -- a little bit more  
4 problematic in that sense. But, nevertheless, that may  
5 also present somewhat of an opportunity for us. And we  
6 also understand that the state statutes that our  
7 legislature have passed are certainly requirements that  
8 other states may or may not think of that we'll have to  
9 address, nevertheless.

10           So with all these moving pieces and parts out  
11 there, we've had to give consideration to our state  
12 statutes, which, generally speaking, are fairly clear and  
13 fairly straightforward. We have to give consideration to  
14 the federal requirements in the final rule, because in  
15 order for us to obtain primacy for the Class VI programs,  
16 our final rule that we develop here in Wyoming has to be as  
17 stringent as the federal rule.

18           So we have to give consideration to those  
19 requirements, but unfortunately the clarity and the detail,  
20 and I think, to a degree, the regulatory understanding that  
21 I -- that I sense the Board is interested in seeing in a  
22 final Wyoming rule, in my opinion, is, to a fair degree,  
23 lacking in the final federal rule. And in working on  
24 trying to bring some consistency between the final federal  
25 rule requirements and Wyoming statutory requirements, in

1 particular it's been a challenge to make sure that we're  
2 consistent one to the other.

3           And as you've probably seen, there's certainly  
4 some obvious changes in our draft rule in the style and  
5 tone in which we start talking about the financial  
6 assurance requirements. That in and of itself isn't  
7 necessary problematic, but I think it just illustrates that  
8 there's some work that needs to be done on this new  
9 language for us to come up with what I would consider to  
10 be, and what I'm sure you also would consider to be a good  
11 final rule. So we need to work on that as well.

12           At this time, Madam Chairman, I can certainly  
13 take the time to walk you through, generally speaking, the  
14 changes that deal with financial assurance requirements in  
15 particular in Chapter 24, or perhaps, given the early stage  
16 of these changes and recognizing that this is really the  
17 first time you've had a chance to see some of this language  
18 prior to our meeting here today, it may be worthwhile to  
19 actually spend a few moments just discussing your general  
20 thoughts and perceptions on what you think you've seen so  
21 far and perhaps provide us some guidance in trying to make  
22 the rule something that is what the Board envisions as  
23 being clear, relatively easy to understand and meaningful.

24           And I certainly think that's something that is a  
25 discussion I would be interested in having with the Board,

1 because I certainly recognize we have -- we have some work  
2 to do here. Thank you, Madam Chairman.

3 CHAIRMAN BEDESSEM: Well, I guess I for  
4 one -- we talk about challenges of trying to mesh the  
5 federal and state requirements with respect to financial  
6 assurance. However, I'm interested in having you speak to  
7 the plume stabilization and the depth waiver requirements  
8 and those components of the proposal.

9 Just kind of give us a little more about that. I  
10 mean, I'm not used to seeing plume stabilization having the  
11 component of essentially not causing any harm. I usually  
12 think plume stabilization staying where it's at, but here  
13 it's staying where it's at and it's not impacting anything.  
14 So I'm just curious to just get a very brief background on  
15 that, because we're trying to either wrap up or be decisive  
16 in the next 35 minutes.

17 MR. FREDERICK: Sure. And I didn't quite  
18 catch what you had to say about the waiver process. Did  
19 you want a little explanation on that as well?

20 CHAIRMAN BEDESSEM: I guess I feel you  
21 talked about the challenges and you know what you've done  
22 so far, but I think I'm more interested in the other part,  
23 but that may not be the same as the -- my colleagues are on  
24 board with.

25 MR. FREDERICK: Yeah. Let me try to

1 respond to that. Truthfully, I think the section dealing  
2 with the waiver requirement -- and just for your  
3 information, that particular concept was not discussed or  
4 included at all in EPA's draft rule we used to base our  
5 regulation on. So that's a new concept. And, in fact,  
6 it's a concept that -- that we supported, because it -- it  
7 provided more opportunities for injection than what the  
8 draft regulation had proposed. And draft regulation  
9 essentially proposes that you can only inject beneath the  
10 deepest underground source of drinking water as defined in  
11 federal rules or USDW. Essentially it's a formation that  
12 contains more than 10,000 milligrams per liter of total  
13 dissolved solids. So it's fairly saline.

14           And we have in Wyoming here underground sources  
15 of drinking water at relatively great depths. In fact, the  
16 Madison formation, as an example, in the Moneta divide area  
17 is at a depth of roughly 15,000 feet. Total dissolved  
18 solids is, I believe, less than a thousand milligrams per  
19 liter. So in situations like that, it really begs the  
20 question whether or not we can even find formations beneath  
21 the Madison at that depth in the event we wish to sequester  
22 carbon dioxide in them.

23           So we were, you know, actually quite pleased, I  
24 think, to see the waiver option come in. We're essentially  
25 provided, then, an opportunity to, okay, inject above that



1 deepest USDW under certain conditions that are prescribed  
2 in the rule here.

3           So I thought that was favorable. I thought that  
4 was positive. And, quite honestly, I think the majority of  
5 the language that particular section that we're proposing  
6 to add is fairly clear and straightforward. Doesn't cause  
7 me as much confusion, I guess, as some of the later  
8 language discussing more specifically financial assurance  
9 requirements.

10           The second part of your question I'm trying to  
11 recall, but I had something I wanted to speak to.

12           CHAIRMAN BEDESSEM: It's with respect to  
13 the plume stabilization --

14           MR. FREDERICK: Yes. Thank you.

15           CHAIRMAN BEDESSEM: -- and the definition  
16 and where that's used.

17           MR. FREDERICK: Yes. Thank you.

18           Plume stabilization first was acknowledged,  
19 I think, as an important -- an important element of the  
20 whole carbon sequestration process, from permitting all the  
21 way through closure, then into long-term monitoring and so  
22 forth in the report that was developed by the carbon  
23 sequestration working group. And the carbon sequestration  
24 working group didn't define plume stabilization per se.  
25 And in our discussions we instead considered criterion

1 factors that should be considered and evaluated when trying  
2 to assess whether plume stabilization has occurred or  
3 hasn't occurred.

4           And I think more generally that type of  
5 flexibility in allowing DEQ to establish at what point in  
6 time or when plume stabilization occurred is a reasonable  
7 one, given the variety of situations we would probably see  
8 for carbon sequestration projects, and recognizing that --  
9 that a plume may be mobile in one part of the state and  
10 present little, if any, risk to human health or the  
11 environment, even if it continues to migrate, with  
12 groundwater, as opposed to some other part of the state  
13 where that same degree of movement migration might -- might  
14 be more of a concern to us. So I think providing the  
15 flexibility for us to be able to evaluate that is  
16 important. I think that's a good process.

17           The working group also recommended to the -- in  
18 its report how plume stabilization fits into financial  
19 assurance requirements. And I can paraphrase -- let me  
20 grab my statute real quick. If I could draw your  
21 attention, Madam Chair, to the draft rule that you have  
22 before you, I hope, the redline/strikeout version, page  
23 24-42.

24                           BOARD MEMBER CAHN: 42?

25                           MR. FREDERICK: Page 24-42, at the very top

1 of the page, starting with line 1996. This is essentially  
2 language developed by the Wyoming -- excuse me, the carbon  
3 sequestration working group and recommended to the  
4 legislature in its report, and that was subsequently then  
5 adopted into statute.

6           And this is where plume stabilization is  
7 discussed by the working group and by statute in the  
8 context of financial assurance. In particular, the  
9 reference to completion and release certificate from the  
10 administrator, in line 2,000, certifying that plume  
11 stabilization has been achieved without the use of control  
12 equipment based on a minimum of three consecutive years of  
13 monitoring data, references a point in time at which the  
14 financial assurance requirements such as bonds and  
15 assurance instruments can essentially be released, and, for  
16 all intents and purposes, the project or the site is  
17 essentially closed, the permit is terminated and DEQ, to  
18 the extent it believes is necessary, will continue with  
19 long-term monitoring, verification and maintenance, if any,  
20 is needed of the site. And resources that will allow that  
21 to occur will be provided for in a special revenue account  
22 that the legislature authorized DEQ to set up and provided  
23 options for funding that maintenance account, monitoring  
24 maintenance verification account, if you will, based upon a  
25 per-ton fee of CO2 injected or some other alternative

1 methods.

2           So it's clear that -- that not only would  
3 injectors expect to understand at what point in time are  
4 they released from the financial assurance liability  
5 requirements that are in place, but also I think the  
6 expectation for us to be able to articulate that in the  
7 rule in some form or fashion.

8           The final federal rule speaks to plume  
9 stabilization as well, but not to the, I guess, degree of  
10 clarity that I think the Wyoming statutes do.

11           CHAIRMAN BEDESSEM: Thank you. I'm just  
12 curious, you know some of this language, this number of  
13 spots where things are bolded, I'm not used to seeing  
14 bolded items within that rule. Are they supposed to be  
15 bolded or is it --

16           MR. TILLMAN: In the final they won't be  
17 bolded. I guess in the federal rule they were that way,  
18 and --

19           CHAIRMAN BEDESSEM: They don't need to be.

20           MR. TILLMAN: No, they don't. And in the  
21 final rule they won't be bolded.

22           CHAIRMAN BEDESSEM: Okay. Thank you.

23           MR. TILLMAN: That's just a formatting --  
24 a formatting thing on our part.

25           BOARD MEMBER CAHN: That takes care of some

1 of my comments.

2 CHAIRMAN BEDESSEM: Good.

3 In the interest of time, shall we open this up  
4 for Board comments?

5 Klaus, do you have anything that you want to ask  
6 with respect to Chapter 24?

7 BOARD MEMBER HANSON: It just struck me in  
8 looking at this, why would you want to do injection? You  
9 know, I mean, it's a -- I guess it's a healthy process to  
10 get rid of some carbon, to put it underground, but the onus  
11 that is put on the operator is fairly great, and the  
12 financial security that has to be presented is probably  
13 necessary, but what's the incentive? You know, that's  
14 where I'm -- I'm sort of --

15 CHAIRMAN BEDESSEM: If you want to address  
16 that, Kevin, for Klaus?

17 MR. FREDERICK: I can try, Madam Chairman.

18 First let me say that we have not received any  
19 permit applications for carbon sequestration projects in  
20 Wyoming.

21 BOARD MEMBER HANSON: Uh-huh.

22 MR. FREDERICK: Nor am I aware of any that  
23 are in the immediate mix of things. Prior to the Federal  
24 Rule, the University of Wyoming did a -- proceed with their  
25 plans to essentially develop a test well.

1 BOARD MEMBER HANSON: That's right, yeah.

2 MR. FREDERICK: And, fortunately, it turned  
3 out that the test well discovered what appears to be some  
4 fairly significant lithium deposits that --

5 BOARD MEMBER HANSON: Hallelujah.

6 MR. FREDERICK: -- presented, I think, a  
7 real challenge for former state geologist Ron Surdam, who I  
8 think is now trying to figure out how we can have lithium  
9 and CO2 injection in the same well. But he's certainly  
10 more knowledgeable about that than I am.

11 But to your point, Mr. Hanson, it appears that  
12 perhaps the largest -- or greatest, I should say, incentive  
13 for carbon sequestration may actually come through federal  
14 regulations on power plants and proposed rules that are out  
15 for public comment, even as we speak, that seems to suggest  
16 that carbon sequestration is the preferred technology for  
17 emissions reductions that the proposed rule appears to  
18 intend to apply at some point in the future.

19 I think it's clear to us that perhaps the biggest  
20 incentive for injecting CO2 is probably going to be for  
21 enhanced oil recovery here in Wyoming and --

22 BOARD MEMBER HANSON: Put it down, it comes  
23 up.

24 MR. FREDERICK: Slowly. And we're  
25 certainly hopeful that proceeds to be the case. And that

1 at some point in time, then, when those reservoirs are  
2 depleted, then we may be looking at carbon sequestration --  
3 long-term carbon sequestration projects, after that  
4 reduction has essentially been eliminated.

5 BOARD MEMBER HANSON: Uh-huh.

6 CHAIRMAN BEDESSEM: Thank you.

7 Comments?

8 BOARD MEMBER CAHN: I don't have anything  
9 of significance, but I do have some questions and  
10 editorials I can go through very quickly. I don't have a  
11 lot.

12 I do not have line numbers on the version that I  
13 looked at, so I'm going to go by page number and then --

14 MS. THOMPSON: That's fine.

15 BOARD MEMBER CAHN: -- sub numbers.

16 So page 24-3, on (gg), the definition for plume  
17 stabilization. Is there something missing after injected  
18 and subsurface? So is it means the carbon dioxide injected  
19 "into" the subsurface essentially no longer expands, or are  
20 we talking about the carbon dioxide injected subsurface no  
21 longer expands?

22 MR. TILLMAN: I guess, Madam Chair Cahn  
23 (sic), to me that's semantics.

24 BOARD MEMBER CAHN: I agree it's semantics.

25 MR. TILLMAN: The way I wrote it was

1 injected subsurface -- into subsurface. I guess it was  
2 implied.

3 BOARD MEMBER CAHN: You're talking about  
4 the subsurface as opposed to the carbon dioxide injected?

5 MR. TILLMAN: Yes.

6 CHAIRMAN BEDESSEM: No. No. You're  
7 talking about the carbon dioxide --

8 MR. TILLMAN: Injected --

9 CHAIRMAN BEDESSEM: -- injected into the  
10 subsurface.

11 MR. TILLMAN: Yes.

12 MS. THOMPSON: So potentially we could  
13 clear it up with --

14 BOARD MEMBER CAHN: Into.

15 MS. THOMPSON: -- which has been injected?

16 BOARD MEMBER CAHN: Yeah. Yeah.

17 MS. THOMPSON: We're looking at the carbon  
18 dioxide. We're looking at that plume --

19 BOARD MEMBER CAHN: Which has been agreed.  
20 It just wasn't clear what you were talking about. Like I  
21 said, these are just to make it easier to understand. It's  
22 nothing of significance.

23 MS. THOMPSON: Okay.

24 BOARD MEMBER CAHN: Under next page, under  
25 (11) public hearing. It says means a nonadversary hearing.



1 I've never quite seen it that way. Is that necessary to  
2 have that, or can we just say means a hearing held by the  
3 administrator?

4 CHAIRMAN BEDESSEM: I don't know what that  
5 is.

6 MS. THOMPSON: I think our Chapter 3 rules  
7 of practice and procedure defines a hearing as a  
8 nonadversarial hearing. So --

9 CHAIRMAN BEDESSEM: So this just  
10 corresponds to the --

11 MS. THOMPSON: -- it's just corresponding  
12 to that. So we're saying that -- when we call it that,  
13 there's certain rules that apply. So you're not going to  
14 cross-examine any witnesses because it's not an  
15 adversarial.

16 BOARD MEMBER CAHN: That's fine. We can  
17 move on. I just hadn't seen it before.

18 MS. THOMPSON: Okay.

19 BOARD MEMBER CAHN: And then the next  
20 question I have -- this is actually more of a question on  
21 (mm) than radioactive waste. The regulations that you  
22 refer to are NRC regulations, and I'm just curious, because  
23 the picoCuries per liter concentrations in that regulation  
24 are higher than like a drinking water standard for  
25 radionuclides. So I was wondering why that is the

1 regulation that -- is that how EPA does it, and so you just  
2 follow their --

3 MR. TILLMAN: Right. And that was already  
4 in Chapter 24, so that wasn't modified with this.

5 BOARD MEMBER CAHN: Okay.

6 MR. TILLMAN: Yeah.

7 BOARD MEMBER CAHN: I just didn't really  
8 understand that.

9 MR. TILLMAN: I believe --

10 BOARD MEMBER CAHN: Yeah, that's why they  
11 chose that.

12 MR. TILLMAN: I didn't mean to talk at the  
13 same time.

14 But I believe that's federal language, that  
15 definition.

16 BOARD MEMBER CAHN: Okay. All right.

17 20 -- line (tt), second line down, liters should be  
18 capitalized. Page 24-5, Section 3(b)(i), we've got that  
19 the wells -- that the well (S) were, and I think you want  
20 was/were, if -- if the well -- if the well was engineered,  
21 and if the wells were engineered. So it's just editorial.

22 BOARD MEMBER HANSON: Uh-huh.

23 BOARD MEMBER CAHN: If you take out the S,  
24 it doesn't make -- that the well were engineered.

25 MR. FREDERICK: Right.

1 CHAIRMAN BEDESSEM: So that was --

2 BOARD MEMBER CAHN: Was/were.

3 CHAIRMAN BEDESSEM: Just fix it and use the  
4 S.

5 BOARD MEMBER CAHN: Like I say, these are  
6 pretty trivial. If you have real comments, go right ahead.  
7 Mine are --

8 CHAIRMAN BEDESSEM: No. Fine.

9 BOARD MEMBER CAHN: On 20 -- let's see.  
10 Same page, Section 3(b)(ii). I'm not understanding why  
11 Section 9(b)(i) through -- (i) -- (vii) is exempt from the  
12 casing and cementing requirements.

13 MR. FREDERICK: I'm sorry, Madam Chair.  
14 Could you say again where you are referring to?

15 BOARD MEMBER CAHN: So I'm on Section  
16 3(b)(ii).

17 MR. FREDERICK: What page?

18 MS. THOMPSON: Line 224.

19 BOARD MEMBER CAHN: Page 24-5.

20 CHAIRMAN BEDESSEM: All they were doing is  
21 changing section reference.

22 BOARD MEMBER CAHN: But I don't understand  
23 why -- why the wells in sections 9(vi) and -- (vii) are  
24 exempt from casing and cementing requirements. I don't --  
25 I don't understand that. And when I look over at Section

1 9, it's on page 26, 24-26. No, maybe it's not.

2 MR. FREDERICK: This was actually, as I  
3 recall, a clause that --

4 BOARD MEMBER CAHN: I'm sorry, 24-22.

5 MR. FREDERICK: -- many felt was something  
6 that would provide some additional flexibility to states.  
7 In the event -- and here again, we're speaking specifically  
8 to Class I, Class II or Class V wells that wish to  
9 essentially convert to a Class VI well.

10 BOARD MEMBER CAHN: Oh, okay.

11 MR. FREDERICK: That's in the case of, say,  
12 Class I wells, for instance, I suspect that the casing and  
13 cementing requirements is equally rigorous as they are for  
14 Class VI wells.

15 BOARD MEMBER CAHN: I would hope so.

16 CHAIRMAN BEDESSEM: Yeah. So I don't think  
17 this gives anybody a break, really.

18 MR. FREDERICK: And I think that was really  
19 kind of the intent. If, as stated, the administrator  
20 doesn't believe that there's going to be or would be an  
21 impact to an underground source of drinking water, would he  
22 have the flexibility to consider casing and cementing  
23 requirements that aren't as rigorous, but nonetheless are  
24 probably still protective enough.

25 BOARD MEMBER CAHN: Okay. Just for my own

1 edification, on page 24-7 talks about things that are  
2 represented work -- geologic work signed and sealed by a  
3 licensed professional geologist and work signed and sealed  
4 by a licensed professional engineer. So where does well  
5 construction fall? Is that engineering or geologist?

6 MR. FREDERICK: In my opinion, that could  
7 be either.

8 BOARD MEMBER CAHN: So it depends on who  
9 you have on -- who you use in the project?

10 MR. FREDERICK: I think so, yes. I don't  
11 know that either profession has any clear claim to being  
12 the only sole expert on well construction.

13 BOARD MEMBER CAHN: Okay. I just was  
14 curious.

15 Okay. 24-10, under Permit Conditions, (c), big  
16 also, big letter C, I didn't understand that statement that  
17 it shall not be a defense for permittee -- that it would  
18 have been necessary to halt or reduce the permitted  
19 activity in order to maintain compliance with the permit  
20 conditions, and I have no idea what that's saying.

21 MR. FREDERICK: Well, that's a fair  
22 question. I'm not so sure I do either. That's language  
23 that we have essentially in our other UIC rules as well. I  
24 can't recall, off the top of my head, whether this is in  
25 the Federal Rule or not, but I think it's a crafty way that

1 some attorneys have come up with to essentially allow a  
2 permit violation to be enforced, whether it may cause harm  
3 or damage or not.

4 BOARD MEMBER CAHN: Okay. Well, if it's  
5 not in the federal rule, could you please try to word it in  
6 a way that's understandable, because I have no idea what it  
7 says. It's obviously crafted by a lawyer. They don't want  
8 anybody else to understand it.

9 MR. FREDERICK: We'll see what we can do  
10 with that.

11 BOARD MEMBER CAHN: Then page 24-11, F,  
12 just the word stay -- to stay -- shall not stay any permit  
13 condition. I didn't know what that word meant, to stay a  
14 permit condition.

15 BOARD MEMBER HANSON: Resist. To stay.  
16 To --

17 MR. TILLMAN: I believe "to stay" means  
18 render ineffective.

19 MS. THOMPSON: That's another lawyer term.

20 MR. TILLMAN: Yeah, that's ineffective --

21 BOARD MEMBER CAHN: What does it mean?

22 MR. TILLMAN: Basically to render  
23 ineffective.

24 MS. THOMPSON: Paused. It's not --

25 MR. TILLMAN: Yeah, it's on pause until

1 they decide something else. And in the federal CFR, in Air  
2 and Water, they use stay quite a bit, and they don't  
3 explain it.

4 MS. THOMPSON: It's a lawyer term, so when  
5 they say that they've stayed a decision, they've put  
6 that --

7 BOARD MEMBER HANSON: On hold.

8 CHAIRMAN BEDESSEM: On hold.

9 MS. THOMPSON: -- the effects of that  
10 decision on the side, a status quo is enacted until they  
11 figure out what they're going to do over here.

12 CHAIRMAN BEDESSEM: Okay.

13 MS. THOMPSON: So that's -- yeah, it's  
14 lawyerese.

15 BOARD MEMBER HANSON: Yeah.

16 BOARD MEMBER CAHN: Okay. 24-12, S, as in  
17 Sam. I don't understand the part that says all instances  
18 of noncompliance not already required to be reported under  
19 paragraph (c)(i)(Q) through (R) of this section at the time  
20 monitoring reports are submitted. So you got requirements  
21 in that section that are not already required to be  
22 reported. I'm like -- it's like -- and it didn't help me  
23 to go to (c)(i)(Q) through (R).

24 MR. FREDERICK: Yeah, I suspect that  
25 (c)(i)(Q) and (R) probably identify specific conditions

1 that constitute noncompliance, but perhaps not all. I  
2 think this is intended to essentially say even if you are  
3 aware of some noncompliance that's not on that list, it  
4 needs to be reported.

5 BOARD MEMBER CAHN: Oh, okay. When you say  
6 it, I understand it.

7 MR. FREDERICK: I believe that's right out  
8 of the federal rules.

9 MR. TILLMAN: Yeah, that's --

10 BOARD MEMBER CAHN: And V, I also didn't  
11 understand. Requirement that the permittee notify the  
12 administrator at such time as the permit requires before  
13 conversion or abandonment of facilities. So you have a  
14 requirement at times when it's required.

15 MR. FREDERICK: Yeah. That's perhaps a  
16 little clumsy.

17 BOARD MEMBER CAHN: These all probably are  
18 from the federal rule, but you look at those.

19 The next one down, W, a requirement that  
20 injection may not commence until construction is complete,  
21 and I just wanted to know construction of what?

22 BOARD MEMBER HANSON: Well, shaft or  
23 something like that.

24 BOARD MEMBER CAHN: Sounds like we  
25 should probably -- since we're going to see this again, we



1 can just go to yours.

2 CHAIRMAN BEDESSEM: No, I'm good.

3 BOARD MEMBER CAHN: Mine are questions of  
4 clarification and changes "that" to "which," those kinds of  
5 thing, so we can catch them on the next go-round.

6 I can just send them to you.

7 MS. THOMPSON: Yeah, I don't mind taking  
8 those edits separately.

9 CHAIRMAN BEDESSEM: So is that your  
10 proposal, then, that we vote on this chapter at the -- at  
11 the next quarter? I wasn't sure what you were presenting.

12 MR. FREDERICK: I suspect, Madam Chair,  
13 that there's a good chance we won't be ready to vote on  
14 this at the next meeting. I can't say for sure not.

15 CHAIRMAN BEDESSEM: Because of the other  
16 items that need to be resolved?

17 MR. FREDERICK: Excuse me?

18 CHAIRMAN BEDESSEM: That you won't be ready  
19 at the next meeting because of outstanding issues with the  
20 financial assurance?

21 MR. FREDERICK: I suspect that we will  
22 bring back this rule for the next advisory board meeting  
23 with some better clarification, certainly, and a discussion  
24 on the financial assurance requirements than what we have  
25 here. For your information, really, what we're looking at

1 here is language essentially out of the federal rule.  
2 There are some minor sections that we've incorporated out  
3 of the state statutes to make sure they get included as  
4 well, but I think those of us that have worked on this rule  
5 probably think that we may be able to actually improve this  
6 regulation by making it a little bit more clear.

7 CHAIRMAN BEDESSEM: It would be wonderful  
8 if you could address these other paragraphs at the same  
9 time that probably came from similar source that are  
10 confusing and add to the clarify of the whole picture.

11 BOARD MEMBER CAHN: And I could call you  
12 next Friday and just give you my -- or Bill, either one of  
13 you -- what my questions are, what my changes -- suggested  
14 changes are. Nothing is substantial.

15 MS. THOMPSON: Sure. Sure.

16 BOARD MEMBER CAHN: It's just all to make  
17 it easier to understand, because I don't understand it, as  
18 far as editorials. They don't need to come before the  
19 Board, those things.

20 MS. THOMPSON: Sure.

21 MR. FREDERICK: Madam Chair, just to  
22 clarify, as I understand it, when we bring in existing  
23 regulation back to you for some proposed modifications and  
24 so forth, only those sections that we're opening --

25 CHAIRMAN BEDESSEM: Are really what we

1 should be commenting on.

2 MR. FREDERICK: Well, that's not to say we  
3 can't consider these. I just want you to be aware that if  
4 we open up additional parts of the rule for public comment,  
5 then --

6 CHAIRMAN BEDESSEM: Then you would have to  
7 go back to public comment --

8 MR. FREDERICK: Yes.

9 CHAIRMAN BEDESSEM: -- you're saying, if  
10 you make changes to other areas.

11 MR. FREDERICK: Yes.

12 CHAIRMAN BEDESSEM: So that might be worth  
13 the effort.

14 BOARD MEMBER CAHN: But not if it's  
15 anything -- we've gone over it before, when it's not a  
16 technical change, if it's just clarify language or to fix a  
17 typo, we don't -- that's okay. I mean, it's if you change  
18 the --

19 CHAIRMAN BEDESSEM: Intent.

20 BOARD MEMBER CAHN: -- intent of it that it  
21 needs to go for public comment again. But if you don't  
22 change the intent, it's just clarifying it or a fixing  
23 typo, that's okay.

24 MR. FREDERICK: Yes. To a degree, I agree  
25 with you. My concern, though, is that if we open up for

1 some minor language changes, technically were someone to  
2 ask whether or not that means that section is open for --

3 BOARD MEMBER CAHN: Okay.

4 MR. FREDERICK: -- additional discussion or  
5 comment, I don't know that we can limit it to just for  
6 language change that we're talking about.

7 CHAIRMAN BEDESSEM: I can understand that  
8 fine line that he's walking here.

9 BOARD MEMBER CAHN: I guess I assume if a  
10 chapter is before the Board, then everything in that  
11 chapter is up for -- if you set it out for public comment,  
12 then everything in that chapter -- or if you're sending it  
13 to the --

14 CHAIRMAN BEDESSEM: No.

15 MS. THOMPSON: That's not always the case.

16 BOARD MEMBER CAHN: No?

17 CHAIRMAN BEDESSEM: Huh-uh.

18 MS. THOMPSON: Like in Air Quality, when  
19 they're amending their chapter, they open up very specific  
20 sections to update language. And we -- and they never  
21 refused to change anything. It's just the next time they  
22 get into that section, they will offer to update that then,  
23 because then it really does limit the scope to those very  
24 specific sections that they've changed in a serious way.  
25 And then they will take the suggestions for the other

1 sections, and they will work on them in a separate  
2 rulemaking, because at some point everything gets adjusted.  
3 But generally when we're doing these, we want to limit the  
4 scope so that we can get this through and then take on the  
5 next -- but it's -- it's usually in a cycle.

6           So like 25, we've torn that one all the way  
7 through, so there's no limit --

8           CHAIRMAN BEDESSEM: On comments for that.

9           MS. THOMPSON: -- while we're there.

10           But this one we've -- we've adjusted very  
11 specific sections.

12           CHAIRMAN BEDESSEM: I can understand that.  
13 It sounds to me like you'll probably end up going back to  
14 this chapter again in the future anyway. But I appreciate  
15 the Water Quality Division's desire to at least make the  
16 language in these new sections on financial assurance more  
17 clear and understandable.

18           BOARD MEMBER HANSON: I -- just an  
19 observation or -- I don't know whether it's really true.  
20 Page 24-36, there is something about, you know, notifying  
21 folks who own the land on top. So are we getting into the  
22 question of subsurface ownership? Because -- I mean,  
23 that's, of course, an important issue in this state. You  
24 know, I know at my house I don't own anything past 10 feet.  
25 Somebody else owns it. But I guess there is value in

1 sequestered carbon dioxide down there. Will that have to  
2 be addressed?

3 CHAIRMAN BEDESSEM: It looks like everyone  
4 is being notified.

5 BOARD MEMBER HANSON: They notify  
6 everybody, but it doesn't say anything about who owns what  
7 and are they getting compensated or --

8 MR. FREDERICK: Yes. Just real quickly.  
9 There is an additional section in the regulation that  
10 discusses notification of mineral owners, for instance.

11 BOARD MEMBER HANSON: Yeah.

12 MR. FREDERICK: The legislature set up  
13 essentially pore space ownership or pore space rights in  
14 the subsurface associated with CO2 injection. Those pore  
15 space rights are part of the surface owner estate. He can  
16 assign them. He can sell them, similar to a mineral.

17 BOARD MEMBER HANSON: To a mineral, right,  
18 yeah.

19 MR. FREDERICK: Yeah. So there is value  
20 there, absolutely.

21 BOARD MEMBER HANSON: I just saw this, you  
22 know, and I thought who gets what here?

23 MR. FREDERICK: Yeah. I prefer to keep  
24 that out of the rule, because it's addressed in statute.

25 BOARD MEMBER HANSON: Fine. Unless

1 somebody comes and says I'm the surface owner, then.

2 MR. FREDERICK: And he has those rights,  
3 absolutely, yeah.

4 CHAIRMAN BEDESSEM: Well -- so thank you  
5 for the preview of Chapter 24.

6 MR. FREDERICK: Thank you. Look forward to  
7 seeing you next time.

8 BOARD MEMBER HANSON: Thank you.

9 CHAIRMAN BEDESSEM: Thanks for hanging in  
10 there until 5:00.

11 Is there anything else we need to address before  
12 we adjourn the meeting?

13 MR. FREDERICK: Just real quickly, Madam  
14 Chair. I think you did touch on this a little earlier, but  
15 we are working on the rule reduction changes. We do have  
16 plans to bring some -- proposed rule reductions before the  
17 advisory board at the next meeting, where we're combining  
18 chapters, more or less. So just for your information and  
19 to let you know we are working on it.

20 CHAIRMAN BEDESSEM: Thank you.

21 MR. TILLMAN: I'll see you again.

22 CHAIRMAN BEDESSEM: I have a question. As  
23 far as the next board meeting, are we looking at that being  
24 in June or later?

25 MS. THOMPSON: I figured the revised

1 timelines that I've been working on for our various rules  
2 meetings. I've been figuring on July. I wasn't sure that  
3 we would have enough time to do edits in that two-month  
4 window, since we would have a 30-day public notice period  
5 for this meeting.

6 CHAIRMAN BEDESSEM: Right. Uh-huh.

7 MS. THOMPSON: Or for the next meeting,  
8 sorry. So I was sort of basing all of my timeline off of  
9 July. So if you have vacation in July, you know, please  
10 let me know as soon as possible, and I will mark out those  
11 dates so that we don't consider them for the next meeting.

12 But other than that sort of nebulous  
13 consideration, we will be sending a Doodle Poll probably in  
14 May to just get an idea of where folks are. And, you know,  
15 we have another division to consider, and they have several  
16 programs that need to brief you as well, so...

17 CHAIRMAN BEDESSEM: Okay. I just wanted to  
18 get an idea of what month we're looking at.

19 MS. THOMPSON: I think June would be a  
20 little soon for both sides.

21 CHAIRMAN BEDESSEM: Okay.

22 BOARD MEMBER CAHN: And I think  
23 historically we -- over the years we have had some problems  
24 with July or August meetings in terms of finding a  
25 quorum --



1 MS. THOMPSON: Okay.

2 BOARD MEMBER CAHN: -- on the board with  
3 people with summer vacations.

4 MS. THOMPSON: And other events, so --

5 BOARD MEMBER CAHN: We can certainly try.

6 BOARD MEMBER HANSON: From my perspective,  
7 the beginning of July looks better than the end of July.

8 CHAIRMAN BEDESSEM: I would agree.

9 BOARD MEMBER HANSON: If you get into  
10 August, that's when people are disappearing fast.

11 CHAIRMAN BEDESSEM: Well, thank you very  
12 much. And I'll -- we are hereby adjourning the Water and  
13 Wastewater Advisory Board meeting.

14 (Meeting proceedings concluded  
15 5:04 p.m., April 18, 2014.)

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C E R T I F I C A T E

I, KATHY J. KENDRICK, a Registered Professional Reporter, do hereby certify that I reported by machine shorthand the foregoing proceedings contained herein, constituting a full, true and correct transcript.

Dated this 23rd day of May, 2014.

  
KATHY J. KENDRICK  
Registered Professional Reporter

