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

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION FOR THE PURPOSE OF CONSIDERING:

APPLICATION OF THE NEW MEXICO OIL AND GAS ASSOCIATION TO REPEAL AND REPLACE TITLE 19, CHAPTER 15, PART 34 OF THE NEW MEXICO ADMINISTRATIVE CODE ADDRESSING PRODUCED WATER, DRILLING FLUIDS AND OTHER LIQUID OIL FIELD WASTE; AND TO AMEND THE DEFINITION OF PRODUCED WATER IN TITLE 19, CHAPTER 15, PART 2 OF THE NEW MEXICO ADMINISTRATIVE CODE.

CASE NO. 15239

REPORTER'S TRANSCRIPT OF PROCEEDINGS

COMMISSION HEARING

February 13, 2015

Santa Fe, New Mexico

BEFORE: DAVID CATANACH, CHAIRPERSON
AUBREY DUNN, COMMISSIONER
ROBERT S. BALCH, COMMISSIONER
BILL BRANCARD, ESQ.

This matter came on for hearing before the New Mexico Oil Conservation Commission on Friday, February 13, 2015, at the New Mexico Energy, Minerals and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico.

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EXHIBITS OFFERED AND ADMITTED

(9:06 a.m.)

CHAIRPERSON CATANACH: The next item on the agenda this morning is the public hearing for Case Number 15239. The case is titled "The Application of the New Mexico Oil and Gas Association to Repeal and Replace Title 19, Chapter 15, Part 34 of the New Mexico Administrative Code Addressing Produced Water, Drilling Fluids and Other Liquid Oil Field Waste and to Amend the Definition of Produced Water in Title 19, Chapter 15, Part 2 of the New Mexico Administrative Code."

Our goal today is to conduct the hearing so as to provide a reasonable opportunity for all persons to be heard without making the hearing unreasonably lengthy or cumbersome and without unnecessary repetition.

Just by way of procedure, the Commission shall take all testimony under oath or affirmation, which may be accomplished en masse or individually. However, a person may make an unsworn position statement. The Commission shall admit relevant evidence unless the Commission determines that evidence is incompetent or unduly repetitious.

A person who testifies at the hearing is subject to cross-examination by a person who has filed a pre-hearing statement. A person who presents technical

testimony may also be cross-examined on matters related to the person's background and qualifications. The Commission may limit cross-examination to avoid harassment, intimidation, needless expenditure of time or undue repetition.

The hearing today will begin with a presentation by the Applicant.

First I will ask the Commission counsel to enter into evidence the affidavit indicating how notice of this proceeding was completed.

Then I will ask each of the parties to identify themselves. If they have witnesses, they should provide us with the number of witnesses they anticipate presenting and an estimate of the length of the total testimony. If you have any witnesses with limited availability, please let us know.

We have received the following submittals that are part of the record in this case: Petition by the New Mexico Oil and Gas Association, NMOGA, pre-hearing statement by NMOGA, which lists three technical witnesses, proposed modifications by NMOGA, entry of appearance by Earthworks Oil and Gas Accountability Project, proposed modifications and written comments submitted by Earthworks and Environmental Defense Fund, additional written comments

submitted by Earthworks, et al., pre-hearing statement by Independent Petroleum Association of New Mexico, which indicated no technical witnesses, and the pre-hearing statement by the Oil Conservation Division, which lists two technical witnesses.

There is a possibility this hearing may extend into tomorrow. As the day wears on, we may have a better sense of that and whether or not that's going to occur. If we do need to continue the hearing to tomorrow, we will try to announce that as soon as possible. We do have this room tomorrow, and we can allow access into the building.

We will have a period for public nontechnical testimony each day of the hearing. At the back of the room there are sign-in sheets. If you wish to testify, please provide your name on the sheet and indicate that you wish to testify.

When you come forward to speak, please clearly identify yourself and any group you may be speaking on behalf of. It is important that everyone have the opportunity to speak if they want to. Please be respectful of others.

Once the hearing is completed, the Commission may immediately begin deliberation on the proposal.

Mr. Brancard, I would like you to now address the Affidavit of Notice for this case.

MR. BRANCARD: Mr. Chairman, we have an Affidavit of Notice from Florene Davidson which outlines all the notice that was provided of this hearing, and I'll offer this as Commission Exhibit 1.

CHAIRPERSON CATANACH: Exhibit Number 1; is that correct?

MR. BRANCARD: Yes.

CHAIRPERSON CATANACH: Exhibit Number 1 will be admitted as evidence in this case.

(Commission Exhibit Number 1 was offered and admitted into evidence.)

CHAIRPERSON CATANACH: I will now call for appearances in this case.

MR. FELDEWERT: Mr. Chairman, Michael Feldewert, with the Santa Fe office of Holland & Hart, appearing on behalf of the Applicant, New Mexico Oil and Gas Association.

As a pre-hearing statement in the case, we have three witnesses here today. I have filed with the Commission an exhibit book that you have in front of you containing 45 exhibits. I anticipate our first witness will take roughly two hours. The remaining two witnesses will roughly take an hour each. I do have a

brief opening statement that will hopefully orient us before we proceed with the witnesses here today.

CHAIRPERSON CATANACH: Thank you, Mr. Feldewert.

Additional appearances?

MR. WADE: Good morning. Gabriel Wade representing the Oil Conservation Division. We will have two witnesses for rebuttal purposes and to answer any questions the Commission may have. So we don't have a set time anticipated, but we'll be open.

MS. FOSTER: Good morning. Karin Foster on behalf of the Independent Petroleum Association.

At this time we support NMOGA's petition, as well as the revised petition. We do not have any witnesses at this time. However, we reserve the right to call rebuttal witnesses if necessary. I don't think it would be necessary, but we reserve that right. Thank you.

CHAIRPERSON CATANACH: Thank you, Ms. Foster.

Any additional appearances?

Are there any parties that are planning to give nontechnical statements in this case?

MR. DRONKERS: Potentially. Pete Dronkers, Oil and Gas Accountability Project. I may not -- I

don't know yet. At this point I may offer some rebuttal. I'll see how things go. I'm here to listen, mostly listening.

CHAIRPERSON CATANACH: Thank you.

MR. NEWELL: Michael Newell. My firm represents various landowners and other people from Lea County and southeast New Mexico, and we'd like the opportunity to comment on the rule. And we're here to listen as well.

CHAIRPERSON CATANACH: Thank you.

MR. HALLDORSON: I'm Brent Halldorson representing the Texas Water Recycling Association. I'd just like to give a statement regarding our thoughts on the proposed rules.

CHAIRPERSON CATANACH: We'll decide when we want to take the statements. It'll either be before lunch or after the end of the proceedings, so we'll decide that.

Can I get the witnesses in this case to stand up and be sworn in at this time.

(Mr. Welch, Mr. Fiedler, Dr. Robinson, Mr. Powell and Jim Griswold were sworn.)

CHAIRPERSON CATANACH: Mr. Feldewert, do you want to give an opening statement?

OPENING STATEMENT

MR. FELDEWERT: Mr. Chairman, Members of the Commission, this is an application to repeal and replace Rule 34, which is known in the industry as produced water rule. Our proposed -- the rule has been provided to you in our notebook as Exhibit Number 1. I have also provided you and Ms. Davidson an extra copy of Exhibit 1 outside of the notebook so you can have that handy as we proceed here today.

I want to point out that this Exhibit 1 we have provided does include all of the modifications that were filed this last week by New Mexico Oil & Gas Association where we corrected some textual errors. We've provided further clarification on the rule, and then we adopted some of the changes that the Division saw as they were reading through our proposed rule.

This application also seeks to amend the current definition of produced water in the Division's rules, and those amendments are reflected in what we've marked as Exhibit Number 2 in the notebook. And all we're doing there is changing the existing regulatory definition to match the statutory definition. As we were going through Rule 34 and looking at the provisions that deal with produced water, we found that the regulatory definition actually predates the statutory

definition that was adopted by the legislature, and so what we -- we thought it appropriate to have the regulatory definition match the statutory definition that was subsequently provided by the legislature under the Oil and Gas Act. So that's all that's intended to do.

We have also provided you as Exhibit Number 3 the current rule. And I've done that for a couple of reasons. One, I think it's helpful to understand what we've changed and what we have not changed, under what is currently on the book with the Division. And I would invite you to turn to Exhibit Number 3, and have out, also, Exhibit Number 1 that we've handed to you. Because what you'll first see is that if you go to the Objective clause, which is on the first page of Exhibit 3 and the first page of our Exhibit Number 1, we have added a new opening clause to the objective, and it reads: "To encourage the recycling, re-use or disposition of produced water by use in a manner that will afford reasonable protection against contamination of fresh water...." That provision has been added, and we have new provisions we have included in Rule 34 to address that objective.

There has been little change to the second clause of the objective, which deals with the procedures

for transporting produced water. Parts 17 through 20 of our existing rule carry over to the provisions of the current rule that address the second part of that Objective clause with very few changes.

If you turn to what's -- if you keep a finger on here and turn to what's been marked as Exhibit Number 4, what I have provided to you is a cross-check. And on the right-hand side, you will see that, for example, current Rule 34.8, dealing with transportation, that has been carried over into the new rule as 34.17.

34.9, dealing with the Form C-133, has been carried over into our current rule of 34.18, with one language change. 34.9 referenced a provision that is no longer in effect in New Mexico and that it used to read that the applicant had to possess a carrier permit. I am informed by the Division that that's no longer a document used by the State, and so we substituted "warranty for transportation" for "carrier permit." It's now 34.9, and under our rule, it is 34.18. That's the only change.

Section 34.10, dealing with cancellation and suspension, has been carried over to 34.19, and on down the list. And we had carried over all the provisions of the existing rule with -- except for one, and that is the last provision of existing Rule 34.13.

And if you look at that provision, it's entitled "Methods for Disposal of Other Oil Field Wastes." It doesn't deal with produced water or liquid waste. So since this is a produced water rule and it was intended as a produced water rule, that provision there doesn't fit, and it's also duplicative of other provisions. So that's the one provision from the existing rule we did not carry over into the new rule because it doesn't seem to fit.

So now we have NMOGA's changes. And, again, if you have the old rule in front of you, under Exhibit Number 3, then put next to it our Exhibit Number 1, you'll see that we have expanded the title to caption not only produced water but what the rule actually also addresses and that is drilling fluids and liquid oil field waste. So we've expanded that title.

We've expanded the scope to cover the recycling and disposition of ions by produced water, and then we've added that first clause to Objective because it does not exist in the current rule.

All of the new parts dealing with that new objective, recycling and re-use of produced water, are found in Parts 7 through 16 and then Part 11 of our proposed rule. Those are the new provisions to implement the objective of that first clause. And all

those new provisions are the product of a committee that was brought together by NMOGA and tasked with formulating a rule to promote the recycling and re-use of produced water. It was brought together with members of the industry with varies disciplines. Members of the Oil Conservation Division participated in those efforts.

The first task was to identify the impediments -- the current impediments to the recycling and re-use of produced water and then to develop a rule that would address those impediments, and that's what we believe we have done here. The process took a while. It took over a year, about a year and a half, and we think we've come up with a rule now that would address the impediments and encourage the recycling and re-use of produced water.

So what you'll see as we go through this rule is there are number of new provisions, and they accomplish a number of things. But primarily what they do is they clarify the regulatory process for recycling and re-use of produced water. There are a lot of notices that were out and forms. There was never really anything brought together. There was a lot of confusion as to what you had to do, the type of permitting process you had to go through to recycle and re-use produced water. Hopefully we have clarified that within this

rule.

The other primary impediment that the committee determined existed to recycling and re-use of produced water was the absence of a viable containment system, and so we have created a recycling containment under this proposed rule.

And if you look at the first page of our rule, it's defined. It's defined as a storage containment. On the first page of our proposed rule, in Part 34.7B, it's defined as a "storage containment which incorporates a synthetic liner as the primary and secondary containment device and is used solely in conjunction with a recycling facility." So it has limited use.

And it can only hold, as it points out, "for the storage, treatment or recycling...." It can only hold produced water. Nothing else. And it can only hold that produced water "for the purpose of drilling, completion, production or plugging of wells used in connection with the production of oil or gas...." So it has a limited use. It has a limited purpose, and under the proposed rule, it also has a limited life. It has a life of five years with an annual renewal so long as the operator can demonstrate the integrity on an annual basis to the Division. So we

have a facility that we think we need here in New Mexico. It has limited purpose, limited use and a limited life.

And rather than create new requirements for this new inground facility, we have carried over from Rule 17 the design, the operation, the construction and the enclosure requirements that this Commission adopted in 2013 for multi-well fluid management pits. That seemed to be the most analogous storage device to what we are proposing. Those were put in place by the Commission in 2013 after an extensive hearing process.

And if you turn to what's -- a preview, you can turn to NMOGA Exhibit 10. We have identified for the Commission in NMOGA Exhibit 10 the finding in the Commission's 2013 order under which they adopted the siting, design, construction, operation and enclosure provisions for a multi-well fluid management pit. We have carried those provisions over into our rule. It did require substantial editing to the text to make it fit here, not to the substance, but to the text. And I have a number of slides I'm going to go through to demonstrate that.

We did add a couple of changes. First off, there were liner provisions and leak detection provisions that this Commission adopted in 2013 for

multi-well fluid management pits. If you turn to Exhibit Number 12, on the right-hand side is what the Commission adopted for multi-well fluid management pits back in 2013. On the left-hand side are some alternative lines, some additional options that we are proposing for the shorter term limited-use facilities. And we have an expert witness who is going to appear here today to talk about these liner options.

You'll also see towards the bottom, under 12.A(7), we're also proposing an alternative to the 2 feet of compacted soil, which is currently required under Rule 17 for multi-well management pits. We're also proposing a 200 mil geonet, and our expert is going to address that option as well.

So we are proposing those changes to what is currently applicable to multi-well fluid management pits for the purpose of our produced water rule.

The second change we are making to the provisions that were adopted by the Division -- or Commission in 2013 deals with Table 1. Commissioner Balch may remember there was a lot of discussion about Table 1. If you turn to what's been marked as NMOGA 19, this is Table 1 that was adopted by the Commission. There are a couple of changes we are proposing. The first one's easy.

On the left-hand side, you'll see there are no provisions for groundwater less than 51 feet. That's because under the siting requirements, we can't locate a recycling containment to groundwater less than 51 feet.

Under the Constituents and under Methods, you'll see our changes. I have them here red lined, strike-out format. And all this is trying to do is just update the EPA testing methods to fit what we're trying to examine here, to change the testing method for TPH and to change the testing method for benzene, to use the most applicable -- what is now the most applicable EPA testing method.

So what you're going to find is most of the other provisions in this rule deal with this recycling containment, but they track from Rule 17, and we're going to walk through this. And I have three witnesses today to do that. First I want to call Mr. James Welch. He's a chemist employed by Halliburton. He has national and international experience with the management of recycling and re-use of produced water. He served on the NMOGA committee.

I'm going to have you wait one minute before go up there.

MR. WELCH: Okay.

MR. FELDEWERT: He's going to address with

you the current impediments to the recycling and re-use facility. He has observed also what the committee has observed. He can provide you a detailed review of the rule and its intended effect. He's going to do a walk-through of this rule, and he's going to testify that this is going to promote the recycling and re-use in a responsible manner. That's going to take roughly two hours.

Then we're going to call our next witness, Mr. Charles Fiedler. He's going to address those additional liner options and leak protection options under Exhibit Number 12. He is a professional engineer with Gordon Environmental down in Albuquerque. He has extensive experience dealing with geomembrane liners and leak detection systems. I anticipate his presentation is going to take less than an hour.

And our final witness is going to be Mr. Clay Robinson. He's going to address the changes to the EPA testing methods that we've proposed in Table 1 that are reflected in Exhibit 19. He has a Ph.D. in soil science. You may recall that -- at least Mr. Balch may recall that he testified on the EPA testing methods for chlorides in Table 1 under Rule 17 back in 2013. He's going to address these updates that we propose, and I anticipate his presentation to take about an hour. So

I am hopeful we can finish here today.

But before we proceed, if there are any questions that I can answer about what we're doing, what we've proposed, I'll be happy to do that before we call our first witness.

CHAIRPERSON CATANACH: Okay. I don't think we have any questions, Mr. Feldewert.

Do any of the other parties want to make opening statements at this time?

OPENING STATEMENT

MR. WADE: Thank you, Mr. Chair.

Gabriel Wade on behalf of the Oil Conservation Division, and we would -- the Oil Conservation Division is here in support of the rule. Again, we do have a couple of witnesses that may be called for rebuttal purposes or if the Commission has any questions. We did have the opportunity to give a lot of input and commentary, so we are here this morning. Thank you.

CHAIRPERSON CATANACH: Thank you, Mr. Wade.

Any other party?

Ms. Foster.

MS. FOSTER: On behalf of the Independent Petroleum Association, I don't have a formal opening statement, but I would note for this body that the

Independent Petroleum Association was not included in the task force to work on this rule. We did not attend the meeting, but we have read the petition, and at this time we support it.

CHAIRPERSON CATANACH: Thank you.

Just a note that there are additional copies of the rule on the back table if anybody wants to grab one of those.

At this time we can proceed with your first witness, Mr. Feldewert.

MR. FELDEWERT: Call Mr. Welch.

JAMES P. WELCH,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. FELDEWERT:

Q. Would you state your full name for the record and identify for the Commission your occupation?

A. James Paul Welch, Global Business Development Manager for Halliburton.

Q. And as part of your current responsibilities with Halliburton, what do you do as their global business development manager?

A. I help operators recycle and re-use produced water. I'm a chemist by training, and for the past

eight years, I've worked specifically in the realm of produced water supporting operators in their recycle efforts.

Q. Have those efforts included not only national efforts but international efforts?

A. Yeah. I've also been to Saudi Arabia in the Middle East, as they had questions about what the U.S. was doing in their water re-use capacity and their stimulation. I've supported Canada, Australia. I have ongoing projects right now in Brazil, Colombia, Mexico, Argentina, so I've also been working at this on an international capacity.

Q. And with all your responsibilities, did you have an opportunity and offer to serve on the work group that resulted in this --

A. Yes, I did.

Q. -- developing this proposed rule?

A. Yes, I did.

Q. And for the record, has that proposed rule been marked as NMOGA Exhibit Number 1?

A. It is.

Q. Are you also familiar with the definition of produced water?

A. Yes, I am.

Q. And are NMOGA's proposed changes to that

definition marked as Exhibit Number 2?

A. Yes, they are.

Q. Aside from discussing your involvement with the work group, what do you intend to address with the Commission here today?

A. Well, we want to talk about the impediments to the current administrative code. So there is some uncertainty into the rules on how to apply them, so we've drafted a road map through Rule 34 to help operators recycle and re-use produced water. So we want to discuss the outline of that rule and how it's applied.

Q. If I turn to what's been marked as NMOGA Exhibit Number 5 in the notebook, is that your current resume?

A. Yes, sir, it is.

Q. Did you prepare this document?

A. Yes, I did.

Q. Does it accurately reflect your educational background and work history?

A. Yes, it does.

Q. Now, it indicates -- you mentioned your degree in chemistry. When did you receive that?

A. 1984.

Q. And how long have you been involved in oil and

gas, water management and re-use issues?

A. Throughout my career, I've always been involved in water management both upstream and downstream, so in terms of the application of chemical and mechanical techniques to change the constituents in water. So I've always been involved with that.

Produced water, specifically, I started in about 2008, and, in fact, I started that effort in New Mexico. So my first efforts to recycle and re-use produced water were in New Mexico.

Q. If I look at page 2, it indicates you're a member of the Texas Water Recycle Association?

A. That's correct.

Q. Can you explain the purpose of that?

A. Texas Water Recycle Association is an advocacy group, so we support the recycle of water and the conservation of fresh water for the state of Texas. So it's not primarily just an oil and gas industry. We have brought constituents and we also support enactment of legislature. In the last Texas Legislature, the Texas Water Recycle Association was effective in drafting new legislation for Texas that was adopted and was the standard for re-use in Texas. As mentioned previously, Brent Halldorson, the president of that organization, is also here.

Q. Now, if I look to page 3, I see -- and going into page 4, I see a number of publications --
A. Yes.
Q. -- and speaking engagements?
A. Yes.
Q. And have they involved the recycling and re-use of produced water?
A. Most extensively. They're all about recycling and re-use. I go all over the world talking about produced water and how to recycle it and how to re-use it.
Q. As a result of your education and work experience, are you familiar with the nature of the constituents of produced water as defined in NMOGA Exhibit Number 2?
A. I am.
Q. And, Mr. Welch, as a result of your education and work experience, are you familiar with the processes that are utilized to capture, store and treat produced water for recycling and re-use during oil and gas operations?
A. Yes, sir, I am.
MR. FELDEWERT: Mr. Chairman, I would tender Mr. Welch as an expert witness in the storage, treatment and management of produced water for recycling

and re-use during oil and gas development operations.

MR. BRANCARD: Mr. Chair, I would just say that since we're in a rulemaking proceeding, we don't need to qualify people as experts in order for them to give opinions, but we can accept the witness' credentials, and you can duly note their experience and knowledge and their background.

CHAIRPERSON CATANACH: Mr. Welch is so qualified and noted.

Q. (BY MR. FELDEWERT) Would you explain to the Commission the current impediments to the recycling and re-use of produced water that led to the development of this proposed rule?

A. Yeah. I think there is a great deal of uncertainty with the operators in how to apply recycling and re-use standards as the rules are currently written. For instance, the size is uncertain in terms of the way the rules are written now. So the multi-well fluid management pit suggests that the size is not defined. But when operators are evaluating the option to use a recycle facility or a recycle containment, it's an economic evaluation.

In southeastern New Mexico, the city of Carlsbad sells fresh water off the Double Eagle for $1.50 a barrel. To move that water to location, to use

that water for stimulation purposes, it costs another $2.00, $2.50 a barrel to transport.

So an operator's already paying 300-, $400,000 worth of water to complete a well. If they want to recycle water, then they have to compare that to the cost of the recycle alternative. So recycle containment for a standard size inground impoundment is half a million dollars. That requires a lot more infrastructure to manage the produced water than the fresh water. So they have to have a threshold of time by which they can rationalize their investment to build those types of infrastructures. So there is not a lot of incentive to recycle water from an economic standpoint. So what we've tried to do in Rule 34 is create a path of least resistance, the most cost-effective alternative to enable operators to make that economic evaluation to justify the investment of the recycle containment and recycle facility.

There is also the issue of using water from other sources. As the rules are drafted currently, commingling is not allowed. So if you're using a multi-well fluid management pit, only those wells associated by the drill permits can be included in the multi-well fluid management pit. So you have to complete the first well, and then you have to take the

flowback that comes into that from that well to take that into the multi-well fluid management pit.

So bear in mind that to complete a well may take 100,000 barrels. You're only going to get a portion of that water back, 10 to 20 percent of that water, and it may take you a hundred days to see that water come back. So, again, if you complete a well that's 100,000 barrels, four months later you may have 20,000 barrels of that water coming back. If you're not allowed to commingle any water into that facility, that asset is underutilized until you get enough water to come back.

So one of the changes that we wanted to adopt or propose into Rule 34 is to allow the commingling of fluids. So there is the economic incentive; there is the use and the uncertainty. So those are the things we tried to address in Rule 34.

Q. Mr. Welch, given the expense associated with the creation of any line facility, does an operator need an efficient life span in order to breach the economies of scale and recoup that investment?

A. Yes, it does. And in -- in the enactment of the Pit Rule, in 17, it was contemplated that the multi-well fluid management pit might have a lifetime of five years, so we adopted that standard in Rule 34 as

well.

The way the multi-well fluid management pit rule was drafted, if an operator wanted to add more wells to that facility, he had to go back to hearing. That created uncertainty to the operators. So what might be said is that the multi-well fluid management pit was bound by APDs, that at the expiration of the drill permits, the facility had to be closed. So we wanted to give operators more certainty in the time to recover the investment of their recycle containment, so we adopted the five-year provision as contemplated in 17.

Q. Mr. Welch, in your opinion, in order to promote the recycling of produced water, do we need a storage facility that has a multi-year life span?

A. Yes, sir, we do.

Q. And in your opinion, to promote the recycling of produced water, do we need a storage facility that has the ability to accept produced water from multiple facilities?

A. Yes, sir, we do.

Q. And the current storage options, in your opinion, are they sufficient to promote recycling and re-use of produced water?

A. No, sir, they are not.

Q. I want to talk about those internally. First off, what are the problems, for example, with aboveground steel tanks?

A. Steel tanks are -- we have a picture of a -- of a frack tank island, if you will.

Q. Let me interrupt you.

MR. FELDEWERT: Mr. Chairman, these pictures are contained within NMOGA Exhibit Number 6.

THE WITNESS: This was an application that took place in the Carlsbad area, and in this particular application, the operator wanted to recycle produced water. We brought out 72 frack tanks to location. So you had the logistics in terms of sourcing these, the cost of sourcing and locating the frack tanks on site. Those tanks run anywhere between 35 and $50 a day for rental purposes.

And as you can see and in the next slide as well, in between each one of the tanks, there are hoses and fittings and flanges, and all of those items have to be monitored for leak purposes.

In addition, these tanks don't fill evenly. So as we indicated before, you have to accumulate all of the water before the stimulation. So it may take weeks to fill all of your tanks in preparation for your completion effort. So the whole time these tanks are

being filled, you have operators that are constantly monitoring the volume and elevation. These tanks are designed to hold 500 barrels each, but operators only put about 400 barrels in them because they don't want to overtop for obvious reasons. So you have a filling concern that requires constant maintenance. When you do go to draw these tanks down for completion purposes, they don't drawdown evenly, so --

Can you go back to the previous slide, Mr. Feldewert?

As you can see, that's a transfer pump on the left-hand side. So the tanks that are closest to that transfer pump drawdown preferentially to the adjacent tanks. So an operator, again, is having to monitor this very closely -- this drawdown very closely to make sure that they're not taking air into the pumps and that they're drawing down equally.

There is another issue with these tanks. You don't know what the previous application for the tanks might have been, so the internal integrity of the tanks may be different. The coatings may have broken down, so one's going to rust preferentially. That changes the constituency of our completion fluids. You don't know if high pH or low pH fluids may have been in these tanks before, so that changes the constituencies

of our completion fluids.

So the preference would be to store all of this water in a large recycle containment so that that fluid is homogenous, so oil service companies were in a better position to take this water and make reliable fluids out of it and have good completions.

Q. (BY MR. FELDEWERT) Now, Mr. Welch, Rule 17 allows for the creation of permanent pits. You're aware of that?

A. Correct.

Q. What's the problem with utilizing a permanent pit for the short-term storage of produced water?

A. Well, a permanent pit is designed for oil-field waste. It's not really designed for the recycling of produced water.

The other issue is the size. It's 10 acre-feet. Some of our completions are 100,000 barrels. You're using a permanent pit that, by design, is 10 acre-feet. So its total volume is 77,000 barrels, but you have to have 3 feet of space on the top. And then you want to have space on the bottom where you might accumulate dust and dirt. So you don't want to bring that into your well. So the effective volume of a permanent pit is much less than the 10 acre-feet that's contemplated. The point is it just doesn't give you

enough volume for well completions. If you're completing 100,000 barrels, there's just not enough room in a permanent pit to afford recycle.

Q. Now, do we have some of the same problems, then, with temporary pits under Rule 17?

A. Well, in a temporary pit, you have named wells that are associated with the temporary pit, but the issue is once the first well is completed, you have six months to close that facility. So as we indicated before, if I'm completing a well and it takes me four months to get 20,000 barrels back, my duration of that asset is almost complete before I start receiving any useful volume into the facility. So --

Q. Let me stop you right there, Mr. Welch. I've put on the screen what's been marked as NMOGA Exhibit Number 7, and what you just referenced, that's reflected in the first paragraph of this particular side, under 17, under the definition of temporary pit, "must be closed within six months"? And then there are some other issues that are of concern with these temporary pits?

A. I think I named them.

Q. Okay. Did we hit all the concerns here? We've got the limitations --

A. Well, yeah. There is the commingling aspect of

it as well, so that would be another issue as we raised previously. We want to bring in multiple fluids to make economic use of the size of these assets. And if you're waiting for that flowback over a month, several months worth of time, then you have an underutilized asset.

Q. And under the current provisions governing temporary pits, particularly the last provision that we have on this slide, you're limited to the flowback from the wells that you identified on your APD and whatever flow-back arises under the drilling operations?

A. Correct. Right.

Q. Then if I turn to what's been marked as NMOGA Exhibit Number 8, is that a slide that addresses the provisions for the multi-well fluid management pit?

A. Yes, it is.

Q. What is the -- you talked about some of them, but what are the other concerns of the multi-well fluid management pit that has resulted in the lack of use for recycling and re-use of produced water?

A. When an operator's going forward and putting together their drill permits, those expire within two years. So an operator is putting together a drill program. Those approved permits are then assigned to the multi-well fluid management pit, and so at the expiration of that drilling campaign, they have to

nominate additional permits through a hearing process. That creates uncertainty for the operators. So as we mentioned before, it may cost half a million dollars or more just to put in the recycle containment.

So there is an uncertainty in terms of how they're going to recover the investment if they put in this infrastructure. So when you're handling produced water, all the facilities, the pipes, they all have to be leak proof. Everything is -- all the leaks are contained, so there's containment. These are not concerns with fresh water, but they add costs into the managing of produced water. Operators are certainly willing to do that and are encouraged to do that, but they have to have a reasonable length of time in which to recover that investment. So the multi-well fluid management pit is bound by APDs with the uncertainties that add additional drill permits to the -- to the permit.

Again, you can't commingle fluids. So if you're completing wells, you're waiting for that flowback to start filling up your pit so you can complete additional wells. If you can take in additional fluids, then you could utilize that asset. So for some period of time, months, as soon as that pit is approved, you're waiting for water to come into that

facility for it to be re-used.

Q. Now, we had a couple of years, a little over a year, year and a half of experience with Rule 17. Has experience shown that the current options are sufficient to encourage the recycle and re-use of produced water?

A. We've really not seen adoption. We've seen some operators that have attempted to use multi-well fluid management pits. To my understanding, there have been two that have been approved. One that's been constructed. One of those was with variance that started to simulate what we've adopted in 34.

Q. In your opinion, based on your education and experience, is there a need for more versatile produced water storage facilities to encourage the recycle and re-use of produced water?

A. Yeah. To help operators, I think if we had something that gave operators the discretion to nominate the size of their facility, to bring in fluids from multiple sources into the recycle containment and having a known duration on the asset would also help them qualify their economic investment.

Q. And in your opinion, does the proposed rule provide a facility that is versatile enough to encourage recycling and re-use of produced water?

A. Yes, sir, it does.

Q. Let's talk a little bit about the proposed rule, which has been marked as NMOGA Exhibit Number 1.

First off, before we get into it, the meat of the rule, I want to turn to page 1, and I want to look at the definitions with the Commission, okay, that have been adopted. And can you explain -- you'll see, as you go through definitions, there in Part 34.7 that there are three definitions down there, one for a recycling facility, and one is for a recycling containment. Can you explain -- please explain to the Commission the difference between a recycling facility and a proposed recycling containment?

A. Recycling facility and recycling containment are complementary to each other. So the recycling facility is how we transition or we take the produced water that might be deemed as a waste and turn it into something that we can use. So the recycling facility could be something as simple as a filtration skid or weir tanks. But it changes the characteristics or it enables the transfer of the produced water so that it can be re-used.

The recycle containment is -- we envision it to be an inground, synthetically lined, double-lined facility, and it's primary purpose is to contain the produced water.

And then the last rule is treatment -- or the last word is treatment. And when we talk about treatment, produced water could be reconditioned either chemically or mechanically. So we left it vague because we're seeing innovation in the industry where we're putting less and less treatment into our produced water. When we started looking at this in 2008, for instance, we couldn't use produced water in southeastern New Mexico as a stimulation fluid. But our chemistry has changed such that we can now use produced water 100 percent to complete wells.

Q. Mr. Welch, so a recycling facility can be stationary or portable --

A. That's correct.

Q. -- and encompasses a number of devices?

Now, the recycling containment that we have proposed, does it have to be used in connection with the recycling facility?

A. It does. You have to -- there has to be a complementary recycling facility to the recycling containment.

Q. So like another storage option for a recycling facility? Would that be correct?

A. Yes.

Q. If I then turn to -- I want to talk a little

bit about what is contained within a recycling containment. First off, if you look at the definition, it makes it very clear that it can only hold produced water, correct?

A. That's correct.

Q. If I then go to Part 34.10B, on page 3 of our proposed rule of Exhibit Number 1 --

A. Correct. Yes.

Q. -- that particular provision again re-emphasizes that recycling containments can only hold produced water, correct?

A. Right. We've included fresh water and brackish water that could be introduced into the recycle containment, but once they're commingled with any produced water, it becomes produced water. But the idea is that you can bring in water from multiple sources so that you have a sufficient volume to utilize your recycle containment for re-use.

Q. As I go through that provision and it talks about the types of fluids that you can have in produced water, one of the provisions I see is that it has a clause that says "fluids that are added to water." Do you see that?

A. Yes.

Q. What are we talking about there? What are

fluids that are added to water to facilitate well drilling?

A. Well, when we're completing the well, we're adding, you know, friction reducers, scaling inhibitors, biocides. These are all put into the fluid to support the completion. The volume of these additives is very small, less than 1 percent, and a lot of those materials don't come back to the surface. But at any rate, those could end up as in the produced water pit.

Q. And as I continue on, I see another phrase, "water produced with oil and gas flowback operations."

A. Yes.

Q. What is that?

A. Well, in early flowback, you have -- when the well is completed and you're flowing back, it's produced water, but it's early produced water.

Q. Is it water that is naturally occurring in the formation that you are targeting?

A. Generally the early flowback is the water that was injected for the completion. So it depends on whatever the source water is. So if you're using fresh water at the source, that early flowback generally looks more like fresh water than it does produced water. The longer that water stays in the earth, the more likely it resembles the connate water, the naturally occurring

water that's in the formation.

Q. And the salinity of that flowback water, can that range across the state?

A. It certainly can. I mean, if we look at the San Juan Basin, the dissolved salt concentration in that water is very low. It approximates fresh water standards, but as you look in southeastern New Mexico, the produced water is almost saturated with salts.

Q. Then finally as I continue through that list of the produced water fluids, I see a phrase "water generated by oil and gas processing facilities." Do you see that?

A. Yes, sir.

Q. What is that?

A. Well, as we're trying to make the hydrocarbon available for sale, any entrained water needs to be removed. So it's just -- it wasn't removed by primary or secondary processes, so before it meets a pipeline standard, we have to remove the rest of the water. So that water also -- it looks just like the produced water that was produced with the water initially -- produced with the oil initially.

Q. With the field facilities?

A. Correct.

Q. And the last clause again points out that these

containment -- recycling containments do not hold hazardous waste?

A. That is correct.

Q. And that is a provision?

A. (Indicating.)

Q. And is that a defined term under the Division's regulations?

A. Yes, sir, it is.

Q. Then I want to go back to page -- I want to go back to the rule a little bit, move on to Part 8, which is on page 2 of Exhibit Number 1, Part 34.8. There is an A and a B here. Okay?

A. Correct.

Q. What was the -- what was the purpose of Subpart A? What were we doing there?

A. Well, we're restating what the OCD had stated in its notice to operators, that no permit is required to recycle and re-use produced water. We have recycle by -- or disposition by use. And so disposition by use is the recycle and re-use. And then in Subpart B, we have disposal and so the methods that qualify as disposal.

Q. Okay. If I turn to what's been marked as NMOGA Exhibit Number 9, is that the notice to operators, on the first two pages and in the Form C-147, that was

referenced by the notice?

A. Yes, sir, it is.

Q. That's what's currently on the Division's Web site?

A. That's correct.

Q. And you were essentially trying to adopt those provisions in 34.8A?

A. Correct.

MR. FELDEWERT: And then, Members of the Commission, if you'll recall, when I was discussing the carryover provisions from the current rule, Exhibit Number 4 reflects that Part 34.8B is actually one of the carryover provisions from the current rule.

Q. (BY MR. FELDEWERT) Then if we move on, Mr. Welch, to 34.9 --

A. Yes, sir.

Q. -- this addresses those recycling facilities that we find on the first page?

A. That's correct.

Q. Is there -- there is listed -- in our pre-hearing statement, we reference this. We talk about permit by rule, the permit-by-rule concept. Does this begin the permit-by-rule concept within our proposed rule?

A. Yes, sir, it does.

Q. Explain that to us, please.
A. Well, we're trying to lay out a road map where it's incumbent on the operator for compliance. If they fail to comply, then the Division could take immediate action on the operator for compliance.
But what we've laid out here is the recycle facility will always be permitted. It's either permitted by the existing assets that are on site. If a recycle facility is added to an existing permitted facility, then we're required to provide notice. If it doesn't meet any of the compliance standards, then it needs to be permitted.
Q. Okay. So if I go to Part A, for example, it indicates that if it's part of a permitted drilling operation, in this particular case, you don't need to do anything --
A. That's correct.
Q. -- correct?
Okay. Then if it's not part of an existing drilling operation, it either has to be permitted or registered?
A. It has to be registered. That's correct.
Q. And then Subpart B of 34.9, does that identify when registration of recycling facility is required?
A. It does.

Q. And it lists nine different -- I'm sorry -- seven different instances --
A. That's right.
Q. -- primarily dealing with current oil and gas --
A. Correct.
Q. -- operations like waterflood projects?
A. 9B(7), I think, is really kind of the heart of the rule, where we're talking about registering the recycling facility with the recycle containment. So that's really the heart of the rule. If it doesn't comply with A or B, then it needs to be permitted as defined by C.
Q. Under Subpart C?
A. Correct.
Q. Then if I move on through this particular part, there are paragraphs -- or subsections D through H. Do they deal primarily with the operational requirements for a recycling facility?
A. Yes, sir, they do.
Q. Again, we're talking about the recycling facility, not the recycling containment?
A. That's correct.
Q. Subpart D, does this reflect that this facility can serve a number of different wells?

A. Yes, it does and the fact that it can be on site or off site. One of the other things that we contemplated in our committee is we wanted to make commercial facilities available. So a small operator might not have economies to scale to put in a recycle facility and recycle containment, but a commercial facility might be established that would benefit the small operators. So as we noted in here, the recycle facility, recycle containment might be off site and could take commingled fluid from multiple operators for re-use.

Q. And then if I move to Subpart E, it requires the operator for the recycling facility to monitor the volumes in and out, correct?

A. That's correct.

Q. Will the volumes in always match the volumes out?

A. They won't.

Obviously, we're in an arid area, and the water that's coming into the facility will be subject to evaporation. And in southeastern New Mexico, we may have 7 feet of evaporation on an annual basis. So they will certainly not add up. Volumes in will not equal volumes out.

Q. Is the volume-out component -- is that

important for purposes, later we will see, of determining when the facility must be closed?

A. Yeah. When the committee met, we reviewed -- spent a lot of time looking at the multi-well fluid management pit, and we came to a decision that part of the reasons that the APDs were assigned to the pit was to make sure that these -- the multi-well fluid management pits weren't abandoned. And so we wanted to put in a mechanism in this rule that would offer the same kind of provision to make sure that these facilities weren't abandoned.

So the provision that we added is that operators have to use 20 percent of the volume on a six-month basis. Otherwise, it will deem that it's not being used and operations have ceased. So if a recycle containment is 100,000 barrels, then the facility has to dispense 20,000 barrels every six months to sustain that asset as a viable working asset. So evaporation doesn't come into that. So we're trying to measure disposition by use, so it's used for its intended purpose, to recycle and re-use, and 20 percent of that entire volume has to be used on a six-month basis.

Q. And we'll see that provision later in the rule?

A. Yes, sir.

Q. If I then go to Subpart F, this reflects that

an operator must keep records of the source and disposition of the recycled water?

A. That's correct.

Q. And then G, again, enforces what is evident from the definitions, and that is that these types of recycling facilities may not be used for disposal?

A. Correct.

Q. And then H is the fluid removal requirement upon cessation?

A. Yeah. We adopted that from 17.

MR. FELDEWERT: And I don't think I have a conversion chart here, but for the record, that comes out of Rule 17.12(F)5, and it's adopted verbatim.

Q. (BY MR. FELDEWERT) All right. Now I'm going to talk about recycling containments in Part 10. Now, these are the -- these are the additional storage devices that are allowed to be used with recycling facilities?

A. That's correct.

Q. In order to be permitted by rule, do they have to meet all of the requirements in this rule before they can be registered and allowed to be used?

A. Yes, sir. That is correct.

Q. As part of the permit-by-rule concept?

A. That is correct.

Q. Okay. If I go to Subpart A, that emphasizes that to register it, you have to meet this rule and show that on a Form C-147?

A. Yes, sir.

Q. Is it your understanding that the Division is in the process of modifying or will be in the process of modifying the C-147 if this rule is adopted and that it will conform with the rule requirements?

A. That is my understanding.

Q. If I then go to B, that's the provision that we just spoke about earlier dealing with the produced water --

A. Right.

Q. -- or at least types of produced water?

A. That's correct.

Q. And Subpart C is what we haven't touched on yet. This is the provision providing for the initial five-year life span of the facility?

A. Correct.

Q. Is that -- as you said earlier, is that time frame important to make this economically viable?

A. Yeah, it is. So we just wanted to give operators certainty that they would have use of this asset over that five-year period of time. They can get one-year extensions on the asset, but they have to show

that they've monitored and complied with the monitoring requirements on a weekly basis.

Q. And are there constant monitoring requirements during the life of that facility?

A. There are, leak detection; then the integrity of -- of the fencing and netting is required.

Q. So we'll go through those here in a minute, correct?

A. Right.

Q. In your opinion, Mr. Welch, is a five-year life necessary to encourage recycling and re-use?

A. It is.

Q. And finally, Subpart D emphasizes again that this recycling containment cannot be used for disposal?

A. That's correct.

Q. Is the proposed five-year life span consistent with the Commission's order back in 2013 approving a multi-well fluid management pit under Rule 17?

A. Yes, sir, it is.

Q. If I turn to what's been marked as NMOGA Exhibit Number 10, is this the finding from the Commission order back in 2013 adopting a multi-well fluid management pit?

A. Yes, sir, it is.

Q. And have we highlighted for the Commission the

language indicating the Commission's point at that time that they anticipated a multi-well fluid management pit could be up to five years?

A. That's correct.

This was also the basis for establishing the siting, construction, operation, enclosure and reclamation standards. So again, we adopted the standards that were already applied in the multi-well fluid management pit into 34.

Q. Will the produced water to be contained within these proposed recycling containments be similar, if not identical, to the drilling fluids that are allowed to be contained in the multi-well fluid management pit?

A. Yes, sir, it is.

Q. In your opinion, is the multi-well fluid management pit, under Rule 17, an analogous device to the -- to our proposed recycling containment?

A. Yes, sir, it is.

Q. Is that why, therefore, the Committee, as you point out, adopted the siting, design, construction and operational provisions for multi-well fluid management pits under Rule 17?

A. Yes, sir.

Q. How was that accomplished?

A. We took the provisions of 17 and adopted them

almost directly into Rule 34 with modifications, extracting words that were not appropriate for our purpose. So, again, we're laying out a road map specifically for recycling and re-use of produced water.

Q. Does the committee believe that it captured the applicable requirements --

A. Yes, sir.

Q. -- from Rule 17?

A. Yes, sir.

Q. Then let's started walking through those. And let's begin with Part 11, are they not --

A. Yes, sir.

Q. -- on page 4 of Exhibit Number 1?

Before we walk through that, if I turn to what's been marked as NMOGA Exhibit Number 11, is this a comparison chart developed for the Commission to identify for them the comparable provisions in Rule 17 that were utilized to establish the siting, design, operation, enclosure requirements for Rule 34?

A. Yes, sir, it is.

Q. And so Rule 17 provisions are on the right-hand side?

A. Correct.

Q. And the new Rule 34 provisions are on the left-hand side?

A. Yes, sir.
Q. I'm going to leave this on the screen as we walk through the various provisions. Okay?
A. Okay.
Q. As we note here on Exhibit Number 11, Subpart A of 34.11, on page 4 of Exhibit 1, is taken almost verbatim from Rule 17, correct?
A. That's correct.
Q. Was there some language that was removed as we transferred the provisions over?
A. Yes, sir.
Q. What did they relate to?
A. Well, arbitrary language that didn't apply to what we were accomplishing -- trying to accomplish in 34.
Q. Okay. Was there also -- for example, within the siting requirements listed in A1 through 9, at the end, would there be certain clauses allowing for exceptions or variances by the Division?
A. There are. And we intended -- or we intentionally moved all the variance provisions into Section 16 of Rule 34, so we consolidated all the variance in one spot.
Q. But all the substantive siting requirements are then carried over from Rule 34?

A. That's correct.
Q. Okay. Then our conversion chart indicates that Subpart B of this 34.11 also has its counterpart in Rule 17?
A. That's correct.
Q. And likewise, Subpart C is taken verbatim from Rule 17?
A. That's correct.
Q. So really there were no changes, nothing modified to the siting requirements?
A. That's correct.
Q. If I then go to Part 12 dealing with design and construction, we have a Subpart A that was taken from Rule 17.11J?
A. Correct.
Q. But we did make some modifications to the proposed -- or to the liner language and leak-detection system that's currently in Rule 17?
A. That's correct.
Q. And I'm going to leave Exhibit 11 on the screen. And that's reflected in the NMOGA Exhibit Number 12?
A. That's right.
Q. And we have a professional engineer that's going to come forth and discuss the proposed liner

options and leak-detection system options that are reflected on the left-hand side?

A. Correct.

Q. The one thing I noticed here is that, again, if you look at Exhibit 12, taken from Rule 17, that there is a Subpart 5 that was not carried over and was stricken in our -- well, it's not carried over to our proposed rule, correct?

A. Correct.

Q. And again, that deals with the -- a variance provision to be approved by the district office?

A. Right, that we consolidated in 16.

Q. So that's an example -- we took that type of language out and consolidated all of that language into our Part 34.16?

A. Correct.

Q. Then if I look up here at the screen, design and construction, Part 12B, dealing with topsoil, that's taken directly from Rule 17, correct?

A. That's correct.

Q. Then as I move down to our proposed Part 12, to Section -- Subsection C, that deals with signage?

A. Correct.

Q. And if I turn to what's been marked as NMOGA Exhibit 13 --

A. Right.
Q. -- does that compare with the signage provision -- comparable language that the Commission adopted in Rule 17?
A. Right. And here again we have an example of taking out the language that didn't apply to what we were trying to do with our containment facilities.
Q. So as we're moving through, we have to continually modify the text to meet our particular facility?
A. Right.
Q. But our intent was to always carry over the substantive meaning?
A. Yeah. 17 considered temporary pits, permanent pits, below-ground pits, below-grade pits. So we only wanted to extract that language that applied to our recycle containment.
Q. Let's then move on to Subpart D, D as in dog, dealing with fencing. If I turn to what's been marked as NMOGA Exhibit 14, does that also provide the Commission with an examination of the fencing language from Rule 17 and how we have carried it over into our proposed rule?
A. Yeah. In 17, I mean, they contemplated that you can fence in a much larger area that surrounded the

recycle containment. The way we adopted it in 34 was to put the fencing directly around the recycle containment, with fencing and gates as well. So it's a more concentrated, more focused fencing effort than what was considered in 17.

Q. Now, there is one provision, though, in here -- Mr. Welch, if I look on the right-hand side of Exhibit 14, under subparagraph 2, there is a requirement for a chain-link security fence. Do you see that?

A. Yes, sir.

Q. Which is applicable when you're within 1,000 feet of an occupied permanent residence, school, et cetera?

A. Right.

Q. Was that applicable to our containment device?

A. No, sir.

Q. Is that because we're not allowed to site a containment device that close to a residence or school or hospital?

A. That's correct.

Q. Then the final provision of Part 12 is Subpart E dealing with netting.

If I continue on with NMOGA Exhibit 15, is that, again, a side-by-side comparison of the netting provision from Rule 17 and how we have carried it over

to Part 12E of our proposal?

A. Yes, sir, it is.

Q. And under this proposed rule, you're allowed to -- you're required to inspect on a monthly basis no matter what provisions you are using to protect migratory birds?

A. That's correct.

Q. Okay. Then we are on Part 13, the operational provisions. And as I look up to NMOGA Exhibit 11 on the screen, I see that Parts -- Subparts A and B(1) and (2) capture or -- are brought over from various -- various paragraphs of Rule 17?

A. Right.

Q. If I turn to what's been marked as NMOGA Exhibit 16, here we had to do -- first off, is this a side-by-side comparison of the provisions of the rules from Rule 17 and how we brought them over to Rule 34?

A. It is. And we used the color coding to aid in where that language was sourced from and where it ended up in Rule 34.

Q. Because there was a lot of textual editing that had to be done and some reorganization?

A. Correct.

Q. So, for example, the blue language on the right-hand side matches up with the blue language on the

left-hand side?

A. That's correct.

Q. We did not carry over the provision F(1)?

A. Correct.

Q. And is that because that's captured in the definition and various other aspects of the rule we've already gone over?

A. Right.

Q. Then if I go to Subpart B(3) through 7, or Part 13 of our proposed rule, we see that that came from a comparable provision in Rule 17, 17.12.A(4) through (8)?

A. Yes, sir.

Q. If I turn to what's been marked as NMOGA 17, is that the side-by-side comparison of these two provisions?

A. Yes, sir, it is.

Q. And, again, have we highlighted the -- or assisted -- provided some assistance here by highlighting certain language?

A. Right. We have.

Q. There's -- on the right-hand side, there is the provision that says: "The operator shall not discharge into or store any hazardous waste in a pit, closed-loop system," et cetera, right?

A. That's correct.

Q. That, we reflect, is already captured in Part 10(B) of our proposed rule?
A. Right. Correct.
Q. That's the rule where we highlight here where it talks about what type of produced water and --
A. Right.
Q. -- can't hold hazardous waste?
A. Right.
Q. And then the remaining aspects of Rule 17, 4 through 8 have been carried over to the existing rule with some reorganization?
A. That's right.
Q. Okay. Couple of things. One is on the right-hand side here, you see subparagraph 5 on the right-hand side, on NMOGA Exhibit Number 17? There is some language there, "pursuant to 19.15.29 NMAC."
A. Yeah. That's a spill provision. And we have double containment on our facility, so we're not going to spill. We're going to capture. So we took that language out.
Q. So in other words, that spill provision really doesn't apply --
A. Does not.
Q. -- for example, if we have a leak below the primary line?

A. If we have a leak below the water level, then we need to drain to that point, make the repairs, notify the Division of our leak. And likewise, if it's above the water level, we still need to provide notification.

Q. So if I'm understanding, the spill rule applies if there is an actual spill on the ground?

A. Right.

Q. And because we have a double-liner system, even though we would have a leak in the primary liner, that doesn't necessarily mean we're going to have a spill on the ground?

A. That's correct. We have -- the secondary liner will capture that, and we're using the 200 mil netting. And a liner professional will speak to that.

Q. Okay. But the important point is that nonetheless we're going to notify the Division, correct?

A. Exactly.

Q. And that is contained within our proposed rule?

A. That's correct.

Q. All right.

MR. FELDEWERT: And also I think the Commission will notice on the left-hand side, in subparagraphs 4 and 5, because we have a double-liner system, we inserted the clause -- the word "primary" in front of "liner" because that would be the applicable

one, whether the leak was above or below the water level.

THE WITNESS: Correct.

Q. (BY MR. FELDEWERT) Okay. If we look at NMOGA Exhibit Number 11, in Operations, Part 13, the last is Subpart C. So if I go to NMOGA Exhibit Number 1 and I go to page 6 and I look at Subpart C, is this the 20 percent rule provision that you discussed earlier defining when there has been a cessation of operation?

A. What section are you on?

Q. I'm on Part 34.13C, on page 6 of NMOGA Exhibit 1.

A. Yes.

Q. So you'll need to go to your Exhibit 1.

A. Yeah, I have it here.

Q. Okay.

A. Yes. So, again, we wanted to make sure that this asset was not stranded, that it was constantly being used, so we put a use provision on that asset. So, again, if that facility is 100,000 barrels, then the operator must dispense 20,000 barrels of that asset in a six-month period to maintain the viability.

So we wanted to do a couple of things here to kind of manage the size of the assets. So an operator's going to build a pit as big as they need to

to accommodate their frack schedule, to accommodate the size of the frack. So that's going to dictate how big it's going to be.

Of course they want to measure cost. We have fencing and netting and liners, and as the pits get bigger, all of those things get more expensive. So there is a cost constraint that holds the size down by those provisions, but also the operator has to be mindful that they're going to have to use 20 percent of that volume every six months. So we wanted to throw that also in there as kind of to optimize the size of the recycling facility -- or recycle containment so that it was managed and the operator took that into consideration.

Q. So, Mr. Welch, we've now gone through the design, construction and operational provisions of the rule. As you point out, there is no specific size requirement to this recycling containment?

A. No, sir. There is not.

Q. And in your opinion, is that -- is an arbitrary size limitation necessary given the practical restrictions that are imposed on these recycling containment?

A. An operator's going to be mindful of how big they need the facility to be. They're not going to just

spend money building overly-large facilities. That's not in their best interests. So they have the cost constraints and use constraints that we're encouraging to manage the size of the assets.

Q. For example, you're going to have a large, shallow service area?

A. Probably not. Again, noting the evaporation rate in New Mexico, it's much better to have a small surface area and then a deep recycle containment. We want to manage evaporation. We want to manage the amount of dust and dirt that lands in the recycle containment. So it's much better to have a deep recycle containment than the large surface area.

Q. Is there any specific size requirement for multi-well fluid management pits in Rule 17?

A. This is not.

Q. And not that we always do things like they do in Texas, but is there any specific size requirements on these recycling containments in Texas?

A. There is not.

Q. In your opinion, will the absence of an arbitrary size limitation encourage recycling and re-use of produced water?

A. We do want to encourage without the size restriction.

Q. In your opinion, will -- are there enough restrictions imposed on these recycling containments if any operator who designs these is going to err on making them smaller rather than larger?

A. That's our intent through the 20 percent provision. Yes, sir.

Q. And with the absence of an arbitrary size limitation, will that allow the operators the flexibility necessary to create a facility that's going to meet the anticipated water re-use needs?

A. Yes, sir, that's correct.

Q. Okay. Then the last part of the carryover provisions from Rule 17 are found in Part 34.14, which is the enclosure requirements in our rule, correct?

A. That's correct.

Q. If I look up at our NMOGA Exhibit 11 on the screen, we see that Subpart A, dealing with the timing for removal of fluids, et cetera, that's a carryover from 17.12.F(5) and 17.12.G(5)?

A. That's correct.

Q. And is it the time frames that were carried over? For example, the 60 days and the six months?

A. That's correct.

Q. So the text had to be changed where we carried over the time limits?

A. That's right.
Q. Then if we look up here, we see that Subpart B of Part 14, the removal of fluids and liners, is directly carried over from Rule 17?
A. Yes, sir.
Q. Then Subpart C, dealing with testing, that again was carried over from Rule 17?
A. That's correct.
Q. But we did have some language change?
A. That's correct.
Q. So if I turn to what's been marked as NMOGA Exhibit 18, is this a side-by-side comparison of the comparable provision in Rule 17 with Part 14C, the closure testing provisions?
A. It is.
Q. And what have we done here?
A. We've eliminated the language that didn't apply to our recycle containment, but all the substantive language in terms of the number of points, composite samples, stained or wet, all of that was carried over into 34.
Q. And do we likewise carry over the reference to Table 1?
A. Yes, we do.
Q. And so if I turn to what's been marked as NMOGA

Exhibit 19, is that the Table 1 that has been carried over to Rule 17?

A. Yes, sir, it is.

Q. But there have been some changes?

A. That's correct.

Q. First off, is it correct, Mr. Welch, that we did not carry over the provision for groundwater less than 51 feet because you cannot site a recycling containment if the groundwater is less than 51 --

A. That's correct.

Q. Secondly, we've proposed some changes to the EPA testing methods?

A. That's correct.

Q. And those are reflected in Exhibit 19?

A. That's correct.

Q. And we have an expert who is going to testify to these later today?

A. Yes, sir.

Q. And did the -- well, let me ask this: If I turn to what's been marked as NMOGA Exhibit Number 20, are these the Division findings from the order that was issued in 2013 that caused the NMOGA committee to carry over the Table 1 adopted by the Division under that rule?

A. Yes, sir, they are.

Q. Then as I go up to NMOGA Exhibit 11 on the screen, we see that Subpart D, the closure report, is taken verbatim from the comparable provision in Rule 17?
A. Yes, sir.
Q. And then Subparts E, F, G and H are taken from a couple provisions in Rule 17, under 17.13.H(1) through (5), correct?
A. That's correct.
Q. And then there are various subparts under H(5) that are also carried over?
A. Right.
Q. Required some editing?
A. Yes, sir.
Q. So if I go to -- look at Subpart E first. Okay? If I turn to what's been marked as NMOGA Exhibit 21, does this reflect the reclamation provisions that were adopted under our rule, on the left side, and then the comparable provisions from Rule 17?
A. Yes, sir, it does.
Q. And do we again have some color coding here to assist the Commission in tracking the language?
A. Yes, sir, we do.
Q. And all of the substantive provisions have been carried over?
A. That's correct.

Q. If I then turn to what's been marked as NMOGA Exhibit 22, this deals with the remaining subparts of Rule -- Part 14F, G and H?

A. Yes, sir. Yes, sir.

Q. Again, on the right-hand side, we show the comparable provisions from Rule 17?

A. That's correct.

Q. Now, a couple of things: The Subparts (A) and (B) shown on the right-hand side, first off, Part (A) was not applicable?

A. Right.

Q. Did you look at that?

A. I did.

Q. And that does not -- looking at that language, there is no application to our particular recycling containment?

A. That's correct.

Q. And then this reflects that Subpart B, on the right side, is previously found in the prior slide of the 14E?

A. Yes, sir.

Q. So that completes our carryover language from Rule 17; does it not?

A. That's correct.

MR. FELDEWERT: Mr. Chairman, I have a

little while yet, maybe another half hour. Do you want to take a break?

CHAIRPERSON CATANACH: Yeah. This will be a good time to do that. Let's take a ten-minute break at this point. Let's try to limit it to ten minutes. We have a long day still, so --

(Break taken, 10:29 a.m. to 10:46 a.m.)

CHAIRPERSON CATANACH: Okay. I'll call the hearing back to order and turn it back to Mr. Feldewert.

MR. FELDEWERT: Thank you, Mr. Chair.

Q. (BY MR. FELDEWERT) Mr. Welch, if you could turn to -- go back to our Exhibit Number 1 and go to page 8.

A. Yes, sir.

Q. We left off -- we were about ready to go into Part 34.15A, dealing with the financial assurance requirements for recycling containments.

A. Yes, sir.

Q. Now, when the committee was looking at the financial assurance requirements for the recycling containment, what did you look to as far as guidance?

A. Rule 17, sir.

Q. Or was it Rule 36?

A. That was Rule 36. That's correct.

Q. And if I look at what's been -- or first off, if I look at Subpart A, this is language that the

committee adopted with the assistance of the Division?

A. That's correct.

What we tried to capture here is that all the recycle containments would be bonded. So if an operator builds a recycle containment for their own purposes, then they're covered under the statewide bond -- their statewide bond. If the operator -- if there is not a bond on the recycle containment, then the operator of the recycle containment needs to secure a bond. And the amount of that bond is $25,000 or the cost of closure, plus reclamation.

Then we contemplated that we might have a recycle containment that would be operated in a commercial aspect. So in that event, the commercial facility would be taking produced water into their own account, and they would be delivering it to third parties. So that requires an additional bond, again, of $25,000 or the cost of closure plus reclamation.

Q. Now, the $25,000 minimum amount, does that come -- arise out of 36.11A?

A. Yes, sir, it did.

Q. Because it is whichever is greater, right?

A. That's -- whichever is greater.

Q. -- or 25,000?

A. That's correct.

Q. And so essentially an operator can have a recycling containment and operate under the existing bond only so long as it's using it for itself?
A. That's correct. If they deliver to a third party, then additional assurance is required.
Q. All right. If I then turn to what's been marked as NMOGA Exhibit -- keep this out. If I turn to what's been marked as NMOGA Exhibit 23, this reflects, at the top, that the remaining subparts of the financial assurance -- at least Subparts B, C, D and F arise out of comparable provisions in Rule 36?
A. That's correct.
Q. So I'm looking at the top line --
A. Yes.
Q. -- of NMOGA Exhibit 23?
A. That's correct.
Q. And those provisions were carried over verbatim from Rule 36 --
A. That's correct.
Q. -- Subparts C, D, E?
And then there is some change to F?
A. Right.
Q. And the paragraph numbering got a little off from Rule 36 because of formatting issues, correct?
A. That's correct.

Q. Okay. Now, there is one point I want to address, Mr. Welch, and the Commission. If I look at page 9 of NMOGA Exhibit Number 1 and I go to Part D, according to our Exhibit 23, Part D, 1, 2 and 3, arise out of a comparable provision in Rule 36, 36.11E. If I look at the end of D2, there is a sentence that talks about "demand may be issued 30 days." Do you see that?

A. Yes, sir.

Q. It says: "Demand may be issued 30 days prior to expiration."

A. Right.

Q. That provision does not exist in current Rule 36?

A. That's correct.

MR. FELDEWERT: And what I would like to inform the Commission who will be reviewing this rule, we believe that there is an inconsistency in between that particular sentence and Subpart C, which deals with the forfeiture of financial insurance -- assurance, which talks about the notice requirement, which is a mandatory notice requirement. So I think there is consensus that -- and maybe, perhaps, put a question mark by it now, but there may be consensus to strike that last sentence of Subpart D(2).

Q. (BY MR. FELDEWERT) With that said, Mr. Welch,

the remaining aspects of those provisions all were carried over from 36.11, except for we had to do some additional editing in Subpart F?

A. That's correct.

Q. And if I look at, again, NMOGA Exhibit 23, Subpart F provides a side-by-side comparison with the comparable provision from Rule 36?

A. Right.

Q. And did the committee essentially adopt the substantive provisions and adopt the language applicable?

A. That's correct.

Q. Then if I'm looking at our rule -- and I'm at page 9 of Exhibit Number 1 -- the committee did add two additional paragraphs that are not found in Rule 36; is that correct?

A. Yes, sir.

Q. G and H?

A. Yes.

Q. And do they -- those essentially identify when the Division can release the bond and how those funds can be used?

A. Yes, sir, that's correct.

Q. Then the next topic is the variance provision that was adopted by the committee.

A. That's correct.
Q. And, again, as you mentioned earlier, we attempted to streamline all of the variance provisions and put it into one section of the rule?
A. That's correct.
Q. Did you -- in coming up with this variance provision, did you rely upon the comparable provision in Rule 17?
A. Yes, we did, with one change of -- in Rule 15, we cited that there could be a request for a hearing within ten days. In our proposed rule, under 16, we changed that to 60 days, that we would offer dialogue in request for the variance, for discussion with the Division to try to resolve any uncertainties and try to come to conclusion before hearing.
Q. Okay. So let's look at that in more detail with NMOGA Exhibit 24.
A. Okay.
Q. Does that provide a side-by-side comparison of the variance provision in our proposed rule and the variance provision in Rule 17?
A. Yes, sir, it does.
Q. And is there some color coding, again, on here to assist the Commission in identifying the comparable provisions?

A. That's correct.
Q. Now, what you were talking about there deals with what's been shaded in yellow?
A. That's right.
Q. In particular, if I look on the right-hand side, current Rule 17 requires the operator to request a hearing within ten days of receipt of any denial, right?
A. That's right.
Q. And in our proposed rule, on the left-hand side, down in Subpart D, we've expanded that hearing time frame to 60 days?
A. That's right.
Q. And you mentioned that was for the purpose of allowing some dialogue before actually having to file for hearing?
A. That's correct.
Q. Now, with respect to the other aspect of the change in yellow, do you see that up in the top, right-hand side, there is the standard in Rule 17, and on the left-hand side, we noted that the standard was to afford reasonable protection against the contamination of fresh water.
A. That's right.
Q. And is that because that's the statutory standard --

A. That's correct.
Q. -- for produced water?
A. Right.
Q. And so that's why we carried it -- as produced water?
A. That's right.
Q. And with the provisions in blue, first off, it maintains the 60-day time frame that the Commission adopted in Rule 17 for the Division to act upon --
A. That's right.
Q. -- the variance request?
A. That's correct.
Q. And it also maintained the requirement that the applicant identify or provide notice to the surface owner of hearing?
A. That's correct.
Q. And then looking -- and I think we can use the left-hand side of Exhibit 24. The one provision that has been added by the committee that is not in the variance provisions in Rule 17 is found in Subpart F, down at the bottom of the left-hand side?
A. Yes, sir.
Q. Was that added at the request of the Division?
A. That was, yes, sir.
Q. All right. Then the last topic, Mr. Welch,

deals -- if I'm looking at our new rule -- the proposed rule and looking again at the new provisions -- not the provisions we carried over, but the new provisions, we jump all the way over to "Enforcement," which is Part 21. It's the last new provision.

A. That's correct.

Q. And that's on page 11 on Exhibit Number 1?

A. That's correct.

Q. Was this provision crafted by the committee and the Division to specifically apply to this permit-by-rule concept that's incorporated in our proposal?

A. Yeah. We wanted to give the operators the opportunity for compliance, but we also wanted to offer aggressive enforcement by the Commission if necessary.

Q. Okay. So if I look, for example, at Subpart B of 21, it allows the Division to require immediate cessation of operations and a mandatory -- if need be, require immediate drainage of the facility if there is any type of violation?

A. That's correct.

Q. And also as an addition -- if I look over at Subpart F, the Division also has the option not to approve any additional permits for that operator if there are any problems found in the recycling

containment, correct?

A. That's correct.

Q. And, Mr. Welch, if I go back to the first page of our proposed rule, go back to the beginning, and I go back to that first -- that added clause in the Objective, "to encourage the recycling, re-use or disposition of produced water by use in a manner that will afford reasonable protection against contamination of fresh water" --

A. Yes, sir.

Q. -- in your opinion, does the proposed rule encourage the recycling and disposition of produced water by re-use?

A. It does.

Q. And in your opinion, does the proposed rule identify for New Mexico operators the regulatory process that you need to go through to recycle and re-use or dispose by use produced water?

A. It does.

Q. And at the same time, in your opinion, does this proposed rule also afford reasonable protection against the contamination of fresh water?

A. Yes, sir, it does.

MR. FELDEWERT: With that, Mr. Chair, I would move for the admission of NMOGA Exhibits 1 through

24.

CHAIRPERSON CATANACH: Any objection?

MR. WADE: No objection from the OCD.

CHAIRPERSON CATANACH: Exhibits 1 through 24 will be admitted as evidence.

(NMOGA Exhibit Numbers 1 through 24 were offered and admitted into evidence.)

MR. FELDEWERT: Mr. Chair, that concludes my examination of this witness.

CHAIRPERSON CATANACH: Mr. Wade, do you have any questions of this witness?

MR. WADE: We do not have any questions.

CHAIRPERSON CATANACH: Ms. Foster.

MS. FOSTER: Thank you. No questions for this witness.

CHAIRPERSON CATANACH: Commissioners, do you have questions of this witness?

COMMISSIONER BALCH: I always have questions.

CHAIRPERSON CATANACH: Mr. Balch, you may ask your questions.

CROSS-EXAMINATION

BY COMMISSIONER BALCH:

Q. Morning, Mr. Welch.

A. Good morning.

Q. So recycling containment, they're essentially trying to repair the multi-well fluid management pit language from Rule 17, not usable?

A. Well, I think it's a little more extensive than that, but we also contemplated recycling facilities as well in addition to the recycle containment. You need both. That wasn't contemplated in the multi-well fluid management pit.

I think Rule 17 was very instrumental because I think it took us from a mindset where we were looking at produced water as a waste to a resource that we might be able to re-use. So I think Rule 17 got us half of the way there, but I think Rule 34 has taken that thought process further, and we've laid out a road map for operators for -- for recycling produced water so -- to include containment facilities.

Q. Recycling containments can only hold produced water?

A. That's correct.

Q. I think you addressed that makeup water would become produced water as soon as you add it to the --

A. That's correct.

Q. -- to the containment. Is that explicit enough to allow addition of makeup water?

A. I'm --

Q. The language that is in the current document.
A. Well, what we're trying to do there is make full use of the recycle containment to hold water so that we can complete wells. So if we don't have enough produced water, we want to be able to bring in water from other sources.
Q. I understand that.
A. Okay.
Q. But the containment says it can only contain produced water?
A. That's correct.
Q. It's a pretty -- pretty short statement?
A. Yeah.
Q. I'm not sure if it could be interpreted to not allow makeup water.
A. To not allow makeup water? No. I think we can put -- the intent is to put any type of water into the recycle containment.
Q. I understand the intent.
A. All right.
Q. I just want to make sure that it's captured in the language, that you're capable of adding makeup water.
A. Yes.
Q. Similarly for, you know, the evaporation, you

noted that that can be 7 feet a year in New Mexico.
A. Right.
Q. Somebody could say that's disposal.
A. Well, the way we structured the language is evaporation is not disposal or disposition by use. Disposition by use is the water that's dispensed from the facility to -- to complete subsequent wells. So we're not counting evaporation as use in this application.
Q. On Exhibit 15, change in the language on fencing --
A. The netting?
Q. The netting, yes.
A. Yes, sir.
MR. FELDEWERT: Exhibit 14?
Q. (BY COMMISSIONER BALCH) 14. Netting, yes. In Rule 17, we also excluded wildlife. And presumably wildlife could include migratory birds, but migratory birds doesn't necessarily include deer, antelope, other animals that might wander in. Is there a reason that word, "wildlife," was excluded from the netting?
A. No, sir. I don't recall any rationalization for removing "wildlife" from that language.
Q. Would you object to having it back in there?
A. I would not.

Q. In Exhibit 17, you also changed the language for "addition of fluids to the pit." Simplified it, "substantially injection or withdrawal." And I presume that was really just to allow best practices?

A. Right.

Q. Okay. I have no problem with best engineering practices.

So for a fixed-size project, somebody's drilling 30 wells from a single island, they make a containment for recycling for that, you could probably calculate about the size of the containment that you would want?

A. Right.

Q. If you have a third-party vendor that's servicing a large area and may want to have that, that containment operating for the full five years and then maybe replace it with a new one for the next five years after that, what's the largest size containment that you can conceive of being useful for that type of entity?

A. Well, the largest facilities I think we've seen in Texas are 500,000 barrels. So that's -- that's the largest that I've seen. I don't know what the upper limit would be.

Q. Practical limits are going to be cost of construction and the five-year life span?

A. Yeah. And I think one of the -- and we'll hear from our liner expert, too. But as these pits get larger and larger, then the seams become more problematic. As the facilities get larger, then you get the netting and fencing requirements as well, and then you have to use the bonding of the -- of the recycle containment. So, again, we wanted to put that in there to help manage the size of these assets.

Q. "Variances." There are some language changes from Rule 17 as well.

A. Okay.

Q. In particular, the yellow change at the very top. You went from Rule 17, which provides equal and better protection of fresh water, public health and the environment, and simplified that to "afford reasonable protection against contamination of fresh water." And you indicated that was because of the statutory requirement. I may have a question for Mr. Brancard here in a moment about that.

A. Right.

Q. But variances were a new thing introduced in Rule 17.

A. Okay.

Q. So it may be a better precursor if you use the language from Rule 17 directly. The idea of a variance

is you're only going to allow it if you can indeed prove you're going to be at least as good or better --

A. Better, right.

Q. -- than what's stipulated in the requirement.

A. (Indicating.)

Q. And I'm not sure if "afford reasonable protection" captures that intent.

COMMISSIONER BALCH: Do you have any comment on that, Mr. Brancard?

MR. BRANCARD: Commissioner, I think we're driving at different purposes here. You're correct that what's in Rule 17 is sort of saying if you have a protection at X level, if you're going to do a variance, the protection can't be less than what you already have. And instead we're replacing it by just sort of a general standard to apply to any protection. The overall standard, correct, is what is stated in here. But I think the goal of Rule 17 is in evaluating a variance, you don't want what you're changing less than what was already in the rule before, which might be a greater protection, say, than you had otherwise.

COMMISSIONER BALCH: Right.

Q. (BY COMMISSIONER BALCH) So I think that's kind of the spirit of the variance, and I remember debating it over several days. So I think that would be worth

trying to capture more completely in this new proposed rule as well.

A. Okay.

Q. The next thing, of course, is going to be the permit-by-rule question.

A. Yes, sir.

Q. And that's also something that for multi-well fluid management pit you required a permit, and I think that was in part because of extensive siting requirements, construction, inspection, making sure that the Division knew when and where they had to be to check the components of that process and to approve the site in the first place.

A. Right.

Q. So a rule by permit moves the burden -- I'm not sure if that's the correct away to put it, but the extent of having the Division approve it, you're instead asking them to allow you to approve it and then they can check it later on --

A. That's correct.

Q. -- correct?

Do you feel that provides the same level of opportunity for the Division to intervene on site location in particular?

A. I think it does. And I think we're also

contemplating that C-147 is going to have some sort of checks and balances associated with that document that the operator's going to have to sign off that they've complied with. So the burden is on the operator, but it's going to be validated by the Division, and they can do so at any time.

Q. And you indicated that OCD is already working on revisions to its C-147?

A. I think once this rule passes in whatever form, that that process will begin.

Q. All right. Those are my questions. Thank you very much.

A. Certainly. Thank you.

CHAIRPERSON CATANACH: Mr. Dunn?

CROSS-EXAMINATION

BY COMMISSIONER DUNN:

Q. On containments on 34.10C, on the five years --

A. Yes, sir.

Q. -- so they could be extended with no limit except that it would be inspected?

A. Well, they have to be inspected weekly, and then those records have to be made available upon request. And if you're going to appeal for an extension on the life of that asset, then those documents have to be presented or made available.

Q. And then the next speaker will probably talk about what the average life is?
A. Of the liners?
Q. Of the liners.
A. Yes, sir, I believe so.
Q. So 34.14, page 7, G --
A. Yes, sir.
Q. -- I was just wondering why State Trust Lands wouldn't have the same affordability as the tribal agencies?
A. I don't know that I can speak to that, but I think what our intent there is that we adopt the most rigorous standard for the revegetation. So whatever is the most inclusive to support the revegetation, that's the standard we want to adopt.
Q. So if you could plug in "State Trust Lands" in that area?
A. Yes, sir. Yes, sir.
Q. Okay. And then on the fencing, that's -- so less fencing would be the goal of that change?
A. No, I don't think so. I think the fencing standard is to encircle the recycle containment with fencing using the same standard that was adopted previously, with the gating and to keep wildlife out, four strands starting 1 foot above the surface

barbed-wire gating provisions. So the fencing standards are at least of the same standard as proposed before.

Q. And then on 34.21, on Enforcement --

A. Yes, sir.

Q. -- I guess I was wondering. You know, in the event there is a problem, the operator has to remove all fluids. I guess I would have a concern, since there is no limit on the size of the containment facility, that it looks like you would need to have a plan presented at the same time you do it to show that there would be a way to get all the fluids out within a timely manner. So if you have a huge facility, how many trucks would it take or how quickly could you get it out?

A. A truck holds 100 barrels, so however much water you'd have is how many trucks --

Q. Say 500,000 barrels.

A. Yeah. It would take 5,000 trucks.

Q. Is that possible, though?

A. Yes, sir, it is. I mean, when we're --

Q. Within a period of time?

A. When we're completing wells now, I mean, we're doing a 100,000-barrel frack, we're bringing 1,000 truckloads in to complete that.

Q. I'm just wondering whether or not a contingency plan could be --

A. I understand. I think it could. Absolutely. I think that's well thought out.

Q. That's all my questions.

CROSS-EXAMINATION

BY CHAIRPERSON CATANACH:

Q. Mr. Welch, typically when you're bringing fluid into these pits, it's going to be produced water, right?

A. Yes, sir.

Q. What typically are you treating that produced water for?

A. Well, actually less and less. Right now the standard for recycling produced water in southeastern New Mexico, we're providing some level of filtration, so we're taking out the large particles and we're using the water 100 percent for stimulation purposes.

In years past, we were more concerned about hardness or chlorides or iron, organics. We're not so mindful to remove those constituents now to re-use that water. The idea is if it's in the produced water and it can go back into the formation from which it came, that's where we want to put it. Anything we take out at the surface becomes a waste that we have to manage at the surface, so if we can put it back into the earth, then so much the better.

Q. When you're bringing this water in from

multiple sources or multiple formations --

A. Yes.

Q. -- do you take that into account when you're treating the water and whether or not you're going to use that for specific applications?

A. We do. And, in fact, there are compatibility issues as water's produced from different zones. If it has high sulfates or high hardness in different zones, that could promote precipitation. We may not want that. So we're looking at batteries that are coming in, and if it comes from a zone that has water that's not compatible with coming into our facility, we'll want to exclude that water from coming into the recycle facility and recycle containment.

Q. When you track the source water, are you going to track that on a well-by-well basis?

A. We contemplated that. So water's already being delivered using the C-133, registered water haulers. The disposition of that water is recorded through that process, and we would use those same standards for the water that would be received into our facilities.

Q. So I'm not sure -- is that going to be on a well-by-well basis?

A. I don't know if the detail on those documents is well by well. I can't speak to the granularity of

those documents.

Q. And you're going to be required -- or you're going to track volumes from these different sources, right?

A. That's correct.

Q. On page 8, with regards to the testing methods that you guys are proposing, is it possible that those methods may change and evolve over time?

A. I would expect they would, sir.

Q. And so we may need to build in some flexibility? If there is a better test that comes up two months from now, we can substitute that or also authorize that type of test?

A. Yes, sir.

Q. On the -- on the volume of your -- of pits, when you state that 20 percent of that volume has to be used on -- every six-month period; is that correct?

A. That's correct.

Q. Is that the -- is that based on the total capacity of that pit?

A. Yes, sir. So if it --

Q. Not on the actual volume of water that's in the pit at that time?

A. No. We're considering freeboard in that application as well. So if you build a 100,000-barrel

pit with 3 feet of freeboard, you have to use 20,000 barrels through the dispensement of water from that facility to verify the 20 percent usage requirement.

Q. And when that pit is first permitted, that will have the capacity of that pit showing?

A. Yes, sir.

Q. With regards to financial assurance, you're stating that if an operator has, say, for instance, a blanket plugging bond in place for wells that it operates, that this facility will be covered under that blanket bond?

A. I don't know if it's covered under the plugging bond, but under the bond to operate and to complete wells, it's covered under that statewide bond.

Q. I'm not sure that there is another bond besides the plugging bond.

A. Okay. Then yes, sir, you're correct.

Q. And the variances that you guys are proposing, those also can be approved -- I believe you state that in Part F, variances must receive district office approval. But if that goes to hearing, it could also be approved at the Santa Fe level?

A. Yes, sir.

Q. So that may be something we might want to add some language to.

And I don't believe there is a form currently to track the water in and water out.

A. That's correct.

Q. So we're going to have to come up with a form --

A. Yes, sir.

Q. -- and device for that?

A. Yeah. We left that blank in the rule. That form's not been assigned yet.

Q. And also I don't believe that we have a closure report form developed yet?

A. That's correct.

Q. What is the reason to limit the OCD -- you state that we can't -- with regards to the plugging -- or to the financial assurance, that the OCD can't look at that less than five years from the initial acceptance. Do you have any comment on that?

A. Well, the provision for surety is for five years, so that bond can't be -- or the financial assurance cannot be issued for a period of less than five years unless there is a valid reason that's demonstrated to the Division.

Q. Well, that seems to limit the Division to where they can't examine the financial assurance within that five-year period.

A. I don't think there is any intention to limit the evaluation of that. It's simply to provide assurance to the Division that the financial assurance is in place for at least five years.

Q. Okay. On the extension of the five-year operation of a containment, is that for an additional period of one year?

A. It is. It's on an annual basis.

Q. I believe that's all I have.

COMMISSIONER DUNN: I have one more question.

CHAIRPERSON CATANACH: Sure.

RECROSS EXAMINATION

BY COMMISSIONER DUNN:

Q. On 34.11, were there any changes in the siting requirements as far as distances?

A. I don't recall. I'd have to review the rule.

MR. FELDEWERT: Mr. Commissioner, I can say that no, there was not, that the distances were all carried over from Rule 17.

COMMISSIONER DUNN: Okay.

Q. (BY COMMISSIONER DUNN) And there aren't definitions for reasonable recycle and re-use for backflow water?

A. We considered flowback and produced water to be

the same.

Q. Flowback. I'm sorry.

A. Yeah. It's just a matter of definition. Flowback has different definitions depending how you use it. Generally flowback is a subset of produced water, so we called it produced water to include both.

Q. Wouldn't the flowback have the drilling -- the fracking -- I mean, wouldn't it have more in it than just the produced water?

A. So some of the definitions for flowback -- flowback is typically always thought of as the first water that's coming back after the well's completed. Sometimes it's an accounting word. So when the production or when the hydrocarbon is cut over to production, then it is no longer flowback. It becomes produced water. Other definitions are when the water coming back out of the well looks like the connate water, starts to resemble the naturally occurring water, that's when flowback ends and produced water starts. So there are a lot of different interpretations as to when you have flowback.

But exactly to your point, flowback will typically have more of the completion fluids in it. It'll have more of the guar stimulation chemicals that were used to complete the well in it.

Q. But it can go into the facility?
A. Yes, sir, it can.
Q. That's all I have.
CHAIRPERSON CATANACH: Is that all for this witness?
MR. FELDEWERT: Mr. Chair, if I may, I have a couple of follow-up questions, and I want to go to Mr. Balch's question about makeup water.

REDIRECT EXAMINATION

BY MR. FELDEWERT:
Q. Would you turn, Mr. Welch, to 34.10B?
A. Yes, sir.
Q. And that provision, you and I walked through that. It identified some of the fluids associated with produced water. To the extent that there is a question as to whether that language would include makeup water, there would be some addition to that language to include makeup water is different from flowback water --
A. Yes, sir.
Q. -- from produced water?
A. Yes, sir.
Q. And then with respect to Commissioner Dunn's inquiries about the annual extension, which is a good one, if you turn to Section 34.10C --
A. Yes, sir.

Q. -- there are -- within the rule, there are some requirements that the operator must do on an annual basis to get that additional extension of time, correct?
A. That's right.
Q. The operator, 30 days prior, must file a form C-147 with an attached summary showing all monthly inspections?
A. That's correct.
Q. Including monitoring the leak detection system?
A. Yes, sir.
Q. And demonstrate that the integrity has not been compromised?
A. That's correct.
Q. And that the annual extension has to be approved by the Division after that filing?
A. That's correct.
Q. And that's every year?
A. That's every year.
Q. Within a five-year period of time?
A. That's right.
Q. That's all the questions I have.
CHAIRPERSON CATANACH: This witness may be excused.
THE WITNESS: Thank you.
CHAIRPERSON CATANACH: Thank you.

MR. FELDEWERT: Call our next witness.

CHAIRPERSON CATANACH: Yes, sir.

CHARLES W. FIEDLER,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. FELDEWERT:

Q. Would you please state your name, identify by whom you're employed and in what capacity?

A. My name is Charles Fiedler. I am a professional engineer employed by Gordon Environmental in Bernalillo, New Mexico.

Q. And what are your job responsibilities?

A. My job responsibilities include civil and environmental engineering, solid waste disposal permitting, dealing primarily in the environmental sector with oil field wastes, solid wastes, hazardous wastes, dairy wastes, anything that has to do with waste.

Q. And does that involve construction and analysis of geomembrane liner containment projects?

A. Yes, sir, it does.

Q. If I turn to what's been marked as NMOGA Exhibit Number 12 in the notebook in front of you, are these the additional liner options and the

leak-detection system that you intend to address with the Commission here today?

A. That is correct.

Q. And if I turn to what's been marked as NMOGA Exhibit 26, is that a copy of your current resume?

A. Yes, it is.

Q. And does it accurately reflect your educational background and work experience?

A. Yes, it does, particularly relating to liner projects.

Q. And did you prepare this document?

A. Yes, I did.

Q. It indicates that you have a bachelor's degree and a master's degree in civil engineering from Texas A&M?

A. That is correct.

Q. Did you have any particular focus at that time?

A. I did -- at that point in time, there really wasn't what was called an environmental engineering field back in the day, so I was focusing on the environmental components, in particular solid waste management at that time, with the recent introduction of the Resource Conservation and Recovery Act.

Q. Are you a registered professional engineer?

A. Yes, I am, in Texas since 1978 -- excuse me --

'84, and in New Mexico since 2009.

Q. And if I look at the first page of your resume in the upper, left-hand corner, is this the areas of your expertise?

A. That is correct.

Q. And that includes oil-field waste, processing and disposal facilities?

A. That is correct.

Q. As a result of your experience, are you familiar with produced water?

A. Yes, I am.

Q. And have you been involved in the design and development of produced water treatment facilities?

A. Yes, I have, most recently with the permitting of the DNCS Surface Waste Management Facility in Lea County.

Q. Now, on that point, your resume reflects a long list of geomembrane liner projects?

A. That is correct.

Q. How long have you been designing those types of projects for liquid and solid waste containment systems?

A. I've been involved with the design and development of synthetic liner systems, flexible membrane liner systems since they were first introduced in the earlier '90s.

Q. Have you been qualified as an expert witness by any judicial or administrative bodies?
A. Yes, I have, by several listed in my resume.
Q. And did that include your expertise in liner systems?
A. Yes, it did.
Q. If I turn to what's been marked as -- actually, I'm going to have up on the screen for ease of reference NMOGA Exhibit Number 12 as we move through the slides associated with your testimony. As I look up there on the left-hand side, I see a reference to "LLDPE string reinforced" liner.
A. Yes, sir.
Q. Are you familiar with and have you studied those types of liners?
A. Yes, I have.
Q. If I, then, in the notebook, turn to what's been marked as NMOGA Exhibit 27, does that assist in providing a description to the Commission of the type of material that you find for these LLDPE-R liners?
A. Yes, sir. What we're talking about here is a linear low density polyethylene material, the attributes of which include high tensile strength. They are puncture resistant, impact resistant. One of the major things is they're relatively flexible, so they lay down

very easily when you're placing them. They're thinner films with better environmental stress cracking resistance, and they have good chemical resistance to the chemicals found in produced water, including the hydrocarbons at the levels found in produced water.

Q. Now, if I look up on NMOGA Exhibit 12, I see "LLDPE string reinforced." Do you see that?

A. Yes, sir.

Q. When you look on the slide, it says "LLDPE-R." Does that mean the same thing?

A. Yes, sir, it does. The terminology in the industry typically relates to the polypropylene string reinforcement that's used in the LLDPE-R for reinforced liner.

Q. Okay. Without going through the entire reiteration, I'll use LLDPE. Okay?

A. That works for me.

Q. Are there features, facility-located LLDPE liners that -- I'm sorry -- LLDPE liners that make them attractive for shorter-term storage facilities?

A. Yes, there are. Again, they're chemical resistant to the components of produced water that include the hydrocarbons, resistant to environmental exposure, which is exposure to the sun, to the wind, to the rain, resistant to mechanical damages that might be

incorporated with water going into a pond, water coming out of a pond, the weight of the pond itself; again, as a I mentioned previously, the flexibility, the ability to lay relatively flat. One of the things that you're looking for with a liner system is intimate contact with the subgrade and ensuring that you have that.

A key component of the LLDPE is that it has the same thermal fusion welding techniques to seam the panels together that you find with the HDPE, which gives you a very secure liner that is very easy to test the seams. And it meets established industry performance standards for all of these types of compatibility issues.

Q. Mr. Fiedler, if I turn to what's been marked as NMOGA Exhibit 28, does this identify for the Commission a more streamline format of what you just discussed?

A. Yes, it does. It really focuses on the installation attributes, again, the material being relatively dimensionally substantial.

Q. Let me stop you right there. I'm one exhibit behind.

A. Okay.

Q. So the features that you just discussed are reflected on Exhibit 28, right?

A. That's correct, yes, sir.

Q. And if I then turn to Exhibit 29, does this identify or assist in your description of the installation attributes that are associated with these LLDPE liners?

A. Yes, it does. The ability to lay this liner down flat, again, looking for that intimate contact with the subgrade, the LLDPE has excellent capabilities in that.

It's easily repaired. If you ever tear it on something, you can go back in and thermally patch it very effectively.

The key component possibly that the LLDPE has is the ability to get this in relatively large panel sizes. Again, your significant component of exposure in a liner system is typically related to the seams. The biggest chance of having a leak in something is where are the seams and how are the seams put together. If you can reduce the number of seams by using larger panels, you have less opportunity for that to happen, improving the integrity of the whole liner system in total. And finally, the larger panels allow for quicker installation time and less cost in the development of it because you're not doing as many seams out there.

Q. Now, as I look up here at NMOGA Exhibit 12 on the screen, I see, as an alternative to what's currently

in Rule 17, NMOGA is proposing a 45 mil LLDPE reinforced liner as the primary liner.

A. Yes, sir.

Q. And then a secondary liner of a 30 mil LLDPE string reinforced or equivalent. Do you see that?

A. Yes, sir.

Q. My first question to you is: In your opinion, is that appropriate?

A. Yes, I believe it is.

Q. And if I turn, then, to what's been marked as the NMOGA Exhibit Number 30, does this explain the outline and why you believe it's appropriate to have a different mil thickness for primary versus secondary liner?

A. Yes, it does.

I believe when you're looking at the liner itself, you've got a composite liner. Really the secondary liner is for containment and to allow you to do leak detection. It's a less critical environment. It's not exposed to the sunlight. It's not exposed to the wave action, particularly. You have a layer between it and the primary liner that buffets it from a lot of the stresses that you'll see in the primary liner. You have less exposure to chemical attack, again because it's not exposed directly to the produced water. And it

has the same installation techniques, but you have the opportunity -- in this case, with even larger liner sheets because of the 30 mil, they're able to produce it in much larger sheets, so it again reduces seam impact.

Q. Now, do both the 30 mil and the 45 mil have the same materials, liner features and installation attributes?

A. Yes, they do, except for, again, the 30 mil allows you to have larger panel sizes.

Q. Now, looking at Exhibit Number 12, one of the current options under Rule 17 is to utilize a 30 mil flexible PVC?

A. That is correct.

Q. How do these LLDPE liners stack up against a 30 mil flexible PVC?

A. When comparing to the PVC, the LLDPE, again, has superior tensile strength, better resistance to chemicals, especially those found in produced waters, the hydrocarbons in particular, and a superior resistance to environmental exposure. Typically with the PVC, the exposure on them to sunlight can be a challenge over long periods of time.

Q. And then the other current liner that's -- language in Rule 17 that's been carried over is the 60 mil HDPE liners?

A. That is correct.
Q. Are those 60 mil HDPE liners more robust than the LLDPE?
A. Yes, they are. They're essentially the gold standard for long-term, forever containment, in putting something into the ground and why we use them in landfills where you're never going to come back and take that material back out.
Q. So those are -- I think you've answered my question. You see those liners routinely used for permanent storage facilities?
A. Permanent waste disposal facilities, yes.
Q. In your opinion, are 60 mil HDPE liners necessary for the type of shorter-term recycling containments that are at issue before the Commission?
A. In my opinion, I believe the LLDPE will provide for the environmental controls that you're looking for in this application for the limited life that we're talking about.
Q. If I turn to what's been marked as NMOGA Exhibit 32 --
A. Yes, sir.
Q. -- is it your opinion this type of installation -- that the LLDPE-R liners are appropriate or preferable for these shorter-term recycling

containments?

A. Yes, sir. It is my opinion that they are.

Q. And does this exhibit help identify for the Commission the reasons for that opinion?

A. Yes, it does.

Q. Can you walk us through them?

A. Again, the LLDPE, the installation attributes and features that it has, the ability to lay relatively flat. It's a little more flexible material than the 60 mil HDPE, so it's going to get your intimate contact and lay down the liner. You can do larger panels. Typically, with 45 mil LLDPE, you can do about a half acre at any time, or the 60 HDPE is going to go down at about a quarter of an acre in a panel and then have to seam, so you'd definitely almost double the seams on a 60 mil as you are on an HDPE. Fewer seams, again, enhance the containment, decrease the installation cost. And where the HDPE is recognized as the permanent liner solution, the LLDPE, for the time frame that we're talking about with this rule change, will provide for the protection that you're looking for.

Q. Now, you've been here for the testimony that these facilities are contemplated to have an initial five-year life and then the opportunity for annual renewal so long as you continue to show integrity?

A. That is correct.
Q. Are there -- are there attributes of the LLDPE that are similar to HDPE that make them appropriate for the shorter-term containment?
A. Yes.
Q. And what are those? Do they have similar life spans and integrity?
A. They do.
When looking at the liner -- life expectancy of the liner materials -- and I know this was a question that came up earlier -- the HDPE and the LLDPE have been undergoing tests with some of the latest results for over 36 years. So there is quite a bit of data there on their life expectancy. And right now both of those are looking at 36 years-plus in terms of their ability exposed to the environment and withstanding that.
MR. FELDEWERT: And on that point, I need to do a housekeeping matter, Mr. Chairman, if I may approach. In going through the preparation for this hearing, we noted that Exhibit 33 that we provided to the Commission in the notebooks had an error in it. The numbers were flipped. And I have now marked as NMOGA Exhibit Number 33A an amendment or replacement exhibit, if I may approach at this time and hand it out. You can

then stick in your -- put it in your notebook.

CHAIRPERSON CATANACH: So this corrects Exhibit 33, Mr. Feldewert?

MR. FELDEWERT: Yes, sir. It's marked as Exhibit 33A for amendment.

(NMOGA Exhibit Number 33A replaces NMOGA Exhibit Number 33.)

Q. (BY MR. FELDEWERT) Now, along that issue of life span, Mr. Fiedler, if I turn to what's now been marked as NMOGA Exhibit 33A --

A. Yes, sir.

Q. -- does this accurately reflect the life expectancy of these three different types of liner systems based on your analysis and study?

A. Yes, sir, it does.

Q. Can you walk us through what these symbols mean and what this shows?

A. What this is saying is that the HDPE right now are based on 2011, which is the latest update to the Geomembrane Research Institute's White Paper on lifetime predictions for membranes, that the HDPE has in excess of a 36-year life in the environments that they were exposing it to.

When they were looking at the LLDPE, they took a little bit different look at it because they were

talking about half-lives and defining that at what point they anticipated it having a 50 percent reduction in strength. So it has a 36-year half-life, which is essentially equivalent to the HDPE during that time frame. And what that's essentially saying is that we have more than enough life in the LLDPE for the five to ten years that we're looking at for the proposed installation.

Q. Looking up here at NMOGA Exhibit Number 12, has the Division, by way of variances, recently approved the use of a 45 mil LLDPE reinforced liner as a primary liner and a 30 mil LLDPE reenforced liner as a secondary liner for a multi-well fluid management pit under Rule 17?

A. Yes, they have.

Q. Does the fact that the recycling containments that are proposed under this rule have a plus or minus five-year life make any difference with respect to the reliability of these LLDPE liners for these types of facilities?

A. In my opinion, it does not.

Q. And in your opinion, will these LLDPE liners function for many years beyond the life expectancy of any proposed recycling containment?

A. Based on the data that's currently available,

yes, I believe they will.

Q. And in your opinion, do the LLDPE geomembrane liners provide the insulation attributes and features that are attractive for these shorter-term facilities?

A. Yes, I [sic] do.

Q. And in your opinion, will these LLDPE liners provide a reasonable level of protection of fresh water in the environment for the time frame that's involved in these recycling containments?

A. It's my opinion that they will.

Q. The next topic that you're going to address with us today is on the bottom, left-hand corner of NMOGA Exhibit Number 12, and it deals with the leak-detection system?

A. Yes, sir.

Q. Have you been involved in the use of the alternative option here that's been proposed, the 200 mil geonet?

A. Yes, sir, I have.

Q. Would you explain to the Commissioner what a 200 mil geonet leak-detection system does?

A. The leak-detection system that we're proposing here by using geonet would place a constructed 2-foot layer of permeable soil with an HDPE mesh of material that has transmissivity that will typically be better

than the soil that it's replacing.

Q. Has the 200 mil geonet become kind of the standard of care for leak-detection systems?

A. Routinely, yes, sir.

Q. Is it easier to install?

A. Yes, it is.

Q. If I turn to what's been marked as NMOGA Exhibit 34, does this assist you in explaining to the Commission some of the advantages of this 200 mil geonet over 2 feet of compacted soil?

A. Yes, it does, sir.

Q. Would you walk us through those, please?

A. Yes. First and foremost, it allows you to eliminate the requirement of heavy equipment on a liner system. This is something that if you can avoid in any liner development project you want to do. It's a very tricky process. It's one that takes a good operator on a piece of equipment to not get out there and make rapid turns, do things with their piece of equipment that will have a tendency to damage the liner system.

Instead, with the 200 mil geonet, you're pulling the liner out typically by hand, laying it on the ground, wiring it together and laying another liner over the top of it. You don't have heavy equipment on it; you have people walking on it.

The hydraulic conductivity with this in comparison to the soil -- and it's a little challenge to talk through, but the transmissivity of the geonet is orders of magnitude better than what you will typically find even with a well-graded sand, which is what you would ideally be looking for if you were laying down 2-foot layer of transmissive zone in there in the leak-detection system.

Minimal settling. With soil, you're going to get some settling. You load the pit up with water. You're going to have compression of the soil. You won't really have that with the geonet. Again, the way the geonet is constructed is designed to have liners laid on both sides of it and still provide a very high transmissivity of liquids through that geonet. The key with it really is the significant increase in fluid transmissivity. So if you have a leak, you're going to see it in your leak-detection system.

The geonet, really, I can't say enough about how much it will improve the reliability of the system that you're looking at, especially where you're dealing with, typically, the native soils that we have in New Mexico, blow sands, which are not necessarily the best drainage media to put down in a system like this.

Q. Finally, Mr. Fiedler, if I take a look at NMOGA

Exhibit Number 12 and I look at the proposed additional liner options that NMOGA has put forth and I look at the additional leak-detection system that NMOGA has put forth in its rule, in your opinion, will this system provide a reasonable level of protection of fresh water and the environment?

A. Yes, it will.

Q. Were NMOGA Exhibits 25 through 34 prepared by you or compiled under your direction and supervision?

A. Yes, they were.

MR. FELDEWERT: Mr. Chair, I would move the admission of NMOGA Exhibits 25 to 34.

CHAIRPERSON CATANACH: Exhibits 25 to 34 will be admitted.

(NMOGA Exhibit Numbers 25 through 34 were offered and admitted into evidence.)

MR. FELDEWERT: That concludes my examination of this witness.

CHAIRPERSON CATANACH: Mr. Wade, do you have any questions of this witness?

MR. WADE: I do not. Thank you.

CHAIRPERSON CATANACH: Ms. Foster, do you have any questions?

MS. FOSTER: I do not. Thank you.

CHAIRPERSON CATANACH: Commissioner Balch?

CROSS-EXAMINATION

BY COMMISSIONER BALCH:

Q. Just a couple of questions. You cited the GRI White Paper --

A. Yes, sir.

Q. -- liner testing in exposed and unexposed environments. What were their exposed environment tests; do you recall?

A. I don't remember off the top of my head.

Q. I'm just -- I'm considering the large amounts of UV that we get in New Mexico and the degradation of any sort of plastic thing that you leave laying on the surface in response to that. Do you feel comfortable that the five- to ten-year period that you might have one of these out there, that half-life, would allow for the integrity of the liner even with our environment, which is probably harsher than what was tested by GRI?

A. Appreciate that, but yes, I believe it will. With the -- with the 36-year half-life or half of the strength of the liner still being available at 36 years, we're talking about ten years as a maximum potential. Yes.

Q. And the 30 mil LLDPE, is that similar puncture resistance to HDPE, 60 mil?

A. Yes. Well, it's comparable in terms of the

location where it is in the system. So you're laying it down on a prepared subgrade, so you have to ensure that you have a prepared subgrade that's free of rocks and puncture-producing items in the subgrade.

Q. Rocks, roots?

A. Rocks, roots, all of the things that go with the liner systems, yes.

Q. NMOGA is requesting a reduction in the secondary liner requirements from 60 mil HDPE to 30 mil LLDPE. Do you consider those to be equivalent or --

A. I consider the 30 mil LLDPE to be equivalent to the 30 mil PVC.

Q. Okay. What about the 60 mil HDPE?

A. Again, the 60 mil HDPE represents the gold standard that you put in from the installed facilities.

Q. Like a landfill?

A. Like a landfill.

Q. So for the -- let me rephrase that a little bit. For the purposes of containing brackish water for periods of up to ten years, does the 30 mil provide equivalent or better protection?

A. I think it provides equivalent protection.

Q. Equivalent protection?

A. Yes, sir.

Q. Thank you.

CHAIRPERSON CATANACH: Mr. Dunn?

CROSS-EXAMINATION

BY COMMISSIONER DUNN:

Q. So how wide are the seams on the LLDPE?

A. Really in any type of -- in fusion welding, typically what's taking place is that you have a 6-inch wide area that you're working in and you put a double seam down so that you have a channel down the middle that you can test. So you've got a double seam in all of your lining situations.

Q. So is the test the same like a poly type weld or not?

A. You're talking about like a fast line -- an HDPE fast line?

Q. (Indicating.)

A. Yes. It's very similar.

Q. So it's a machine -- same way?

A. It's a track welder, so you'll have two heated tracks that are heating the material and then fusing them together as it goes along.

Q. And so what's the width of a panel or how big -- what are the dimensions of a panel?

A. I've seen some evidence of 45 mil LLDPE up to 20,000 square feet, the 30 mil LLDPE up to 30,000 square feet.

Q. If you took the cost of the three different systems, are they equivalent or more expensive? How are they ranked?

A. I would anticipate that you would have less cost of the installation of the LLDPE with the larger sheets, and given just less material in them would also presume that the cost of installation of the material or the cost of the material would be less as well. I didn't specifically look at cost variables in all of this.

Q. So then they would probably be cheaper than the HDPE?

A. They would be less expensive, yes, sir.

Q. And then the geonet, is that welded together, or how is that put together?

A. The production process on it, they essentially braid this thing in a machine. And so they're laying it out so it has a thickness that's maintained under all compression scenarios that you might experience in this application.

Q. And the technique for checking it is all visual, or is there electronic?

A. On the geonet?

Q. Yeah, to see whether or not you have a leak. Because if there was a leak, would it flow through the

geonet?

A. If there was a leak in the primary liner, it would drop into the secondary containment zone and flow through the geonet to a sump where you would be able to monitor.

Q. Would it have an electronic monitor on that?

A. It's possible that it could. Most of these are typically monitored by an individual going out and dropping a sounding device down to see if there is any liquid in the sump.

Q. That's all my questions.

CROSS-EXAMINATION

BY CHAIRPERSON CATANACH:

Q. Is there a significant cost difference between the geonet type of leak detection and the soil type?

A. We're finding in recent installations that it's cheaper to put the geonet down just because you don't have all of the manpower and equipment moving dirt.

Q. So it's probably more -- the material is more expensive, but the labor --

A. The material is expensive, but the equipment and labor necessary offsets the cost of the material.

Q. And I believe you said the 30 mil PVC is probably less expensive than the LLDPE, right?

A. Again, I didn't look at the cost of comparison

on those materials, so I don't really have a good reference for you there.

Q. What's your experience been with companies building these pits? Have they generally been willing to spend more money to use these higher-grade materials?

A. In terms of --

Q. The LLDPE and geonet.

A. We really are seeing this as a new application of this material. Again, because of the life-expectancy issues, that we're not looking at it as being a permanent solution, it's a shorter-term solution, it's well within the capabilities of the material.

Q. But in your opinion, any of these type of liners that you're proposing would be adequate for these applications?

A. For this application, yes, sir.

Q. I have nothing further of this witness.

MR. FELDEWERT: I have no further questions.

MR. BRANCARD: I don't know if you want to have an opportunity for anybody, a member of the public who needs to leave this afternoon, if they need to speak right now?

MR. HALLDORSON: I have some very brief comments, especially before lunch.

CHAIRPERSON CATANACH: Please identify yourself.

MR. HALLDORSON: Yeah. My name is Brent Halldorson. I'm the chairman of the Texas Water Recycling Association.

And I really want to just state for the record that we feel, after reviewing the rule, that the draft rule looks like an excellent rule. In fact, I've always been bragging to people that Texas has the best recycling rules. Now I may have to eat crow and tell people that I think the New Mexico rules are better.

You've made several improvements, the one being the recording of the flows. We don't do that in Texas, and I think we may adopt -- after we watch how you-all do that, we may adopt that in Texas. So I look forward to learning from how it goes in New Mexico.

I also wanted to let you know that we've had the permit by rule for recycling for about a year and a half now in Texas. It's gone incredibly well. We've also allowed the commingling of fluids. We haven't had any issues, and it's really incentivized recycling, especially in areas like the Permian Basin that are really dry.

So I really look forward to seeing how these rules play out in New Mexico, and I anticipate in

the future that we'll be taking some of your knowledge and hopefully improving our own rules in Texas.

If you-all have any questions about what we're doing in the state of Texas.

COMMISSIONER BALCH: No questions.

MR. HALLDORSON: I appreciate the opportunity. Thank you.

CHAIRPERSON CATANACH: Thank you very much.

Does anyone else have comments at this time?

MR. DRONKERS: Just a general comment.

MR. BRANCARD: Come forward.

CHAIRPERSON CATANACH: Will you please identify yourself?

MR. DRONKERS: Sure. Pete Dronkers, Oil and Gas Accountability Project.

There's been very little media attention on this rule so far, and I think the public would be very interested in knowing what the freshwater savings are over time. And I would just stress that -- this is not a technical comment, obviously, but I would just stress that anything that can be done to show the public over time, like maybe a year out from adoption of the rule changes, the volumes in and the volumes out, a report, anything that can actually lend credibility to the rule

achieving the freshwater savings that it's intending to do I think would go a long way in helping the public understand what's going on. This is a very complicated process.

We've worked with communities that are affected by these sorts of issues, whether it be water contamination, air pollution freshwater savings. And a lot of people can't wrap their head around the complexity of a rule like this, and I just urge anything OCD, NMOGA, independent producers can do to make sure that the benefits of the rule can be understood and interpreted by the public without having a formal background in the oil and gas issues.

I think everybody can agree that if those savings can be achieved, this is a good thing. But on the other hand, I think there may be some people that are skeptical, that this could be an attempt to reduce the costs associated with disposal of produced water.

So it was mentioned earlier that a lot of water will evaporate from these ponds. Seven feet a year of annual evaporation is very, very significant. That's water that doesn't have to be sent to injection wells, and it's saving industry money. Another concern that we have is the disposition by use in terms of dust suppression and the other discharges. That would be a

quick and easy way to get rid of produced water without having to send it to injection wells.

So we're aware of those possible concerns, and we just want to make sure that savings that are achieved are well understood by the public, it's transparent, that the information is posted on a Web site. Hopefully there can be a report in the future. But I would just say that the community groups that we work with are keen on knowing that there are freshwater savings being achieved. They just need to know how it's being done, and it needs to be laid out in a way that can be understood plainly and simply by the general public.

So that's just my general comment. Thank you.

CHAIRPERSON CATANACH: Thank you, Mr. Dronkers.

Any other comments?

MR. NEWELL: I have brief ones. I can get these out of the way real quick, if that's acceptable.

CHAIRPERSON CATANACH: That would be fine, sir.

MR. NEWELL: My name is Michael Newell. I'm an attorney in Lovington, New Mexico, and our firm represents various lands owners and people like that who

may be impacted by these rules.

First of all, I started practicing in 1987, and one of the things I've witnessed is the Oil Conservation Division and the Oil Conservation Commission have implemented rules and done things which have markedly improved the environment down there, particularly in the handling of wastes in terms of, you know, the oil field and what they produce. And what I've witnessed is it's a much better environment for those people who represent -- who own land that's impacted by oil and gas operations.

And what I would hate to see this turn into is some type of rule that's misused so that some of the prior production practices of evaporative pits and those type of things are allowed back into use, you know, where now they have largely gone out of use.

There are just a couple only things. I think the thing that I'm concerned about is the disposition by use, and I notice in Rule 34.8A, you know, under A1, it's pretty specific that you don't have to get permission to use the water for certain things, but in A2, you can apply to the appropriate Division district for other uses, and these might include dust suppression or whatever. What I would propose or suggest is that there is a notice provision there that

would go out to whoever the impacted landowner is, that it would allow that person to come in and maybe voice some concerns about what the proposed use might be.

And then the other two areas are just general areas. I'm not sure the $25,000 is going to be sufficient to clean up one of these facilities if one has to be remediated or ultimately cleaned up by the Division, and I notice that funds that are used for cleanups can otherwise be diverted to this. So I would say maybe that issue is one where there is concern.

And then one that we frequently see misused -- and when you talk about, you know, on the -- I think it's 34.14, or the table which is located on page 8, I think making clear that it's the depth from the bottom, which is stated "from the bottom of the containment to where the groundwater exists." Because a lot of times what you will see when they're measuring, whether it's contamination or whatever it is, they'll measure from the surface and not from the bottom of where the contamination was or where, in this case, the bottom of the containment location to be down to groundwater. And that's very important because a lot of places in Lea County, the groundwater is just below 60 feet. It's 60 feet, 70 feet, right in there. And so a lot of times you'll see operators play games with that

number so that the site criteria is different in, like, the contamination or utilization may be different. You know, but if they're going down -- I think clearly, you know, there is not much difference when you're talking about caliche soils when you have 50 feet or 60 feet. That migration is still going to get down to the groundwater.

And so those are my areas of concern that I would like to bring to the Commission's attention, and I appreciate the opportunity to voice this.

CHAIRPERSON CATANACH: Thank you, Mr. Newell.

Any other public comments at this time?

If I might just real quick ask one more question of Mr. Welch?

MR. WELCH: Yes, sir.

JAMES P. WELCH,

after having been previously sworn under oath, was recalled, questioned and testified as follows:

RECROSS EXAMINATION

BY CHAIRPERSON CATANACH:

Q. With regards to the containment pits, is the water coming in going to be measured, or how is that going to be handled? The water in and out, how is that going to be handled?

A. It's going to be measured.
Q. It is going to be measured --
A. Yes.
Q. -- with some sort of an integrator [sic] paddle device that will measure the flow through the line?
Because there is no provision in the rule to provide for how that is to be addressed.
A. No, sir, only that the volume is accounted for. So it would come in by trucks, and it would be monitored or measured, or it would come in through flow lines and monitored and measured.
Q. And then the outgoing is to also be measured in some form?
A. Yes, sir.
MR. FELDEWERT: Mr. Chair, if I may, I'm looking at -- I think what you're concerned with is on page 3, 34.9E.
CHAIRPERSON CATANACH: Yes.
MR. FELDEWERT: Am I correct there?
CHAIRPERSON CATANACH: That's correct.
MR. FELDEWERT: As you can see, we contemplate there will be a form that will record and report the volumes.
CHAIRPERSON CATANACH: Okay. Thank you, Mr. Feldewert.

Anything else we should do before we break?

MR. BRANCARD: Pick a time for everybody to come back.

CHAIRPERSON CATANACH: Okay. One hour? Is that sufficient, Commissioners?

COMMISSIONER BALCH: Usually we allow a little more to have lunch in Santa Fe, an hour and 15.

CHAIRPERSON CATANACH: Hour and 15 minutes. So let's call it at about 1:15 or so.

(Break taken, 12:04 p.m. to 1:22 p.m.)

CHAIRPERSON CATANACH: Okay. At this time we'll call the hearing back to order, and I believe we'll turn it back over to Mr. Feldewert.

MR. FELDEWERT: Yes. Mr. Chair, we'll call our next witness.

CLAY ROBINSON, Ph.D.,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. FELDEWERT:

Q. Would you please state your full name for the Commission and identify what your occupation is?

A. Clay Robinson. I am a soil scientist. I work for the Soil Science Society of America and the American Society of Agronomy as their education manager.

Q. And I put up on the screen what's been marked as NMOGA Exhibit 19. Is that what you intend -- the changes that you reflected on here, is that what you intend to address with the Commission here today?

A. It is.

Q. If I turn to what's been marked as Exhibit Number 36, does this contain your current resume?

A. Yes, it does.

Q. And did you prepare this document?

A. I did.

Q. And does it accurately reflect your educational background and work history?

A. It does.

Q. I notice that you have a Ph.D. in soil science from Iowa State University.

A. Yes.

Q. So I should be calling you "doctor," I guess, right?

A. That's all right.

Q. Doctor, would you please explain to the Commission what soil science is?

A. Soil science is a diverse and integrated discipline. It's not a pure science. It's an applied science. So we use chemistry, biology, physics, ecology. All these others are combined, and we use that

as a part of being a soil scientist, look at how plants grow and what happens to things when they get added to soil, what happens to them as they move in the soil.

Q. How long have you been acting as a soil scientist?

A. Since 1992. So that makes it, what, 23 years.

Q. If I look at Exhibit 36, at your resume, it indicates that you are a certified professional soil scientist.

A. That's correct.

Q. What's the -- what's the certification process?

A. The certification provides a minimum competency level for soil scientists. It requires coursework in six supporting disciplines from soil science, so that includes soil mineralogy and chemistry, soil morphology genesis and classification, soil biology, soil fertility and nutrient management, soil physics and then soil land management. And then it also has other core supporting information from things like math and chemistry and other sciences, some engineering, statistics, things of that nature. And so that's the knowledge component.

And then there is an exam that's required, a Fundamentals of Soil Science Exam that examines the minimum competency for those areas. There is an experience requirement, five years for a bachelor's or

three years of experience with a master's or Ph.D. At the end of that time, you take a professional practice exam that's scenario-based. Rather than just do you know these facts, what do you do with these facts? So that's the basis of a certified professional soil science scientist.

Q. And you've been certified since 1999?

A. That's correct.

Q. Do you now sit on the council that oversees those certifications?

A. Yes. Since -- for the last five -- this is my sixth year. I serve on the Council of Soil Science Examiners, and so that is the board at our national level that puts those exams together based on the performance objectives.

Q. This also indicates that you're a licensed professional geoscientist.

A. That's correct.

Q. Licensed in Texas?

A. That's correct.

Q. Is there a similar certification offered in New Mexico?

A. At this point, there is not.

Q. Is this similar to a being a professional engineer?

A. Yes. It has a similar background for that. It is a state -- established by a state licensure.

Q. Dr. Robinson, have you been recognized as an expert by any judicial or administrative courts?

A. I have been. I was recognized as an expert witness in soil science and agronomy for a judicial review panel, arbitration panel, in Potter County, in Texas. I was recognized as an expert in soil science in a panel for a regulatory board in Nevada, and then I appeared for this group in 2013 for the -- under the Pit Rule hearings as an expert in soil science.

Q. And as a result of your education and experience, are you familiar with the testing methods that are utilized for determining both organic and inorganic compounds in soils?

A. I am.

Q. And if I go back to what's been marked as Exhibit 19, which is up on the screen, Dr. Robinson, did you previously testify before this Commission about certain aspects of Table 1?

A. I talked -- I gave testimony regarding chloride and the testing methods to use for chlorides.

Q. Now, is that an inorganic compound?

A. Chloride is an inorganic compound. That's correct.

Q. What's the difference between organic and inorganic, for the record?

A. Inorganic compounds are things like minerals, salts, and chloride is a component of many salts. Metals fall into that category.

Organic materials have a carbon chain backbone. Organic materials come from either currently living or something that lived in the past and is some decomposition product of plant or animal tissues or residues or wastes.

Q. So if we're dealing with petroleum hydrocarbon products to constituents, is that organic or inorganic?

A. Those are organic compounds. And you might wonder how that relates back to my discussions about living organisms. Well, they were living organisms several -- tens, twenty, hundred thousands of years ago. Plants that then are in some degree of anaerobic decomposition, meaning there is not enough oxygen for complete oxidation to carbon dioxide and water. So there are some remaining long chains of carbon, which is what makes them organic.

Q. As a result of your education and experience, are you familiar with the EPA testing that is utilized to determine the total hydrocarbons in soils?

A. I am.

Q. And are you likewise, then, familiar with the EPA testing methods that are utilized for determining the presence of any benzenes in any soils?
A. I am.
Q. And for purposes of this hearing, did you become familiar with the recycling containment that is being proposed by the New Mexico Oil and Gas Association?
A. I did.
Q. And are you familiar with how Table 1 here, shown on Exhibit 19, is utilized in the proposed rule?
A. I am.
Q. Based on your experience and knowledge as an expert, are these changes that are reflected on Exhibit 19 appropriate?
A. They are.
Q. And I want to talk first about the proposed change to measuring TPH. If I turn to what's been marked as NMOGA Exhibit Number 37, does this assist in explaining to the Commission why you believe that Method 8015M should be substituted for Method 418.1 when you are examining the presence of total petroleum hydrocarbon in soils?
A. This describes Method 418.1 as a beginning point in that -- making that distinction of why.

Q. Why don't you walk us through this exhibit, please?

A. Okay. This method has been recommended and as shown here has been used in New Mexico as a method to identify the total petroleum hydrocarbons in water and liquid wastes. It has also been accepted for solids such as solids and pit waste.

The challenges with this method are severalfold. We'll start with the technical side and the analysis itself. It requires Freon 113 as an extractant. And as you probably know, Freon is not -- not good for the environment, and so its use is being limited. Fewer plants are producing it. The cost is going up. Many states are actively discouraging the use of these -- this method because of its use of Freon. So that make this a method that is really no longer encouraged. EPA is not encouraging this method any longer. It's still there on the books, but they're not recommending it. So that's on the analysis part.

Then the results part: This TPH, by the Method 418 -- TPH stands for total petroleum hydrocarbons, but -- and this method identifies a number. This is the value. It doesn't specify what's within that. And here's the problem with 418.1. It really doesn't identify the total petroleum hydrocarbons

as much as it identifies the total hydrocarbons. So there are hydrocarbons that are not of petroleum origin that this can pick up and detect. So biogenics, so something from plants, animals, tissues, wastes, organic matter, humates and human substances in the soil. It can also even pick up small particulate fine matter such as clays in the detection process.

So the number that you get from a TPH with 418.1 is not total petroleum hydrocarbons, but it's the total hydrocarbons plus maybe some fine particulates. So it tends to overestimate the actual amount of hydrocarbons in the soil of petroleum origin.

Q. We had that discussion about the difference between organic and inorganic compounds. If I'm understanding you, this 418.1 way is designed to pick up other organic compounds such as decayed grasses and sticks and leaves and things of that nature?

A. That's correct.

Q. And, again, you only get one reading. It doesn't break any of the constituents out as to what is comprised of those organic compounds?

A. That's correct.

Q. Now, in contrast, what NMOGA has proposed is the use of Method 8015M. If I turn to NMOGA Exhibit Number 38, does that assist in describing to the

Commission this particular EPA method and why it's more appropriate to determining total petroleum hydrocarbons?

A. It does.

Q. Would you please walk us through this exhibit?

A. So this is the method that is currently being recommended to replace 418.1. It's been a -- it is for a -- a similar version that's has been adopted in many states, that recommendation. It is -- takes the Method 8015, which comes under a suite of methods EPA has developed, SW846. You can see that on Table 1. That's the umbrella under which all these other soil and water testing methods come.

These methods are recommended by the EPA not as -- not as absolutes, you have to do this to fulfill these requirements, but as -- this gives states and labs a guideline upon which to build their SOPs, their standard operating procedures, and their regulatory requirements for things in their own states. And so this 8015 is a modification of this 8015B, and the modification allows the determination of the gas, diesel and motor oil range organics.

Q. So let me ask you something here. I don't want to get lost in the designations here. Up on the screen, we have 8015M. Okay? I think you testified that stands for modified?

A. Correct.

Q. And if I look at your slide Exhibit 38, it talks about the modification of Method 8015B, as in boy. Do you see that?

A. Correct.

Q. What is being modified?

A. These are, again, a suite of methods. Method 8015, the first version, came out in the early '90s, I believe, and then that was modified -- in '96 is when our 8015B came about with that modification.

These modifications may have something to do with the instrumentation. As the instrumentation improves, we may change the method so that it reflects our ability to detect smaller quantities. Sometimes the method addresses not how you detect something but the process that you use to develop or isolate the material in an extract that you're going to do the analysis on. So these modifications are related to the processes or the analysis components of a method.

Q. And then what does the -- what we say 8015M, then, what does it do? What does it modify with respect to the 8015 method?

A. In 8015M, essentially what has been modified from the standard method is the type of standard that you would use for a calibration sample. For the 8015

method in general, or 8015B, the analysis standard is typically a gasoline or a diesel.

For 8015M, with the modification, we pick out certain ranges of the hydrocarbons, certain numbers of carbons associated with that, for instance, 6, 12, 28 and 35, and then there is another method that would even break those out into smaller categories. And so the modification allows a -- particularly with the M, it allows a broader range going beyond the diesel range organics to allow the determination of the motor oil range organics.

Q. Okay. So if I look at NMOGA Exhibit 38 and I go to the last bullet point, it discusses the 8015M method, and it gives you various carbon ranges?

A. Correct.

Q. And I see on there a carbon range for GRO?

A. (Indicating.)

Q. And I see a carbon range for DRO, and I see a carbon range for MRO?

A. Correct.

Q. Is that why under TPH, under the Constituent column, we inserted GRO plus DRO plus MRO?

A. Yes. These are the hydrocarbons of petroleum origin. So we want to specify that the total petroleum hydrocarbons in this category are not those that Method

418.1 would identify, which also include hydrocarbons of other origins, but are specifically hydrocarbons in the gasoline, diesel and motor oil range.

Q. So, Doctor, in your opinion, if the Commission adopts a table like the one we see here that has GRO plus DRO plus MRO under TPH and identifies, in the Method column, 8015M, will laboratories know what to examine with this description?

A. Yes, they will.

This 8015M was discussed in a total petroleum hydrocarbon criteria working group that established some of these standards as they evaluated these different methods and were looking for ways to make sure they could identify from gasoline to diesel, oil to motor oil -- diesel to motor oil range organics.

Q. Now, just as cleanup here, if I go to what's been marked as NMOGA Exhibit 39, is that simply a paper from the EPA publication describing in more technical detail the type of method that is involved with 8015?

A. Yes. This is an excerpt of that method.

Q. Just so there is no confusion, up at the top, you see that method, 8015B, B as in boy?

A. Uh-huh.

Q. That just means that this is the second revision of Method 8015?

A. Yes. And you can see down in the bottom right, it says this is Revision 2 from December 1996.

Q. Now, as one final point on this particular subject, were you involved in a study that was done to determine whether Method 8015M was more appropriate than 418.1 in determining the presence of petroleum-based products?

A. I was.

Q. If I turn to what's been marked as NMOGA Exhibit 40, does this provide a synopsis of the results -- or what you did as a result of your study?

A. It does.

Q. Would you please walk us through this?

A. So in 2013, it's cooperating with one of the producers, and we -- through his activities, we collected composite samples from -- these were from pits, but they had these materials, petroleum hydrocarbons in them. There were three pits of different configurations which when all that came together, we were able to collect five composite samples from Eddy and Lea Counties.

These samples were then either analyzed as collected from the -- or from the pits or mixed with soil materials. And then once those samples were prepared, they were evaluated by a commercial lab for

using both the 418.1 method and the 8015M method. And then we compared those results, and what we found is that the Method 418.1 consistently overestimated our petroleum hydrocarbons, GRO plus DRO plus MRO, compared to method 8015M.

Q. If I turn to what's been marked as NMOGA Exhibit 41, is this a bar chart identifying the extent of the analysis under 418 versus 8015M?

A. Yes. This is a table that compares the results of those -- from those methods.

Q. Would you orient us, please, and walk us through this table?

A. So the way these pits were constructed and the materials used in them, in a pit that was using fresh water in the drilling -- or in the well -- using fresh water in the drilling process, a sample was collected of that fresh water from the pit. You can see that the TPH 418.1 method identified that there were 310 milligrams per kilogram, or parts per million, if you will, of total petroleum hydrocarbons. Whereas, the 8015M detected no petroleum hydrocarbons, GRO, DRO or MRO.

As you work your way down, the next one had a mixture of cuttings and mud, and you can see that the TPH in that one was -- by 418.1 was 830 and barely had anything in the 8015M or a little bit, the low end of

the detection range for the DRO.

The next one used some fresh water, as well as cut brine in the drilling process. This one had fair amounts of the gasoline and diesel range organics and some of the motor oil range organics. But if you compare the fresh cut brine, the 418.1 method still had about twice as much detection, so showing that there is about twice as much of those organics present as the gasoline, diesel range and motor oil range.

Then with just the brine cuttings, again you can see -- if you make those comparisons, the 418.1 is always detecting more hydrocarbons present than the petroleum origin hydrocarbons detected by the 8015M method.

Q. Okay. So I think you answered my next question and that is why would this difference in results occur? Is it because 418.1 deals with all hydrocarbons and 8015M focuses on petroleum hydrocarbons?

A. Yes. That would be a lot of the -- a lot of the differences. So again, any kind of plant material, any kind of decomposed plant materials, like soil organic matters, humates -- substances, certain residues that might be there, animal products that would show up.

The other thing, again, that would influence these results is an inorganic material, and

those are clay particles, fine clay particles. And as you probably know, fine clay particles are often used in drilling wells. The drilling mud is a Wyoming bentonite clay. And so those are super-fine sized particles, and they can affect the reading from the TPH 418.1 method.

Q. Now, if I then go to what's been marked as NMOGA Exhibit 42, is this really another way of showing the results in terms of the graph?

A. It is.

Q. And I don't need to belabor this too much, but just orient us first with this graph and then tell us what it shows.

A. We've got our 8015M total hydrocarbons, GRO plus DRO plus MRO, across the bottom, so total petroleum hydrocarbons.

And then we've got the Method 418.1 value across -- on the vertical axis. I call your attention to that diagonal line. That's the one-to-one. So for instance, if you started at 3,000 on the left side, you come across to where it intersects the diagonal line. You drop it to the bottom. You're at 3,000.

So if the 418.1 method detected the same amount of hydrocarbons -- petroleum hydrocarbons as the 8015 method, you would expect all those little reddish-colored triangles to fall along that line. In

fact, almost none of them do, and most of them fall either a little bit above or substantially above the one-to-one line.

So, again, this is just giving you an idea of how much the 418.1 method overestimates the hydrocarbons because it's detecting more than just hydrocarbons of petroleum origin.

Q. So, Dr. Robinson, if I go back and look at what's been marked as NMOGA Exhibit 19 up on the screen, in your opinion, is EPA method 8015, as referenced in Table 1, the appropriate testing method if we're trying to measure total petroleum hydrocarbons?

A. It is.

Q. And in your opinion, does the language under TPH, in the Constituent column, the language of GRO plus DRO plus MRO, provide a sufficient description of the carbon range you tested under Method 8015 if you're looking for total -- the total petroleum hydrocarbons?

A. It does.

Q. Okay. Then the other change that's being proposed relates to the testing method for benzene. In your opinion, why is it appropriate here to change the testing method for benzene, in that the 8015M just talks about the 8260B?

A. 8260B uses a different extractant than the

8015. 8015 uses pentane. That's a five-chain aliphatic carbon -- organic carbon compound. The extractant for benzene is methanol. That's a one-carbon alcohol.

The reason that 8260B is better for benzene is related to the difference in the solubility of benzene in methanol versus benzene with a pentane extractant. The pentane extractant will pull out some of the gasoline and other short-chain carbons in the analysis as opposed to -- the benzene and the methanol only pulls -- doesn't pull those GROs, gasoline-range organics, out. So what you have, in essence, is a much more precise number of benzene with less likelihood of pulling other short-chain carbon materials out with it. So it's a better analysis of benzene.

The other component of that is if you look at BTEX right above that, Method 8260B is already -- is already recommended or required for the determination of BTEX. BTEX is benzene, toluene, ethylbenzene and xylene. And so benzene is determined as a component of that compound already.

Q. So, Doctor, let me ask you something on that point. Would there be any reason to have a testing method of 8260B for BTEX but not have that same testing method for benzene?

A. No, there is not.

And the reason those are combined together, they're all based on a benzene ring. Benzene is a six-carbon compound with some double bonds. That's all you need to know at this point. And then toluene is really a methylbenzene. That means you add one more carbon that's hanging on the outside of it. Ethylbenzene adds a two-carbon chain on the outside of that. And then xylene, you take that same benzene, and they add a carbon in two different places. So all of those BTEX compounds are -- have benzene as the central component of them.

And so that's why it makes sense they're all combined together. It makes sense that you're using the same method to identify all, benzene, toluene, ethylbenzene and xylene, rather than using a separate method that has -- where the other method, 8015M, uses a less selective extractant solution.

Q. Let me have you turn to what's been marked as NMOGA Exhibit 43, and most of this you've already covered. Does this provide in a compound [sic] bullet format what the EPA Method 8260B does?

A. It does.

Q. In looking at this exhibit recently, did you notice that there was an error at the top line?

A. Yes. Where you have "EPA Method 8260B,"

following that, it says "GS/MS." GS is incorrect. It should be GC.

Q. What does that stand for?

A. MS stands for mass spectrometry, and then GS -- or GC stands for gas chromatography. So these are the two methods that are used to analyze for the concentration of the materials in the extract. So they use gas chromatography, and that's what the C stands for. And so that's why the S is inappropriate there.

Q. And the one point on this particular slide that perhaps we didn't discuss yet is the last bullet point where there are different temperatures used to extract the components. And is that important for determining benzene?

A. It certainly is to separate it away from the diesel range organics. Benzene and some of the gasoline range things overlap a bit in their boiling point, is what this is, or volatilization temperatures. But certainly it separates them from those longer chains.

Q. And if we move to NMOGA Exhibit 44, again we need to make the same correction at the top of this exhibit --

A. That's correct.

Q. -- GS --

A. It should be GC instead of GS.

Q. You already covered the form that extracts the BTEX?

A. Correct.

Q. Then if we actually look at what's been marked as NMOGA Exhibit 45, is that, then, like we saw before, the excerpt from the EPA publication describing 8260B?

A. It is.

Q. And does this reflect, on the first and second and third pages, the type of compounds that are detectable under this method?

A. Yes. As noted before, this is an extremely robust method that has the ability to detect more than 100 different types of carbon compounds with and without chlorinated materials attached to them.

But if you just scroll down the list with your eyes there, you'll notice near the top, on the first page of this, benzene is in the list. You go to the second page; a little more than halfway down, you find ethylbenzene. If you go to the third page, until you are about two-thirds of the way down on the list, you find toluene. And then the last three on that list are the xylenes. So this method specifically identifies those four compounds in BTEX as some of its target analytes.

Q. So, Doctor, based on your educational

background and experience, should the same EPA testing method be used for determining BTEX and benzene for purposes of Table 1?

A. It could.

Q. And is the EPA Method 8260B the appropriate testing method for measuring BTEX and benzene in impacted soils underneath the proposed recycling containment?

A. It is.

Q. And finally, are all of the proposed changes that are reflected up on the screen in NMOGA Exhibit 19 -- in your opinion, are they appropriate changes to make?

A. They are.

Q. And are all of these proposed changes to the testing methods feasible for both operators and laboratories to understand and implement?

A. They are.

Q. Were NMOGA Exhibits 35 through 45 prepared by you or compiled under your direction and supervision?

A. They were.

MR. FELDEWERT: Mr. Chair, I would move the admission of NMOGA Exhibit 35 to 45.

MR. WADE: No objection.

CHAIRPERSON CATANACH: Exhibits 35 to 45

will be admitted.

(NMOGA Exhibit Numbers 35 through 45 were offered and admitted into evidence.)

MR. FELDEWERT: And that concludes my examination of this witness.

CHAIRPERSON CATANACH: Mr. Wade?

MR. WADE: No cross-examination.

CHAIRPERSON CATANACH: Ms. Foster?

MS. FOSTER: Actually, I do have some questions. May I sit here at the table?

CHAIRPERSON CATANACH: Please.

CROSS-EXAMINATION

BY MS. FOSTER:

Q. Good afternoon, Dr. Robinson.

A. Good afternoon.

Q. Just a few quick questions. This facility that -- the recycling facility, for closure, at the time that the closure occurs and this testing occurs, you just report to the OCD at that time, correct?

A. Report what?

Q. When you have these test results, you report them to the OCD --

A. Yes.

Q. -- at that time?

A. That's my understanding.

Q. Now, you testified in the Pit Rule?
A. Yes, I did.
Q. And the Pit Rule, that requires the operator, before they even drill their well, to file a closure report with the OCD --
A. I believe that's correct.
Q. -- well before you get to closure?
That's not the case with these recycling facilities, correct?
A. I do not know on that process. I have to go back and read the whole method, but I'm familiar with these methods. The process and when this is filed, I'm not certain.
Q. Okay. Well, then, just talking about this table then, this table is only going to be used at the time of closure, once you've lifted up your liner and taken everything out of your location?
A. That's my understanding.
Q. All right. And it's not -- so if there is a spill on location, this test is not going -- these tests are not going to be used, correct?
A. That's my understanding.
Q. All right. And is it your understanding, also, if there is a spill on location, that Rule 29 would apply, the spill rule?

A. I'm not sure which one would apply, so --
Q. Okay. Well, what would an operator do if there was a spill on the surface at these locations? I mean, is there a process in this rule for a spill?
A. I do not know.
Q. Okay. I have no further questions.
COMMISSIONER BALCH: Couple of questions, if you don't mind.

CROSS-EXAMINATION

BY COMMISSIONER BALCH:
Q. Dr. Robinson, on Exhibit 40, I guess you pulled some samples from three different pits in southeast New Mexico --
A. Correct.
Q. -- and then you compared the two methods using the samples?
How do you establish the baseline, the ground --
A. The lab that I used had a standard calibration sample that they use, and so both methods use the same calibration standard as well. And those -- they used gasoline and diesel ranges as their standards.
Q. Okay. So you pulled material, and then you added hydrocarbons to it to a set level?
A. That would be the -- actually, I was talking

about the laboratory standard.

Q. Right.

A. Right. And so they construct that in the laboratory to get their calibration standards.

Q. So maybe I'm being a little naive, but you pull a couple of hand samples from a pit that are solid waste. You take them to the lab, and you analyze them under the two methods?

A. Essentially. It's a -- it's a composite.

Q. How do you know -- how do you know what's really in there when you're trying to compare two methods?

A. So it was a composite of five point samples within a -- within each of those pits and their constituents. So now you've got this stuff. When you take it to the lab, they do an extraction on it. And so the extractant that they use removes or strips off the hydrocarbons that are within the -- in the case of the 8015M, that's pentane. I have to go back and remember what they use for 418. But they use an extractant that strips off the materials that are in there. And the type of extractant that you use determines what's going to be stripped off. So, again, that's one of those places where 418.1 strips off other things that are not of petroleum origin.

Then the second step is once you've got this stuff that you've collected, once you run it through -- it's a gas chromatograph. And a chromatograph is essentially a process where things are separated. So, for instance, if you take a piece of filter paper and you use a black water-soluble marker and then you stick that into some water, you'll notice that the colors in that black separate out as they move up the filter paper. That's chromatography. So you're moving -- something is moving at a different rate of speed. So the instrument identifies where those peaks of those things that are moving are.

And so what it's identifying, then, from that material that's been collected in a pit, using that methodology, is the rate at which those peaks and when those peaks occur. And so it's the instrumentation, then, that is able to tell us what it is that we're looking at within the material. And because we're using a standard in the 8015M that uses the same kind of ranges -- so we have a 6-chain carbon, a 12-chain carbon, a 28-chain carbon and a 35-chain carbon, we know that what's coming off in that material that we're analyzing is in those ranges, as those right two peaks show what's happening.

Q. Based on the method that you use.

A. Based on the method that you use.
Q. So I think my question is a little higher level than that.
A. Okay.
Q. There is the difference between precision and accuracy. So that would be based off what you've shown us, and 8015, then, is more precise?
A. Correct.
Q. How do I know it's more accurate?
A. I would pick on accuracy because it has not been documented as some of these other method -- as 418.1. Again, I referenced the total petroleum hydrocarbon criteria working group. They compared these methods, and that's where I got the information for these, that the 418.1 identifies things that are not petroleum hydrocarbons. So it identifies hydrocarbons that are not of petroleum origin.
Q. So that's your basis for presenting that 415 [sic] is overpredicting?
A. 418.1 is overpredicting. I'm using the published data from the governmental working group.
Q. Sure.
Would it be possible to take a handful of dirt and add a known amount of chemicals into it and then do the analysis?

A. Absolutely. And essentially -- well, yes, that's possible.

Q. Do you know of any studies that have done that? Perhaps the working group?

A. I think the working group did, but I don't -- I didn't -- I have part of their paper on my laptop.

Q. One of the things that I noticed in Exhibit 41, looking at GRO and DRO separately --

A. Yes.

Q. -- particularly for the fresh/cut brine sample, you have a GRO of 90 and a DRO of 1340?

A. Yes.

Q. And you wouldn't expect that those would add up to be exactly the GRO plus DRO number because that's a separate analysis. But this one's off by several thousand.

A. There's probably a typo in that table because those -- that is the sum. GRO plus DRO is supposed to be the sum.

Q. Well, it should be close.

A. Yeah, close.

Q. I mean, they have a slightly different range, I presume --

A. Right. Right.

Q. -- in the measurement because the brine cutting

is the one that's off by ten units --
A. Right.
Q. -- ten milligrams per kilogram.
Do you have access to the correct numbers for this table? Did we get that data?
A. I can. I can get it.
Q. Before the end of the hearing?
A. Yes. Certainly. Good catch.
Q. Those are my questions.
CHAIRPERSON CATANACH: Mr. Dunn?
CROSS-EXAMINATION
BY COMMISSIONER DUNN:
Q. So the producer that you did the test with, who was that?
A. Randy Higgs.
Q. That's the name of his company?
A. Actually, he's not a producer but a consultant that works with producers, and so he --
Q. I thought you said there was a producer.
A. Well, he had the arrangement with the producers.
Q. And who were the producers?
A. I would have to go back and reference my materials.
Q. So on tab 41, the fresh water, that was fresh

water that was produced there, or where was that produced? Where did it come from?

A. I'm not certain where the fresh water was. I could tell you that I'd probably make -- anything that I would tell you would be an assumption about what the source of that water was in drilling.

Q. So why couldn't it, instead of overestimating that TPH test was more correct than the 8015?

A. Well, if -- if there are gasoline, diesel or motor range organics present in the water, the gas chromatography mass spec method identifies specifically those hydrocarbons that have those chain links with them. And so if they're not picking up gasoline range, which, again, is a defined number of carbons that are attached to each other, or diesel range or motor oil range organics, then I have -- because of the methodology that's used, I have faith that that number is correct as opposed to the 418 method, because if those compounds, gasoline, diesel or motor oil, were present, they would be picked up in the 8015M method.

Q. So then there are other tests, you think, on the fresh water to see what -- is there a third test you can do to see whether or not it was fresh, that it's completely clean?

A. There would be.

Q. So over the past five years, I mean, what industry have you worked for in oil and gas?

A. I have not worked for the oil and gas industry.

Q. Have you ever done any testing on oil?

A. I did -- I did this study. It was a contract study which started when I was working for Stetson Engineers.

Q. So who paid for that study?

A. New Mexico Oil and Gas Association paid for the work done on this study, the lab analysis, and they paid Stetson Engineers a contracted fee.

Q. And so who developed the standards or the -- how did they -- who developed what to ask for in the test?

A. These -- these methods are standard methods used in determining oil and gas. And the laboratory -- contracted with Cardinal Laboratory in Hobbs, I think it is, and -- so I told them what methods I wanted to have run, and then they have the laboratory standard procedures that they use.

Q. And this was done how long ago?

A. 2013.

Q. No other questions.

CROSS-EXAMINATION

BY CHAIRPERSON CATANACH:

Q. Mr. Robinson -- Dr. Robinson, the TPH 418 method would measure hydrocarbons, not necessarily petroleum hydrocarbons?

A. That's correct.

Q. And would -- and these were all measured in a pit?

A. From pit contents.

Q. From pit contents.

On the -- on the TPH numbers, under the 418 method, would you consider that to be background for this area? I mean, would you -- would you consider it -- would you think that a sample out of the pit would be the same as a sample in the pit?

A. No.

Q. And why is that?

A. The soil is not -- let me make sure I understand your question. Are you asking if --

Q. If you were to -- these came from a pit, these soil samples, so if you were to take a soil sample from an area that's not in a pit, would you think that they would be the same?

A. Actually, we did that. We took some materials from outside the pit, and the TPH numbers vary -- vary some. I didn't present that data, but the TPH number --

so if we go outside the pit somewhere and we collect some soil -- because we used that material in mixing, trying to see if -- coming up with a closure in the Pit Rule mix 3 to 1. So we were just looking at some different components there. And so looking at individual soils, those TPH numbers were not necessarily consistent among these for thinking about background.

Q. Were the ones in the pit higher; do you recall?

A. Generally, yes.

Q. Why would you necessarily expect that?

A. Well, if I talk about the things outside the pit for a moment, things like some of the shrub life that might be present, if you have a creosote or greasewood, things like that, those excrete from their leaves and stems some hydrocarbon materials that would be detected by the TPH -- by the 418 method. Those are not uniformly distributed. And so the location of the background sample would make a difference.

And then once something is in a pit and been mixed, then it's got whatever came out of the well in the drilling process that's been in that pit and mixed together.

Q. Now, the hydrocarbons would still be harmful to groundwater; is that correct?

A. Biogenic things, organic matter, not

necessarily. In fact, the biogenic, or plant-animal origin, hydrocarbons are often one of the -- serve as the energy source for the microbial activity that helps remediate some of the other materials that get added to the oil. And they often complex fairly tightly with clay minerals that are in soil, and so their likelihood to leach or move downward is pretty minimal. So they pose a very -- I would say that they pose no threat to groundwater under normal New Mexico conditions.

Q. Okay. I think that's all I have.

CHAIRPERSON CATANACH: Any other questions of this witness?

MR. FELDEWERT: I have just one final question.

REDIRECT EXAMINATION

BY MR. FELDEWERT:

Q. Dr. Robinson, looking at Method 418.1 versus 8015M, based on your experience, both the EPA and the states are discouraging the use of 418.1 as a testing method?

A. They are, primarily related to the use of Freon and then some of them because of the distinction that we've been talking about, in the overestimation of the petroleum-derived hydrocarbons.

MR. FELDEWERT: That's all the questions I

have.

CHAIRPERSON CATANACH: This witness may be excused.

Anything further, Mr. Feldewert?

MR. FELDEWERT: I have just probably some closing statements, but that can wait until the end of the proceedings. I have no further witnesses to present.

CHAIRPERSON CATANACH: Okay. Mr. Wade?

MR. WADE: The OCD would like to call Brandon Powell to address some of the specific concerns that were raised by some of the Commissioners, maybe by some of the commentators from today.

CHAIRPERSON CATANACH: Has Mr. Powell been sworn in?

MR. WADE: He was.

CHAIRPERSON CATANACH: Okay.

BRANDON POWELL,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. WADE:

Q. If you could state your name for the record, please?

A. Brandon Powell.

Q. And by whom are you employed?
A. I am employed by the Oil Conservation Division.
Q. What's your job there?
A. I am currently the inspection enforcement supervisor in the District 3 office.
Q. How long have you been doing that?
A. I've been in that position almost three years -- or almost four years now.
Q. And previous to that, what was your position?
A. I was an environmental specialist for five years.
Q. Between those two positions, are you familiar with the OCD rules and OCD administration?
A. I am.
Q. And, I guess, just previous to being at the OCD, what's your experience in the oil and gas industry?
A. Prior to coming to work for the OCD, I worked for an environmental oil field company, and I managed a soil remediation facility. I was also a senior environmental technician and --
Q. And specifically, are you familiar with OCD Rule 17.34 as it exists now in Rule 36?
A. I am.
Q. And are you familiar with the proposed Rule 34?
A. I am.

Q. And are you comfortable giving the Commission opinions as to the proposed rule --

A. I am.

Q. -- and OCD administration or OCD rulings?

Just to follow up on Dr. Robinson's testimony, since it was the most recent, based on your experience as an OCD environmental specialist, is the 8015M GRO-DRO-MRO or the 418.1 a more applicable method for what we're trying to do under the proposed Rule 34?

A. The 8015M GRO-DRO-MRO we've seen as a lot more consistent method. I review probably hundreds of tests a year as the environmental specialist. The 418.1 would vary. Typically, the 418.1 could be run either in the lab or in the fields, and it varied a lot as far as who was running them, the conditions that were run and how they were affected, where the 8015 was a lot more standardized and I've seen a lot more consistent results.

Q. Okay. And do you have anything more to say about that issue?

A. I don't.

Q. So if we could go back and talk about some of the specific questions the different Commissioners have asked of different witnesses, I believe Dr. Balch asked a question regarding whole concept of permit by rule.

And from the OCD's perspective, how does the permit-by-rule concept work in Rule 34, and do you find that concept in other rules already existent?

A. It's been phrased as permit by rule, but essentially it's set up as similar to the registration process for below-grade tank Part 17. It follows the same -- we file the form, and then you can go do the actions. So the actions aren't started until the form is filed, so the Division has the ability to review the form as soon as it's submitted.

Q. And is the idea in the proposed Rule 34 that you have specific standards put in place by rule and that the OCD can later go do inspections and assure those specific standards have been complied with?

A. There are. The standards are similar to what was in Part 17. There are very specific performance standards that the operator has to comply with.

Q. And I'm going to kind of skip around a little bit. These were asked -- questions were asked, that we identify for Brandon to maybe highlight and expound on. But I believe Commissioner Dunn asked regarding -- and I hope I have the reference correct -- 34.14G, why the State Land Office wasn't particularly added to the language where it talks about federal agencies having additional requirements as to closure. And could you

speak to that? I don't think the OCD has any specific issue with you adding the State Land Office.

A. I don't believe we have an objection to it. Ours was set up as a minimum standard, and those entities address theirs as being above ours. So we wanted to have a -- to be able to allow that.

Q. So it's essentially a floor?

A. Yes.

Q. And Chair Catanach asked something regarding the reporting of sources being -- I think he asked something regarding are sources going to be reported by a well-by-well case. Just in general, can you talk about source reporting and how it's going to be -- how it's proposed to be handled under this rule?

A. Source reporting, my understanding in the rule, is the operator is required to keep track of the sources and make them available on request. Because there could be a vast number of sources, getting the source from the well name or the source name from every source would be extremely overwhelming for all facilities, where it would be done on an as-needed basis, and that obligation would be the operators who keep those sources.

Q. Can I refer you then to -- this would be in NMOGA Exhibit 1, which is the proposed rule. I think it's 34.9F. Is that the --

A. Yes.
Q. -- is that -- go ahead.
A. 9F states: "The operator of a recycling facility shall maintain accurate records that identify the sources and disposition of all recycled water and shall be made available for review by the division upon request."
Q. I think a couple -- maybe one of the people who made a comment -- I think Chair Catanach asked if there is going to be a form that does report volumes of water in and out of recycling facilities. Is that going to be the case as being proposed?
A. That is what is being proposed, is a form to track the volumes going in and the volumes coming out of the facility.
Q. So having a form and tracking the volumes of -- of water -- produced water coming in and out of the facility, will that give the public the ability to -- well, first of all, will that become public data?
A. All of our forms that we receive, we work to put on as public data, yes.
Q. And can people use that public data to make a calculation as to what the impact of recycling produced water would be on that freshwater use?
A. The impact to calculate that, I think, would

directly correlate with the disposition that was coming out of that facility because if there is recycling coming out, we're replacing fresh water.

Q. In other words, the data would be available?

A. The data would be available, yes.

Q. There was some commentary -- I believe Mr. Newell had a concern that these recycling containments might somehow become a disposal method by evaporation, in other words, becoming an evaporation pit. Could you speak to some of the safeguards that are in this proposed rule to keep that from happening?

A. I think the main one that was already addressed is stating probably the use of at least 20 percent of the recycling containment's capacity every six months. If they're not using that, then it would no longer be considered in use. So if they're using it solely for evaporation, there would be no distribution.

Q. And also Mr. Newell specifically discussed the measurement from the bottom of the containment or the facility to the groundwater. I think his concern was that the measurement would not begin at the bottom of a containment or a facility. Is that addressed in the rule?

A. It's actually addressed in two places that I'd like to point out. First, the table that's on the

screen -- it's Table 1 that's in the proposed rule -- in the top left, it says: "Depth below bottom of the containment to groundwater less than 10,000 milligrams per liter TDS."

Also in Exhibit 1, page 4, in 15.34.11A(1), it states: "Where groundwater is less than 50 feet below the bottom of the containment."

Q. Again, this addresses another one of Mr. Newell's comments. I think his concern was how other uses, as contemplated by the proposed rule, would be addressed by the OCD. To begin with, where does that other "uses of produced water" stem from?

A. The "other uses of produced water" was written specifically in here to be a permanent type system. So if the industry has other uses such as dust abatement, those are permitted, and those have to receive the permit approval prior to orientation.

Q. So it's not something that an operator can just go out and do and then register and say they've done?

A. No.

Q. They would ask permission?

A. Yes.

Q. And is that language generally from the statutory language, not just from the proposed rule regarding other uses?

A. I believe other uses is statutory, but I don't know the statute on that.

Q. Okay. And then there were several questions regarding bonding, financial assurance. There was -- Mr. Newell again raised the fact that there was some language in the rule which -- I have to look quickly to give you the cite. I believe it's 34 -- 34.15, Financial Assurance, regarding the $25,000 or whichever is greater. That would be 34.15A(1). So that's page 8 of the NMOGA's Exhibit 1. He made the statement that $25,000 didn't seem to be enough to cover the costs of the closure -- potentially cover the costs in some of these facilities. Is there other language that OCD has in existing rules or has considered that might alleviate that concern?

A. There are a couple of things I'd like to address on that. As far as the financial assurance, it's a closure cost of 25,000 or the estimated closure cost, whichever is greater. And that is in proposed 34.15A(1).

Also, 34.15A works to be consistent with our other rules. If it's an operator that's only disposing -- or using the fluid from their containment in their wells, that would be similar to a multi-fluid [sic] waste management pit or permanent pit. And in 17,

bonding is not required under those circumstances. If it's an operator that's doing a recycling and sending it to somebody else, that would be more consistent with our regulations under Part 36, which does require bonding at a commercial facility. And (A) works to combine those two, to separate the commercial from the operator facilities.

Q. Is that all that you'd like to add regarding financial assurance?

A. That is.

Q. Then I think I'm almost done.

Did you have the opportunity to review some of OGAP's comments on the proposed rule?

A. I did.

Q. And in your opinion, do those comments require -- or did you feel that the OCD should address those specifically, efforts for rulemaking hearing, or do you feel we've already addressed a lot of those issues?

A. Most items are already addressed. The only one that I believe may need to be addressed is where they required specific testing on other uses. That one may -- could either confine us or not be broad enough for other uses, depending where it's being used.

Q. And in your opinion, is the proposed rule

protective of fresh water and the environment?

A. Yes, it is.

Q. I think we have addressed all the previous questions. I have no further questions.

CHAIRPERSON CATANACH: Mr. Feldewert?

MR. FELDEWERT: I have no questions.

CHAIRPERSON CATANACH: Ms. Foster?

MS. FOSTER: And I apologize to the Board for asking these questions. I was not included in the fabrication of this rule, in this proposal, and I wish I had been because I'm sure my questions could have been answered at that time.

CROSS-EXAMINATION

BY MS. FOSTER:

Q. Mr. Powell, you're very familiar with Rule 17, the Pit Rule?

A. Yes, ma'am.

Q. And, in fact, you testified in that Rule, correct?

A. Yes, ma'am.

Q. The concept of permit by rule, that's not really implemented in the Pit Rule, Rule 17, is it?

A. It's similar in the registration process for below-grade tank.

Q. Okay. So in the Pit Rule, the below-grade tank

is the only thing that needs to be registered, but in this rule, this large facility can be registered, correct?

A. The recycling containment can be registered, yes.

Q. And registration is different in permitting in terms of how it's filed in your office or notification? How is the registration different from a permit?

A. Once the registration is filed, the operator can then go forward with their plans of implementation. Where a permit, once it's filed, they have to wait for approval before they can start implementation.

Q. All right. And at any time are the landowners notified either by registration or permit?

A. Not that I'm aware of, without going through it specifically. I haven't prepared for that.

Q. All right. And then a quick question, clarification on the reporting of sources. On Rule 17, when an operator is disposing of his cuttings or the contents from the pit, he has to take a paint filter test before disposing it at a facility; is that correct?

A. That's a requirement of the facility, yes.

Q. In fact, he has to bring a manifest to the surface waste management facility with the contents of what is in the waste, correct?

A. That's a requirement of the facility under 36, yes.

Q. And in this case, in this proposed rule, when somebody's bringing water to this facility, there is no record of what is actually in that water?

A. The operator would have to track the source of where it comes from.

Q. But just the source and the volume, not --

A. Correct.

Q. -- that it was fracking water or that it was produced water or where that water came from or potentially what could be in that water, correct?

A. That's correct. The source is identified.

Q. That's all the questions I have at this time. Thank you.

CHAIRPERSON CATANACH: Thank you.

Commissioners?

COMMISSIONER BALCH: I have a couple of questions.

CROSS-EXAMINATION

BY COMMISSIONER BALCH:

Q. We were talking a little bit about Mr. Dronkers' comments about accounting for how much fresh water is being replaced.

A. Yes, sir.

Q. And you indicated that you could use the outflow as a direct measurement. But I think that when you're building one of these facilities, particularly the first ten wells or so that go into it, you're going to be putting a lot of makeup water in, and that could be produced water, could be fresh water, it could be who knows what. So you probably want to -- is it going to be possible to account for how much fresh water goes in based on the accounting of what goes into the pit with the way the rule is?

A. I believe the way the rule is written, it wouldn't account for the difference sources for it.

Q. Different sources of the makeup water?

A. Right.

Q. So that would make it pretty hard to tell how much fresh water was really being offset?

A. That would be correct.

Q. So you're comparing the permit to [sic] rule to the same registration process in Rule 17 for below-grade tanks. One of the reasons that that was proposed -- that registration was proposed is because there was a huge backlog --

A. Right.

Q. -- of well permits -- or I'm sorry -- below-grade tank permits, 10,000 plus, I beleive, and

the backlog was -- was basically insurmountable. So you could never get past that.

A. Correct.

Q. Since they've implemented that, has the OCD been able to keep up with registrations? Do they look at them in a timely manner?

A. The current registrations, yes. In our office, I would venture to guess that most of our registrations are processed within two weeks.

Q. Processed means somebody who's looked at it, evaluated the criteria?

A. It's been reviewed and evaluated, yes.

Q. How about some kind of cross-checking data concerning -- any sort of analysis you might have in a regular permit process where you double-check things, or you just file it?

A. The registration we actually handle as a permit review. We verify the information that's submitted, the maps that are submitted and do a full evaluation just as we would a normal permit.

Q. So for these recycling containments, I'm not expecting there to be 10,000 of them next year.

A. No.

Q. Probably be a few, right?

A. There will probably be a few, yes.

Q. So how much screening do you think those would get in your office?

A. With never reviewing one, I would venture to say that we would probably have them completely reviewed within 30 days.

Q. But they could have -- they could already started -- they could have broke ground 29 days before you give them their result --

A. That is correct.

Q. -- with the permit-by-rule process?

A. They could have broken ground, yes.

Q. You mention that the 418.1 TPH test --

A. Uh-huh.

Q. -- had highly varying results. Varying in what sense? Do you mean multiple samples from the same site at different times had different results?

A. I've seen several circumstances. I've actually seen where the 418.1 was substantially lower than the 8015 test, but it was ran in the field. The 418.1 was ran in the field, where the 8015 was ran in a lab-controlled environment.

I've seen where there's been organics, leaves, debris, decay, material from a below-grade tank that was sampled, and the 8015 was extremely -- or the 418.1 was extremely high, and the 8015 was fairly

consistent with the material that was around that.

Q. So you're not comparing the 418.1 results; you're comparing those to 8015 -- 8015M results?

A. Right.

Q. And your conclusion was that the 8015 was more consistent and reliable?

A. Was a lot more consistent and reliable.

Q. Ms. Foster brought up the question of closure requirements with the permit by rule. There is no closure report specified in this proposed rule. Do you think that's going to give you a similar kind of potential issue to them breaking ground 29 days before you have completed a review? Same thing, they could be all done with their closure before you analyze their closure process?

A. I'd have to re-review the closure process, but I believe they have to notify the district.

MR. WADE: Closure would be found on 34.14 of Exhibit 1.

Q. (BY COMMISSIONER BALCH) Right. With a permit, you have a closure report before you close?

A. Right.

Q. And I believe Ms. Foster pointed out that there wasn't that stipulation in this document.

A. Right. There would be a specific performance

standard instead of an individual closure plan.

Q. Okay. So your office would come up with what's appropriate for your region, make sure they follow it?

A. They would -- my understanding is they would follow the performance standards that are in the rule itself instead of doing it site-specific.

Q. Thank you very much.

A. Thank you.

COMMISSIONER BALCH: I'll leave the landowner questions to the Commissioner of Public Lands.

CROSS-EXAMINATION

BY COMMISSIONER DUNN:

Q. Well, I appreciate you adding that was part of the reclamation deal, but on the other hand -- so we would -- as a lessee or the holder of land, we wouldn't get any notice if there was going to be a reclamation deal -- or a recycle containment put on us; is that correct?

A. I -- I haven't thoroughly gone through the closure recently, but I don't believe a standard closure would notify the landowner. If there was a variance, I believe that that would be a requirement, to notify the landowner, but I don't believe so on the standard closure.

Q. So on the recycling, do you think, on State

Trust Lands, that that is a part of the activity of the lease or is that -- would we be able to charge a different fee for that?

A. I don't have the background to answer that. I apologize.

Q. Jerry thinks I ought to be able to charge for it (laughter).

So on the three-membrane system, because that's really what the liner is going to be --

A. Yes, sir.

Q. -- wouldn't puncture be more likely to happen through all three membranes? I mean, if you have a 2-foot dirt barrier, the chances of a puncture would be less than if you had three liners right together?

A. I'm not -- I haven't dealt with these facilities or the geonet, so I don't know the geonet's puncture resistance. Typically the sand that's on the bottom -- or the sand layer is on the bottom, so if you have a puncture event, it's usually toward the sidewalls of the pit, which I would see as being similar, whether there was the geonet in the bottom or the sand in the bottom.

Q. But if it goes all the way through the third liner, then it wouldn't go into -- you wouldn't be able to monitor it. It would just go straight down?

A. Right. But I was saying is on the sidewalls. Usually if there is sand on the bottom, you just have the two liners on the side walls. And from my experience, that's where we've seen most of the damage to the liner occur, is in that sidewall.

Q. So does 418.1 generally overstate as compared to the other testing methods or not?

A. I've seen it go both ways. I've seen the 418.1 actually run lower than the 8015.

Q. So you can't say generally --

A. I can't say generally. Typ- -- generally -- typically it is higher, but I've seen it go both ways.

Q. How deep could one of these recycling containments be? So if the water was 300 feet, could you make it 250 feet deep?

A. Theoretically, I would say so, based on the proposed rule. I believe there is a sloping mechanism, but as long as they follow that sloping, they can go as deep as --

COMMISSIONER BALCH: And there are some practical limits on how deep you can make it.

COMMISSIONER DUNN: Yeah.

COMMISSIONER BALCH: You can probably find that in the Rule 17 transcript, the ruling.

Q. (BY COMMISSIONER DUNN) On the financial

assurance, like a large company, if they already have bonding up, they're able to count it back against -- is that correct?

A. If there is a large company, it would be similar -- if they're the ones operating the recycling containment, it would be similar to a multi-well fluid management pit or permanent pit, and that wasn't required, to have financial assurance, in 17. So it would be similar to that. Also that large of a company, you're probably looking at drilling multiple wells if they have a large containment, so they have investment in that field. So theoretically they would be less likely to walk away from it.

Q. But is that a disadvantage to the small producers?

A. The small producers, if they're building it and using on their wells, they would fall under the same -- they would already be bonded under it.

Q. So they wouldn't have to --

A. They wouldn't have to have additional bonding.

Q. That's all I have.

CROSS-EXAMINATION

BY CHAIRPERSON CATANACH:

Q. Mr. Powell, with regards to the 20 percent total fluid capacity used every six months, is it your

understanding that's a self-reporting issue and that's not to be -- the only time that would be reported to the Division would be if they fell below that 20 percent?

A. That would be -- the way I could see that being monitored is they have to give the size of the facility on their C-147, and then they have to report the discharge from that facility to the Division monthly. So I could see the Division being able to verify that they were discharging at least 20 percent of that containment water.

Q. So that's something you think you could track?

A. I would like to see it electronically tracked, similar to our production reporting on C-115s.

Q. I believe you stated that you looked at some of the proposals that the Environmental Defense Fund has set forth, and I believe, specifically, you mentioned the disposition of the use of produced water by other methods. And that's to be -- my understanding that's to be approved by a C-147, right?

A. That would be the permit process under the 147.

Q. Now, they have proposed that the operator has to supply a lot of this additional information on that -- in that instance. What is your opinion on that?

A. It would depend on what it's being used for. The one thing they didn't define is if they wanted it

before or after treatment because the before treatment could be substantially different than the after treatment. The treatment process could build a concentrate that would have to go to disposal and leave you with clean water that goes out. And then they may be using specialized chemicals to do that, so your testing protocol may want to include those chemicals to make sure all of them have been filtered out. Reverse osmosis, you'll end up with a concentrate before and clean water afterwards. So they don't identify which side of it needs to be cleaned, so it would really depend on the situation.

Q. Well, do you believe that the C-147 gives you the authority to require additional testing or require additional information if you think it's necessary to make a decision on whether to -- whether or not to let them use that for that use?

A. The 147 does, and I believe Part 34, as proposed, does as well. If you'd like, I can find the part.

Q. Well, I guess -- is that a yes, then? You think you have the authority?

A. I believe I have the -- we have the authority to review it as proposed and come up with the applicable standards, yes.

Q. And if you believed that you need additional information, you believe you can ask for --

A. Yes, sir.

Q. -- additional testing or other data that you think would be relevant?

A. Yes, Chairman.

Q. That's all I have for now.

MR. FELDEWERT: Mr. Chairman, can I ask a couple of questions?

CHAIRPERSON CATANACH: Yes, sir.

CROSS-EXAMINATION

BY MR. FELDEWERT:

Q. Mr. Powell, I want to have you turn to 34.9F, which on page 3 of Exhibit 1. There was a concern raised by Commissioner Balch about the ability to track whether any of the makeup water included fresh water. As I look at 34.9F, it requires the operator to maintain accurate records, identify the source of the recycled water. Would that -- would that assist in tracking, for example, how much fresh water would have been added to the facility if the source were identified as a freshwater source?

A. That is correct, if the Division requested it.

Q. Okay. Commissioner Dunn asked a question about notice prior to recycling containments being sited for

use by a producer. Do you recall that?
A. Yes.
Q. When you look at, again, trying to maintain consistency in your rules, if an operator's putting in a multi-well fluid management pit, do they provide notice to the surface owner under the rules?
A. Not that I'm aware of, no.
Q. And if the operator is using a temporary pit for their operations, they don't provide notice to the surface owner?
A. I believe they do at the time of closure --
Q. At the time of closure.
A. -- but not at implementation.
Q. It's good distinction. It's a good distinction. At the time of closure, there is no closure -- no notice, but if there is going to be waste left on site, then there is a notice requirement to the surface owner?
A. I believe so, yes.
Q. In our proposed recycling containment, there is no provision for that waste to be left on site?
A. That is correct.
Q. And you were trying to find it, and I'll take you there in terms of your authority under the rule. Section 34.8A(2) gives the Division very broad authority

in terms of determining what they need and what notice is required and what requirements must be in place for any other disposition by use; is that right?

A. Yes, it does.

Q. And nothing can occur until you have the information you need and you have approved the disposition by use?

A. That is correct.

MR. FELDEWERT: That's all the questions I have.

MR. WADE: I have one more follow-up based on a question you had, Chairman Catanach.

REDIRECT EXAMINATION

BY MR. WADE:

Q. Chairman Catanach asked regarding the OCD's ability to make sure that the fluids being held in a containment do not fall below 20 percent. And I just want to point you to 34.13C. And does 13 -- does 34.13C require that the operator must report cessation of operations to the appropriate Division office?

A. Yes, it does.

Q. And 34.9E is also a basic requirement where operators must keep track of their total volumes of fluid in and out, so that information is available to you and the OCD as well; is it not?

A. 34 --
Q. 34.9E.
A. Yes, it does.
MR. WADE: I have no further questions.
CHAIRPERSON CATANACH: Any other questions of this witness?
MS. FOSTER: No. Thank you, sir.
CHAIRPERSON CATANACH: The witness may be excused.
Did you have anything further, Mr. Wade?
MR. WADE: The OCD has nothing further.
CHAIRPERSON CATANACH: Do you want to make a closing statement, Mr. Feldewert?
MR. FELDEWERT: Yes. I think -- if I may, I want to -- we really haven't had a chance to do that, to examine the proposals by the EDF, and now that we have a better understanding of the rule, I think it might be helpful to walk through those. I don't know if you have those in front of you, but I have gone through and I've tried to mark the text -- or looked at their proposals in their document that they sent to this body on January 30th, 2014. There should be a record. And I think the facts are in front. So it would be this document here (indicating).
CHAIRPERSON CATANACH: Where is that

located?

MR. FELDEWERT: I know it's part of the Division record.

COMMISSIONER BALCH: It came as a separate stack of paper.

CHAIRPERSON CATANACH: That's the one.

MS. FOSTER: Mr. Chairman, as a party to this case, I did not receive that document. Is there any possibility I could get a copy of it?

MR. FELDEWERT: I believe it's on the Web site.

MR. WADE: We can make copies of whoever requested it. Maybe we could take a short break.

CHAIRPERSON CATANACH: Let's do that. How many copies do you think we need?

MS. FOSTER: I just need one.

CHAIRPERSON CATANACH: Just make about five. Let's go ahead and take a break until 3:00.

(Break taken, 2:50 p.m. to 3:02 p.m.)

CHAIRPERSON CATANACH: Okay. We'll call the hearing back to order.

Did everybody that wanted a copy of these materials get a copy? If not, there are some on the table in the back.

MS. FOSTER: Thank you, Mr. Chair.

CHAIRPERSON CATANACH: Mr. Feldewert, I believe you wanted to go through these?

MR. FELDEWERT: Well, I hadn't -- we hadn't had a chance to receive [sic] our comments on these proposed -- on what is in the proposed EDF submission, and it won't take very long.

The first comment I see of any substance is on page 3 of their January 30th letter, and it deals with -- if you want to pull out the rule. It deals with 34.8A(1). And as we noted during the testimony, this was an intent to carry over the notice and provisions that the Commission had -- or the Division had promulgated about the use of produced water for drilling and recognizing that produced water quality can vary. Okay? The one thing that EDF points out is that -- they're saying -- in their proposal, they want to add a clause: "Provided however that produced water shall not be re-used above the base of fresh water," which is quite different than what operators have traditionally been accustomed to and, I think, what is beyond what is necessary.

For example, if you look at NMOGA Exhibit Number 9, it has included, on the last two pages, the current Form C-147. And so the second-to-the-last page of NMOGA Exhibit 9 has the front page of a C-147, and it

has a bolded statement in there that "the re-use of produced water may not be used in fresh water zones in drilling or plugging operations." If you're going to adopt any kind of statement on the use of drilling and freshwater zones, it seems to me that's the statement that should be adopted, and it reflects what has been the practice up until now. The problem with theirs is it's much more broader, saying you simply can't use it above the base no matter where you are, and that raises a number of issues that are unnecessary and restrictions that are unnecessary.

If you then go over to page 4 of their proposal -- and I think Mr. Powell addressed this, and we would echo those comments. That deals with 34.8A(2). And yes, we have left a lot discretion to the district.

Now, why did we do that? A couple of reasons. Even if you look within the rule, 34.8A(3), "Research using produced water is to be encouraged through pilot projects approved by the appropriate division district office." We want to encourage people, our operators in the industry, to come up with ways to re-use produced water. If we try to adopt what the EDF is proposing, what we would through all this analysis, all this laboratory analysis, all these testings, all the information that they've added here on page 4, a

number of circumstances may not even be applicable depending upon the nature of the use.

And so our point is I think it has been and should be left with the Division to determine what is necessary and appropriate before they approve any other disposition by use. It gives them broad flexibility, and we think that's appropriate to allow them flexibility in all situations without requiring by rule a certain testing and other procedures we've done. It would also be dependent upon the use. It may not be necessary, and then you've got to go get a variance. That's the problem when you put it in a rule.

The same way with the notice provision to a surface owner. That came up in connection with this other disposition by use. Okay? There may be a use where it would be appropriate to notify the surface owner prior to approval, but there are going to be a number of uses where it doesn't seem to fit. So, again, it's -- it's hard to craft in this rule specific requirements and make it as if it's one-size-fits-all when it's not.

So what we have done and what the Division has, I think, agreed with is that last sentence: "Approval requirements will be determined by the district office based upon the proposed use." And we

think that's appropriate in order to encourage recycling and re-use of produced water.

If we go to page 5, again they're talking about a use above the base of fresh water, similar to what they've said on number one. So I've already covered that.

On page 6, they have at the top a discussion about aboveground, unlined, hard-sided tanks. This rule does not deal with aboveground, unlined, hard-sided tanks. This is a produced water rule, and we're talking about an inground synthetic containment. And so the provisions here that they want to add to the rule really don't apply to our circumstances. This is not a tank rule. This is not an aboveground tank rule. This is a produced water rule.

Towards the bottom there, this has already been addressed in terms of the source issue. We're supposed to keep track of the source. We have come up with forms for that. It doesn't seem appropriate to mandate by rule that it has to be each specific well. It's going to be difficult to implement, most likely unnecessary. So, again, we leave that to the Division.

If we -- the comments on page 7 I think arise out of a little misunderstanding about 34.9.10, which again, as the definition does, deals with the type

of fluids or produced water that's going to be in these containments. It can only be produced water. It has to fall under the definition of produced water. And so the provisions that they have here seem to suggest that there's going to be, for example in the middle, "other contents stored in the containment." There isn't going to be other contents stored in the containment. It can only be produced water. So I think this would actually cause some confusion about what you can put into these recycling containments. We have made it very clear, nothing but produced water, and we think it should stay clear.

Page 8. This refers to the Table 1. This is the closure provisions on 34.13C. What concerns us is the last clause under their paragraph C, where they say: "And any other constituents that may be required by the Oil Conservation Division."

Now, Commissioner Balch sat through the Pit Rule. I sat through the Pit Rule. A lot of us in the room sat through the Pit Rule. There was a lot of time, money and effort by the Commission, by the Division and by the industry to come up with this Table 1 to identify the constituents and the concern that should be tested for in the event that there is a stain in the soil underneath one of these containments.

Their provision here, last clause, "and any other constituents that may be required by the Division," we might as well throw Table 1 out. No standards; they don't explain what they're talking about. That to me just totally eliminates all the efforts that went into Table 1, so we do not see where that's necessary.

On the bottom of page 8, they want to add to the existing provisions in the rule. This is again -- this is not a provision we changed. This is a existing provision in the rule. And at first I thought I understood it, but the more I looked at it, it didn't make a whole lot of sense to me.

They went ahead to 34.7A [sic], recycled fluids, in terms of what you can't transport without a C-133. What is recycled fluids? I'm not sure what they're talking about. And what this does capture already is produced water, drilling fluids and other liquid oil field waste. So I really don't know what they mean by recycled fluids at the bottom of page 8, and I don't see why that change is necessary. It doesn't make a whole lot of sense to me. Again, I think it is a misunderstanding of what can be contained in these recycling containments.

Finally, the last substantive comment I see

is, again, they want to talk about what should be required for anyone who seeks and is transporting liquid waste by truck under the C-133, and they have three bullet points there in the middle. I don't know what's in the Form C-133. I haven't looked at it. I don't know what exactly has to be shown. Okay? I would assume you have to have the vehicle identification number probably already covered.

Here's the one that bothers me, "affidavits from recycling facilities used by the transporter verifying that the transporter is authorized to use each recycling facility." I don't see the necessity for that. Number one, it's going to be very difficult to go out and get affidavits. What kind of affidavits? What are they talking about here? It's not something that we've ever had. There is no need for that. The C-133 system seems to be working fairly well. So I would suggest to you that that particular request makes absolutely no sense here when they're talking about trying to go out and get affidavits. That's going to be very difficult to get and maintain, and we do not see any basis for that.

And that's really the comments -- that's all the comments that we have.

CHAIRPERSON CATANACH: Thank you,

Mr. Feldewert.

Is there anything else? Is there anybody who wants to add to the discussion here?

Ms. Foster?

MS. FOSTER: I'd just like to make a brief closing statement.

CLOSING STATEMENT

MS. FOSTER: I sat through this hearing which has taken much less than a day. I did sit through -- I was an attorney through the Pit Rule hearing, which I think took three weeks of deliberation, I think, for the Oil Conservation Commission to come to the Pit Rule.

My concern -- and I represent the smaller operators who probably will not be using their private recycling facilities but end up using the commercial facilities. But my concern from a public policy perspective is if you spent as much time and you have as much -- as many protections as you do under the Pit Rule, why are those protections not being transferred to this rule, which is a pit of undetermined size, undetermined depth, undetermined volume? Okay? The landowners are not notified. Nobody's notified before an operator goes out there and spends millions of dollars, potentially, to drill this pit, and then the

OCD can come out after the fact to inspect it under this permit-by-rule scheme.

You know, under the Pit Rule I have here, for a temporary pit -- just to have a temporary pit, you have to submit a plan for design and construction of a temporary pit. You have to submit a closure plan, the hydrology -- with hydrology data, with additional data on the site's topography, the geology, the surface hydrology. You have to submit specific groundwater data, and that's just for a temporary pit.

And a temporary pit, which my operators will be using, is only going to be opened up -- it's only open for six months as opposed to this large facility which will be opened up -- which will be allowed to be open for five years, with one year potential extensions just based on inspections.

I'm just asking for some -- I think from a public policy perspective, there needs to be some parity. I hope that my operators will be able to use these recycling facilities, but these recycling facilities, the way that they've set this up, is done by the large companies with large drilling programs, and it really doesn't benefit my small operators. So that is my review of this proposal.

And, again, I wish I had been able to say

this directly to NMOGA while they were preparing this rule, but IPA was specifically excluded from the meetings.

CHAIRPERSON CATANACH: Thank you, Ms. Foster.

Are there any other statements at this time?

MR. WADE: I'd like to go back to the EDF comments just real briefly. I just want to point out that on page 4 of the comments, whether the Commission decides to put requirements into a rule or not to put requirements into a rule may be something that general counsel can speak to with the Commission. I'd like to just point out that these requirements that you see in their proposed -- in the EDF proposed A(2), that's the exact same language you're going to find in the C-147, which is in the exhibits already. They took that language and put it into the proposed rule.

The OCD can see where having specific language in a proposed rule would be beneficial on one hand. On the other hand, it can also narrow the ability to be flexible, and the OCD needs to be flexible, to Mr. Feldewert's point earlier. So we would definitely leave that to Commission to decide.

I want to point out that the OCD is at

least addressing those concerns. They just have to be clear and coming through a form versus specific language in the rule.

And in general, what the OCD looked at in giving input with the work group for this proposed rule, what we really wanted to do is make this rule consistent with the existing rules that we already work in, to make it consistent with Rule 36, to make it especially consistent with Rule 17. We did not want to relitigate Rule 17. We felt that a lot of the standards that are in 17 definitely apply to the situation when we're talking about recycling of produced water and containments for produced water only. And in general, we do believe that the proposed rule does provide protection for the environment and for fresh water.

CHAIRPERSON CATANACH: Thank you, Mr. Wade.

Any other statements at this time?

COMMISSIONER BALCH: Actually, I wouldn't mind recalling a couple of witnesses.

CHAIRPERSON CATANACH: I was just going to ask you that, Commissioner.

MR. FELDEWERT: Which couple of my witnesses?

COMMISSIONER BALCH: I think all the ones I want to recall are still in the room.

MR. FELDEWERT: Okay. Great.

CHAIRPERSON CATANACH: Yes. Who do you want to recall?

COMMISSIONER BALCH: I think first Mr. Powell, because I share some of Ms. Foster's concerns about the rule by permit.

BRANDON POWELL,

after having been previously sworn under oath, was recalled, questioned and testified as follows:

RECROSS EXAMINATION

BY COMMISSIONER BALCH:

Q. I really would like to get a feel from your perspective of somebody that processes the permits and would be processing after the fact, if permitted by rules. I mean, what's the real time difference that we're looking at here for an operator to be able to get their pit going?

A. The real time difference in our district, I would say you're looking at less than two weeks for approval.

Q. On a permit?

A. On a permit. Our IFA registration is filed for that registration to be reviewed. The other districts in the state, I know some of them have a large drilling program going on. I don't know the background.

Q. You're District 3?
A. We're District 3, yes.
Q. Where is that at?
A. In Aztec. We cover --
Q. So up north?
A. Yeah, the northwest.
Q. Do you have a feel at all for what's going on in Lea and Eddy County --
A. I don't know offhand.
Q. -- that office?
A. I know there is going to be some employee turnover and some different things that may delay that, and there's been a very large drilling program.
Q. So speaking from District 3, you can say about two weeks delay if they went for a permit rather than having to get permitted by rule?
A. Yes.

And typically our experience with the below-grade tank registrations is we usually have the below-grade tanks reviewed before they implement the below-grade tanks as well.

Q. Okay. That's all I have for Mr. Powell.

COMMISSIONER DUNN: No questions for Mr. Powell.

CHAIRPERSON CATANACH: Okay. Thank you,

Mr. Powell.

COMMISSIONER BALCH: Mr. Welch.

JAMES P. WELCH,

after having been previously sworn under oath, was recalled, questioned and testified as follows:

RECROSS EXAMINATION

BY COMMISSIONER BALCH:

Q. Granted, San Juan is not a great example right now of a booming drilling area --

A. Right.

Q. -- but realistically how many of these permits -- or how many of these pits do you see being put -- containments being put into place in a year, really?

A. 20, 30, maybe, in New Mexico would be a guess.

Q. So it could be a fair number?

A. Yes.

Q. And if you have a month delay on getting it going because you have to actually go through a permit and stuff, permit by rule, how would that affect the implementation of those containments?

A. I don't think a month is going to be particularly burdensome for operators, but I'm not an operator.

Q. Within the -- last five years plus?

A. That's not going to be an issue.
Q. I mean, my concern is really this: We did spend a lot of time on Rule 17. We made up rules for temporary pits, multi-well fluid management pits, which were the model for the containments and then permanent pits, and in every one of those, there is a permit requirement. And I wonder if someone further down the road is going to question if we change the way we --
A. From permit to registration?
Q. Well, right, if that's going to be an issue for someone appealing the rule, perhaps, or -- or just really -- just as Ms. Foster said, just a public policy standard.
A. Well, we were artful when we created 34 by taking the standards from 17 and adopting these directly.
Q. Except for the permitting standard.
A. Except for the permitting standard.
Q. Right.
A. So we put the burden on the operators as opposed to putting it on the OCD in an effort to support them in their efforts.
Q. Sure. I understand that. I understand that the nature of the fluids is probably going to be a little bit different in a -- in a waste pit for

drilling. You're concentrating material. Here you're going to be recycling a lot more frequently.

A. Yeah. And I think there's been some comments about -- I'm going to change the subject on you a little bit, given the opportunity.

I don't think there is going to be a great deal of fresh water that's going to be going into these facilities. Fresh water is very expensive, and if we get it to the site, to convey it, I mean, we're still looking at $4 a barrel to move it to the recycling containment. The whole objective here is to close the loop and eliminate the trucks. So we want to take the produced water that's already there. That's what we want to put into the recycle containment.

It doesn't make any sense at all to haul all that fresh water in, have it evaporate and then complete your well. So the opportunity here is to eliminate the water that's going to disposal wells, not the fresh water that would be used.

Now, there is consideration in southeastern New Mexico, Capitan reef water. So brackish, TDS, water doesn't serve much use to ranchers or land application. That's a brackish-water source that's being considered for well completion, so that would be another source that would likely end up into the recycle containments.

Q. So if you draw me a -- you're looking at 10,000 TDS or less? That's brackish also, right?
A. Yes. Well, that's --
Q. Protected water is what they call it.
A. Yeah. It's a U.S. protected water, 10,000 milligrams per liter or less.
Q. Going back to the permit by rule --
A. I'm sorry. Yes, sir.
Q. That was an interesting aside, but going back to the permit by rule, if the Commission ends up deciding not to allow permit by rule, we could probably lift text from the multi-well fluid management part of the -- I'm sorry -- permitting part of Rule 17 and put that in place or point to it. Would that be adequate?
A. I hate to answer for all the operators in New Mexico. There is a time constraint there, and if that's suitable for the operators, that's at the Commission's discretion.
Q. Right.
COMMISSIONER BALCH: I don't have any other questions.
MR. FELDEWERT: Can I ask some questions?
COMMISSIONER BALCH: I think you're probably allowed to redirect [sic].

RECROSS EXAMINATION

BY MR. FELDEWERT:

Q. Mr. Welch, this permit-by-rule concept, when the committee got together, is that was something that the Division brought forth?

A. Yes, it is.

Q. Okay. Did they bring that forth because of their concerns about the -- the administrative concerns they were having in dealing with a lot of these -- this permitting process?

A. Yes. And we tried to streamline a process and create a road map that was a path of least resistance. The idea was that we couldn't -- we couldn't address all the conditions that somebody might want a permit or recycle containment, but we could lay out a road map where 75 percent of the containments could be addressed in the rule that we proposed. So we didn't think that we could answer all the inevitabilities in the rule that we drafted.

Q. And in doing this, what we were really looking at in terms of the model was the multi-well fluid management pits?

A. Right.

Q. And we brought all those provisions over from 17, didn't change any of them, as we walked through this today. Has there -- during the time that we were having

the committee, wasn't there -- if we're looking at time frames and looking at how long it takes to permit these devices --

A. Right.

Q. -- what we should be looking at is how long it takes currently to permit these multi-well fluid management pits, right?

A. (Indicating.)

Q. And were you aware that there has been -- it has taken, for some of these, as long as ten months of review to get these multi-well fluid management pits, right?

A. Absolutely. That's true.

Q. And that's what we're trying to avoid?

A. Correct.

Q. And as a result of developing this permit by rule, did we not then sit down and put in some very immediate and strong enforcement provisions?

A. We did.

Q. I want to look at those, 34.21B. We didn't look at them in any great detail, 34.21, on page 11. First off, "A. The operator of a recycling facility or recycling containment shall comply with all requirements of this rule." Not some, but all, correct?

A. Correct.

Q. So if I'm going to permit by rule, I have to meet all of the siting requirements, all the operational requirements and all the design requirements, every single one of them. And if I don't, I have to go get a variance; is that correct?

A. That's correct.

Q. "B. If the division determines that the registration of a recycling facility or recycling containment or that operators at a recycling facility or recycling containment violate the requirements of 19.15.34" -- that would be any requirement -- "the division district office shall notify the operator in writing. If the violation threatens the contamination of fresh water, public health, or the environment" -- the Division makes that determination, right, Mr. Welch?

A. Yes, sir, that's correct.

Q. -- "the notice of violation shall be signed by the director, the operator shall" -- not may -- "shall immediately cease all operations of the recycling facility or containment" -- correct?

A. That's correct.

Q. -- "and" -- it goes on to say -- "the director may require" -- depending on the circumstances -- "to remove all fluids ... in the recycling facility or containment by a date determined by the director."

Pretty strong language there?

A. Yes, sir.

Q. Then the other big hammer here is F: "After a notice of violation that threatens contamination of the fresh water, public health, or the environment is issued" -- the one we just talked about -- "until the operator obtains an agreed compliance order, performs the appropriate corrective action or is granted a stay, the division may not approve any permits for the operator." Is that correct?

A. Yes, sir.

Q. We're talking about drilling permits?

A. (Indicating.)

Q. All kinds of permits?

A. Yes, sir.

Q. Pretty strong?

A. Pretty strong.

Q. Do you have any concern, based on your experience in the industry, that the operators are not going to look very closely at this rule and before they permit by rule that they're not going to make sure that they meet all these requirements?

A. I think there's pretty strong language in here to drive the behavior we're looking for. Yes, sir.

Q. That's all the questions I have.

RECROSS EXAMINATION

BY COMMISSIONER BALCH:

Q. At the risk of starting another round of redirect and since Mr. Welch is still sitting there --

A. Yes, sir.

Q. -- this may be a follow-up on Mr. Feldewert's comments.

But, I mean, the example, when I was talking to Mr. Powell, you put in an application and 30 days later the OCD gets around to reviewing it and they say, Wait a second; there's a problem, you've got 29 days of development already gone into your pit that you may have to undo. I mean, I think that that's a risk that the industry would be facing with permit by rule. I don't know how that plays out in reality. I know that most operators are very conscientious and they try to do the right thing the first time, but people make mistakes.

A. Right.

Q. That's a risk that has to be weighed with this permit-by-rule process?

A. Correct. Yeah. I think that's reasonable. That's a reasonable assessment.

Q. I mean, you're talking about half-million-dollar facilities.

A. It is. And I think it's going to be incumbent upon the operator to get the best resources that they can in the design of these facilities. The design is -- I don't want to say it's standardized, but the methods of construction, the slopes, the embankments, I think those are pretty well thought out and established.

Q. Well, those are in the rule.

A. Right.

Q. You're going to have follow that regardless --

A. Exactly.

Q. -- unless you have a good reason to vary from it.

But somebody at the OCD may have a difference of opinion on depth to groundwater or some other siting requirement, or somebody may break ground on a new school 500 feet away from your site in the last 30 days.

A. Right.

Q. Those are the kind of risks I'd be more concerned about from managing your financial hazard, if you will.

A. Uh-huh. I understand.

Q. Something to consider.

A. Right.

COMMISSIONER BALCH: That's all I have.

CHAIRPERSON CATANACH: Any other questions?

MR. WADE: I have one more question, if I'm allowed, one single question based on --

RECROSS EXAMINATION

BY MR. WADE:

Q. Mr. Feldewert asked you -- and I think this is important because it goes to timing that Dr. Balch already asked regarding the OCD's ability to process permits. Mr. Feldewert asked you how long it takes to permit a multi-well fluid management pit, and I believe you said something like ten months, as an example. Do you know why it would take ten months to permit one of those?

A. I believe the one that I had experience with was an operator in southeastern New Mexico, and there were variances associated with that, clarification and --

Q. Was that a variance request with the OCD directly?

A. No. It was a variance by the operator to the OCD.

Q. Did it involve BLM APDs as well?

A. I don't believe it did. I mean, APDs were at issue in terms of trying to get additional timing for that -- for that containment.

Q. But this particular one example that you have --
A. Yes.
Q. -- required a variance request right up front?
A. Yes.
Q. This was the very first request of the OCD?
A. I think there was a liner and APD variance associated with that permit request.
Q. Okay. Thank you.
CHAIRPERSON CATANACH: Is that all?
MR. WADE: That's it.
COMMISSIONER BALCH: Thank you very much.
THE WITNESS: Yes. Thank you.
CHAIRPERSON CATANACH: Do you wish to recall any additional witnesses at this time?
COMMISSIONER DUNN: No.
MR. BRANCARD: If you would like to close the record and go into deliberations, that's the Commission's wish.
CHAIRPERSON CATANACH: Anything further in this case at all from anyone?
MR. FELDEWERT: No, Mr. Chairman.
CHAIRPERSON CATANACH: Okay. Let's go ahead and close the record and go into deliberations.
(The hearing proceedings conclude at 3:32

p.m., and at 3:33 p.m., the following proceedings occurred:)

CHAIRPERSON CATANACH: Mr. Brancard, I have not been involved in this type of deliberation. Can you give us some advice maybe on how to proceed?

MR. BRANCARD: All right. There are actually two rule proposals in front of you, just so we don't miss out on this. One is a proposal, essentially, to repeal existing Part 34 and replace it with a new proposal that we've been talking about here all day long.

The second, under tab two, is an amendment under the Definition Section, 19.15.2, to change the definition of produced water, and that is based on the fact that produced water has, in the meantime, been defined in the Oil and Gas Act. And this proposal copies the language from the Oil and Gas Act, just so we're clear what's in front of the Commission.

COMMISSIONER BALCH: The proposed language now matches --

MR. BRANCARD: The proposed language now matches what's in the Oil and Gas Act.

COMMISSIONER BALCH: I'm not going to use it --

CHAIRPERSON CATANACH: Yeah. Maybe we

ought to start with that one.

COMMISSIONER BALCH: I'd make a motion to adopt that, to change the definition of produced water.

CHAIRPERSON CATANACH: I'd second that motion.

Take a vote on that? Are we going to vote on this -- every issue?

MR. BRANCARD: You need to ask all those in favor or any objections.

CHAIRPERSON CATANACH: All those in favor of adopting the definition of produced water?

COMMISSIONER DUNN: Aye.

COMMISSIONER BALCH: Aye.

CHAIRPERSON CATANACH: Aye.

(Ayes are unanimous.)

MR. BRANCARD: Okay. And then, you know, as far as the rest of this, if you-all have any general comments you want to make to begin the discussion, you can do that now. Otherwise, what we've done in the past is simply, with a rule like this that has numeral sections, go sort of section by section to see what the issues are and kind of discuss each of them. That is not to say that some of the sections don't connect to other sections, but we can deal with that as we go along. I guess that would be my suggestion to start

general comments.

COMMISSIONER DUNN: Number one, I think State Trust Lands should at least -- especially reclamation, should at least have the same consideration as tribal and federal lands. State Trust is the second largest landholder of New Mexico lands, and I'd ask to have notice prior to the beginning of any process, whether it's the extension of the five years or variances. And as Commissioner of Public Lands, I support the use of recycled water, but as Commissioner, I believe that this rule looks to be a bypass of the Pit Rule. It's a code of words. Whether it's renewable or recyclable, it seems to be promulgated to avoid public scrutiny of the rule.

The use of the different membranes and no limit on size to me creates a greater threat to fresh water in the environment and are a cause of concern that the Energy, Mineral and Natural Resources Department and Oil Conservation Commission are wanting to do the rules because of a lack of human assets to properly oversee the current role of the Pit Rule.

COMMISSIONER BALCH: In general, I found the rule to be fairly well done. I think that all of the primary components of it are protective and, for the most part, equally protective to those put into Rule 17.

I do share a concern with Commissioner Dunn, and I think that most of my discussions are probably going to be with regards to the permit-by-rule components aside from minor changes here and there in the text.

CHAIRPERSON CATANACH: I think generally the rule is good as written. I do have some concerns about when you may construct a pit, the pit can be constructed prior to any inspections or without any inspections. I understand that there are consequences for not constructing the pit properly, but I would feel more comfortable if there was a process by which these pits could be inspected during construction to make sure they were constructed adequately. And I am concerned somewhat about notice landowners or other parties that may be affected on the surface. That's the extent of my comments, generally.

So do you guys just want to go through -- I'm sorry -- Commissioners, do you want to go through these section by section and just --

COMMISSIONER BALCH: That's probably a good way to start it.

MR. BRANCARD: I mean, unless you-all feel there is something significant you'd like to see addressed in this ruling to sort of send it back to the parties at this point. You've raised some significant

issues at this point.

COMMISSIONER BALCH: Even if we do that, it's probably going to be helpful for them to give their thought process on the rest of it.

MR. BRANCARD: Absolutely. Okay. Do you want me just to walk you through --

CHAIRPERSON CATANACH: That would be fine if you would be willing to do that.

MR. BRANCARD: You know, the first page, the first six sections, are the standard requirements of the Record Center, and I don't know if there are any comments with about any of those sections, 1 through 6. By sections, I'm looking at the fourth number here, so 19.15.34.1, so Section 1, Section 2. Any questions about the first six?

COMMISSIONER BALCH: I presume Section 5 would be added in to 2015?

MR. BRANCARD: It would be based on when this gets filed with the Record Center, the effective date. That's how it works. The publication in the New Mexico Register is usually the date. Unless the Commission wants to push that date out, that's going to be the date of effectiveness, when they publish the notice. We'll know that once we get it filed. So when we get it filed, you will know when it will be

published.

CHAIRPERSON CATANACH: I just have a comment. There are a lot of citations in these rules, and I would ask the Commission counsel, when you -- when you file the rules, promulgated or drafted, can you check to make sure that these citations are correct and check for any other minor, you know, corrections that need to be made at that time?

MR. BRANCARD: And that's an important point. That's something that often gets messed up in rules, is cross-references, so it's worth going back through prior to filing. And once you -- if you-all approve a draft, I can go ahead and do that prior to filing just to make sure.

CHAIRPERSON CATANACH: Thank you.

MR. BRANCARD: Section 7 is the three definitions that have been provided here.

COMMISSIONER DUNN: I wonder if flowback water could be addressed, or recycle or re-use, the definition.

CHAIRPERSON CATANACH: Would you like to add that to flowback water, add it to the definition?

MR. BRANCARD: Commissioner, if you look at Section 10B, where it lists -- I mean, produced water, as we've just approved the definition from the statute,

it's very broad, but it's very vague, right? So in 10B, there is an attempt to sort of indicate what is included within that term of produced water, and if you want to at that point --

COMMISSIONER DUNN: So flowback water would be in that?

CHAIRPERSON CATANACH: I believe it would be --

COMMISSIONER BALCH: Recycled, which is fluids.

MR. BRANCARD: There's flowback from operations in here.

COMMISSIONER DUNN: In B?

COMMISSIONER BALCH: The definitions are -- we may want to add more if we need to.

CHAIRPERSON CATANACH: So we're done with page 1; is that correct?

MR. BRANCARD: Section 8.

COMMISSIONER DUNN: There is a notice provision in Section 8, or where would it go?

MR. BRANCARD: You could put that -- you could put that anywhere, really, maybe at the siting requirements. You're talking about, say, at the time they register the facility?

COMMISSIONER DUNN: The permit's filed

or --

MR. BRANCARD: Right. That they would have shown that they've provided notice to the landowner?

COMMISSIONER DUNN: Surface landowner.

COMMISSIONER BALCH: But there is no particular requirement for that now even in Rule 17, is there?

COMMISSIONER DUNN: That doesn't mean we can't add it.

COMMISSIONER BALCH: Well, we can do a lot of things. It doesn't mean we should do them all, because you may -- you may open up other problems in other rules if you do that. Notice may be something that would best be discussed when we get around to the permitting or the permit by rule --

COMMISSIONER DUNN: Okay. Okay.

COMMISSIONER BALCH: -- part of it.

CHAIRPERSON CATANACH: Yeah. I think that Part 8 -- I do believe the district office has sufficient discretion on the C-147 to require additional testing, and I also agree that I don't think that that's necessary to put on the language proposed by EDF.

COMMISSIONER BALCH: Section 8 looks fine to me as well.

MR. BRANCARD: Okay. And as the testimony

indicated, some parts of this rule are carryovers from the current Rule 34. So, like, 8B is actually a provision in here.

CHAIRPERSON CATANACH: That's already in there?

MR. BRANCARD: Yeah. And, you know, there's been talk about disposition by use. Disposition by use is a term that comes from the Oil and Gas Act, in part. It's sort of to divide the world of regulation between the Oil and Gas Act and the State Engineer's jurisdiction. So disposition by use allows this agency to regulate it and keeps it out of State Engineer. It's a strange term, but that's where it comes from, is the Act, and that's the genesis.

Okay. Section 9. This is where we get into what a recycling facility is and isn't and when you're required to register and when you're required to permit a recycling facility.

COMMISSIONER DUNN: So this is where it would be added at that time, you think?

(Ms. Foster exits the hearing.)

MR. BRANCARD: I mean, I don't think there is any -- B is sort of where it says you have to register a recycling facility, and the first several are ones that are covered under other rules. So you have a

permit for an activity under a different rule, and you have a recycling facility with it. It's just covered in that permit. But I think the key, then, is B(7), which is what combine the two concepts of the recycling facility and the recycling containment. So if you're using this recycling-containment idea, then it becomes a recycling facility that you just have to register, you don't have to get a permit for.

COMMISSIONER DUNN: And 7? So insert "permit" there instead of "register"?

MR. BRANCARD: Well, or -- or you would just delete 7, which would trigger C, which says if you're not identified in B, you have to get a permit.

COMMISSIONER BALCH: All right. I guess now's the time to discuss the merit of permit by rule.

COMMISSIONER DUNN: To me it seemed like the real reason for the -- for not -- for the change is because there's not enough people to get the permits done.

COMMISSIONER BALCH: Well, I think the idea is not so much that. I think it's really more this -- to make a streamline process that it can be done relatively quickly. I don't know how much real speed-up you get from it. You still have to -- if you're doing it in production and drilling and completion, you still

need to get all those APDs and organize them as it is, but you would just be able to register this facility much like you would a tank under the current Rule 17.

COMMISSIONER DUNN: Once you get this built, all the wells are not going to slow down the other wells.

COMMISSIONER BALCH: Right. So in Rule 17, we had these multi-well fluid management pits, and what differentiated them was they were driven from -- at least containments, was that they were driven by the life cycle of the drilling permits. So when you were done with the last drilling permit, then you shut it down. So maybe it was you had a temporary facility just for that operation, and then we'd go away when that was done.

Now, there was a permit process to get that pit --

COMMISSIONER DUNN: Right.

COMMISSIONER BALCH: -- which is essentially the same thing as this. The difference, the way I see it, is that this -- these containments will probably have a longer life span than the way they are envisioned than multi-well fluid management pits even though we have the five-year cap on it. And we mirrored that five-year cap here. You may have 12 wells, and

when you're done drilling in 36 months, you shut down, under Rule 17, the multi-well fluid management pit. With these, you can also envision a facility where a service company sets one up and uses it to manage waste.

So there are a lot of really nice advantages to being able to have a facility like this, and I fully support the content [sic] because you reduce that trucking tremendously. You're not having all the traffic on your roads. You've not having pollution from the trucks that are moving all those tanks around. You don't have to have 50 huge diesel generators to run your -- your pumps between all those tanks and line loss, et cetera. So there are good reasons to do it.

The question is -- it's effectively the same thing as a multi-well fluid management pit the way it's written and being federal, except without a permit. You're allowed to register it instead. My question really is -- is not whether that's a necessarily a bad idea, although somebody else might say, Why can't we do that with a six-month temporary pit, but how badly does this throw a wrench into the overall rules if we change that?

MR. BRANCARD: Part of it is a processing issue. As we have testimony from the Division, they're going to review the registrations just like they would

have reviewed a permit requirement. You know, if there is -- the risk, as you said, is with the applicant, the operator who can register knows what they're supposed to do, goes out and does it, okay, and they're taking the risk that they haven't, you know, messed up their application process, the registration process to the extent that they're violating a siting provision or, you know, not doing the liner correctly or something that gets discovered in the registration review by OCD and then OCD has to come out blow the whistle and stop this whole expensive operation in the middle.

Some operators may decide: We're going to hand the registration in and we're going to wait a few weeks before we start up just because we don't want to, you know, take the risk or sit down with OCD with the registration like you would an application and say, You guys see any problems?

COMMISSIONER BALCH: So if it could be ensured of that level of dialogue, then that's a positive impact. I was just concerned that we have a Rule 17 that describes something that's virtually identical, but we treat it differently and it has to be permitted.

CHAIRPERSON CATANACH: Well, what's the difference between a Rule 17 and this rule with regards

to permit versus registration?

COMMISSIONER BALCH: The only thing you can register is a tank in Rule 17.

CHAIRPERSON CATANACH: But is the permit process for a multi-well pit in 17 more detailed than this, that process for obtaining a permit?

COMMISSIONER BALCH: The details of construction, closure, all the requirements that are in this rule were lifted, essentially, from Rule 17 with fairly slight modifications. So there's not a lot of differences in how you construct it, run it, et cetera. The only thing that changes is when you close it. Rule 17 is more specific, ties it to a drilling APD and associated completion. But that would basically preclude someone from going and setting up an independent third-party company that runs a water source for some region that allows you to recycle instead of let's find some other source of water.

And I know -- I know things aren't moving right now, but a year ago, if you were trying to get frack water in the Permian Basin, you could -- you could have your project sitting there for six months while you were waiting to get water together. So there is definitely a demand, but there is no way in Rule 17 to allow it, I don't think, from a third-party point of

view or unless it's associated with a particular project. So that's the primary difference.

But physically the pit itself, the containment, is the same as a multi-well fluid management pit. It's essentially the same construction, essentially the same purpose.

COMMISSIONER DUNN: Does the size come into that or not?

COMMISSIONER BALCH: There is no size. We did have a lot of discussion in Rule 17 about how big could these things get. We did hear from -- I think it was Mr. Welch that the largest one in Texas is 500,000 --

COMMISSIONER DUNN: Barrels.

COMMISSIONER BALCH: -- barrels. There are some practical limits to how deep we can make it based on the slope of the sides, things like that. I mean, they're not going to become the size of a township, I guess, or 500 feet deep. It would be very impractical. But 500,000, it's -- I think that's conceivable. I could see someone -- a third party, in particular, doing that. Or if you were working in a potash area and you were working off a drilling island, drilling 30 wells or 50 wells, yeah, it could be that big, 500,000. I could see that.

CHAIRPERSON CATANACH: So I guess my question is if we change that rule to where the containment has to be permitted rather than registered, are we gaining anything on that?

COMMISSIONER BALCH: Just consistency with Rule 17, making sure that -- I think, in a sense, Commissioner Dunn was right. This is circumventing flaws in the Rule 17 description of a multi-well fluid management pit without revisiting Rule 17, which last time we did it, it was 30 days of testimony and 15 days of deliberations, not something I care to repeat, if necessary. But it's fixing something that you can't do. We made permanent pits, multi-well fluid management pits and temporary pits in Rule 17. We didn't make a pervasive multi-well fluid management pit or third-party operation.

So since it is another category, the question is: Do we -- even though it's another category of pit, do we want to give it a different metric than we gave pits in Rule 17? And are there any implications to that from a statutory point of view?

MR. BRANCARD: Oh, I think you have the authority to structure this rule the way you want to structure it. There is nothing in the Oil and Gas Act that requires a permit -- even requires a permit to a

pit. That was just the way the Pit Rule was developed to work out the issues, to kind of get -- force the operator to lay out exactly how you're going to build it, where you're going to put it and have the agency oversee that.

You know, arguably, the notion here is that you're dealing with materials that perhaps are less, you know, dangerous in some ways than, say, other kinds of disposal waste, liquid waste at a facility, and you're moving the liquids through. Obviously, that requirement of the 20 percent, it's designed to move material through this facility quickly. It's a different kind of mechanism here more narrowly focused on the goal, which is recycle and re-use. Whereas, the pits and the Pit Rule, you know, serve a number of different purposes. Multi-well fluid management, you know, can be used as a recycling, but it doesn't have to be used as a recycling.

COMMISSIONER BALCH: But there are not many other uses that you would use. I would expect, if we pass this rule, that nobody would try and permit multi-well fluid management, that they would permit -- they would permit or register a recycling containment instead.

MR. BRANCARD: Well, and then use the other

temporary permitted pits under the Pit Rule for other uses.

COMMISSIONER BALCH: Right. The temporary pit, in particular, you may have a lot more solid material than tend to concentrate your waste something more. Of course, over five years of running fluid through -- if you take an example of a company, you know -- I think I saw on the slide basic, they have all these frack tanks. What are they going to do when people aren't using frack tanks? They're going to build ponds, right? So they're going to keep that thing going for five years, plus however many extensions they can get, and there will be some concentration, some sludge forming on the bottom, things like that.

Of course, that effective nature of the multi-well fluid management pit was designed in Rule 17. They have the same safeguards for monitoring as the permanent pit does. So you are going to have some monitoring assurance that stuff's not getting out of there.

MR. BRANCARD: I mean, the other -- the other difference in the permit by rule versus permit is that Rule 17 laid out a fairly detailed and extensive permitting process. Okay? So it isn't just that you can't site a facility in a location. You've got to

provide all this information about siting.

COMMISSIONER BALCH: Making some levels of notification at certain points.

MR. BRANCARD: So there are closure plans. There is an operational plan. There is a design plan. There are -- I mean, it's a pretty detailed application process which the agency has to then go through here.

This rule in some ways will be dependent on how OCD redoes the C-147 form. How much do you want from the registrant, you know, to show that you've hit the siting requirements, you've hit the operational requirements.

COMMISSIONER BALCH: So if I can just inject something at this point in the discussion. When we did Rule 17, before we closed the book on it, we looked at the revised C-144. So in this case, if we were to rely on the C-147 to take care of some of our concerns, we would want to delay a final adoption until -- until we saw that form and made sure it addressed any concerns we might have.

CHAIRPERSON CATANACH: So we can leave -- we can leave these pits as being registered instead of permitted but beef up the 147 to add additional siting requirements or whatever --

COMMISSIONER DUNN: Notification.

COMMISSIONER BALCH: Yeah. Whatever you felt -- the Division felt was necessary for --

MR. BRANCARD: Well, or -- or -- or proof that the operator has met these requirements.

COMMISSIONER BALCH: So the concern with making it part of the C-147, it's easier to change a form than it is to change a rule.

MR. BRANCARD: Yes.

COMMISSIONER BALCH: So some future directors could have an idea of how things should be run and change things dramatically without necessarily going through a fresh rulemaking process.

MR. BRANCARD: The flip side of that argument is that the more detail you put in the rule, the more you're stuck with that detail going forward.

COMMISSIONER BALCH: Absolutely.

MR. BRANCARD: And what we're going through right now, again as the Commissioners have pointed out, is running into limitations authorized under the Pit Rule and how the perspectives of oil and gas operations are changing and there is a greater need for recycling, and now we've got this rule that's a year-and-a-half old, but it doesn't really get you there.

COMMISSIONER BALCH: It doesn't do the job because it was overly -- dependent upon putting a time

limit on the multi-well fluid management pit based on drilling APDs, which is not sufficient for the needs of a recycling containment. So I definitely understand that frustration as well.

CHAIRPERSON CATANACH: Mr. Brancard, what is process of amending a form? Is that a formal process?

MR. BRANCARD: No.

CHAIRPERSON CATANACH: That can be done at -- does that require an adjudicatory hearing to do that?

MR. BRANCARD: No. The Division regularly updates its forms.

COMMISSIONER BALCH: So I think a really good rule is going to balance protecting what you're trying to protect, but also it's going to protect people from ad hoc changes later on. So you have to kind of balance that level of detail. I guess if we would have had that right in Rule 17, we wouldn't be here today on this particular issue.

MR. BRANCARD: Yeah. I mean, you can look right here at 10A. Okay? 10A is where the C-147 kicks in, right? And all it says is all operators or owners shall be named in the C-147. You could -- you could add a sentence to that that the C-147, you know, shall

require sufficient detail to show compliance with Sections 11, 12, 13, 14 -- even 14, closure, you know. So, therefore, you're directing the Division that they have to prepare a form that will show that, you know, that -- and it helps the Division, obviously, that they have the information in front of them that shows -- you know, that they don't have to go running out in the field checking every one of these with their tape measure, how far away the nearest house is or whatever. I mean, that's one way to deal with what your concern is, you know, trying to get more specificity.

You can keep the form concept in place, and the registration concept would provide more specificity and direction to the Division about what to put in the form. Then you know the form is connected to what you're requiring the operators to do.

CHAIRPERSON CATANACH: I think I would be in agreement with that change, the C-147 to reflect that. I think I'd be okay with these containments being registered instead of permitted.

COMMISSIONER BALCH: One of the arguments people made for registration for tanks, they didn't ask for temporary pits or permanent pits or any other kind of pit. They asked for tanks for the reason you would essentially have a Division-approved plan for closure

that you would just copy for every new site you created. And it would generally be sufficient to address any of the issues we would come up with about closure. So as long as we think those elements are in this rule the way it's written and make sure that those are targeted directly as needed in the form, I don't have a particular problem with permit by rule just as long as we're able to do that without conflicting with the previous rule.

CHAIRPERSON CATANACH: So we get back to the question of whether or not that conflicts with the previous rule and what are the consequences of that, I guess.

MR. BRANCARD: It's hard to discuss consistency and oil and gas regulation in New Mexico. So to get on my soapbox here for a second, you know, we're going to have a birthday party next month for the Oil and Gas Act. It will be turning 80 years old. And so the rules that have been enacted have been enacted layered and layered, one after the other over the decades. And, you know, what a regulatory scheme looked like in the 1950s and '60s is not what a regulatory scheme looks like in the 1990s or 2015. So there's never been a complete rewrite of the oil and gas rules in New Mexico to make them all consistent, so it's hard

to argue that consistency -- there is not necessarily a standard that we have to go by here. And as I said, there is no requirement, you know, that you have to have a particular permitting process by statute. So I think you have the freedom to do -- to organize it the way you'd like here.

COMMISSIONER BALCH: So, I mean, if this is to be interpreted -- and it probably will be by some people -- essentially, we're replacing that part of Rule 17, and that's no problem. What if someone said they didn't like this --

MR. BRANCARD: Well, you know, I mean, I think -- all you have in the Oil and Gas Act is a requirement "to regulate the disposition of water produced or used in connection with the drilling for oil and gas and to direct surface or subsurface disposal of water, including disposition by use" -- that's where the phrase comes from -- "in drilling for or production of oil and gas" -- and then it goes on to talk about a few others things, road construction, maintenance, et cetera -- "in a manner that will afford a reasonable protection against contamination of freshwater supplies designated by the State Engineer." So that's the standard you're shooting for. Is this rule, in dealing with disposition by use of produced water, recycling --

we're going to put recycling in that term. Okay? Are you regulating it in a manner that will protect against contamination of freshwater supply?

COMMISSIONER BALCH: Under Rule 17, we -- we would change the language of "afford reasonable protections" to "equal or better protection of environment, public health and water." So, I mean, we certainly set a precedent for redefining even parts of that.

MR. BRANCARD: I mean, there's -- you know, having had to defend Rule 17 in the courts, I mean, part of what you're doing here is you're laying a series of requirements on these facilities where you can have them sited away from groundwater, et cetera, you know, how you operate them, the liners you put in there, how you close the facility, what you allow in the facility, how long you allow the facility to operate. All of those you have to add up and say, Does this, in total, provide protection of freshwater supplies? It's not just is the chloride testing method in Table 1 good enough.

COMMISSIONER BALCH: Right.

MR. BRANCARD: It's, you know: Are all of these things combined providing protection of freshwater supplies?

COMMISSIONER BALCH: So I guess the very

first question is do we to keep or strike 9B(7)?

COMMISSIONER DUNN: Do you normally go through a vote on each section? How do you do it?

MR. BRANCARD: You sort of do that as a preliminary way of getting to the end.

COMMISSIONER BALCH: There were parts of Rule 17 that we agreed on, and we were able to vote on a large blocks of it at one time. There were other portions where there was some disagreement, and we voted on them item by item. And then the record would say how the majority voted.

COMMISSIONER DUNN: So we've agreed up to Section 9, then?

MR. BRANCARD: Yeah. So far we've gone through Section 8.

CHAIRPERSON CATANACH: I think the sticking point on my part is 7.

COMMISSIONER BALCH: The permitting versus permit by rule.

COMMISSIONER DUNN: So is it appropriate to make a motion that we approve through Section 8 and then go into 9? Is that how you want to do it?

MR. BRANCARD: I mean, I think you'll want a motion all the way at the end.

COMMISSIONER DUNN: I understand.

MR. BRANCARD: I mean, just so you agree, sort of a consensus on changes along the way, you don't need a motion, I mean unless -- unless the Commissioners want to make sure that their vote is clearly recorded on a particular issue, which may be used here.

COMMISSIONER BALCH: Well, given what Counsel Brancard has said, I would be comfortable with permit by rule as long as we make sure the C-147 has the appropriate pointers in it.

CHAIRPERSON CATANACH: I would also be comfortable with that, just 1 to 10.

COMMISSIONER BALCH: Okay.

MR. BRANCARD: Also in 9, 9E -- I don't know if Commissioner Balch had raised a question on reporting on the water, monthly reporting. Did you want to look at 9E?

COMMISSIONER BALCH: Right. 9E reads: "The operator of a recycling facility shall keep accurate records and shall report monthly to the division the total volume received for recycling and total volume that leaves the system."

The question was brought up: Is there a way to incorporate the monitoring of the amount of fresh water that goes in the system so you can then put that in your glossary brochure at the end of the year that

you saved so much fresh water? And that, I think, is a valuable number to quantify if you possibly can. I don't know if the place to do it is to add something in there, which makes it more complicated, you have to report X, Y and Z, or to have it in the C-147, where the type and nature of the water -- nature of the water is required, and then leave it up to the Division to define what is brackish and what is fresh and what is produced and what is flowback or if we care.

COMMISSIONER DUNN: Either that or add "fresh water."

COMMISSIONER BALCH: Fresh water versus non-fresh.

CHAIRPERSON CATANACH: I would think adding that to E would be appropriate because it's going to be a new form anyway, probably a C-148, which I wouldn't object to adding a requirement that the operator has to --

COMMISSIONER BALCH: I don't even think that the source is important. Just the nature of the water is important. Is it fracture, or is it brackish?

MR. BRANCARD: So we could -- we could write: "The operator shall report monthly to the Division the total amount of water, comma, including the amount of fresh water received for recycling and the

total volume of water leaving the site."

COMMISSIONER DUNN: You'd want "fresh water" delineated, though, right?

COMMISSIONER BALCH: There is a definition of fresh water somewhere in another rule. I know the EPA standard is 690 TDS or something like that.

CHAIRPERSON CATANACH: There may be a definition of fresh water under Division rules already.

MR. BRANCARD: I mean, the protection of freshwater supplies is for the State Engineer generally.

COMMISSIONER BALCH: There's going to be a definition of fresh water somewhere.

MR. BRANCARD: Yeah.

COMMISSIONER BALCH: So you would have to write that as "fresh water as delineated by wherever you find it in the regulations."

MR. BRANCARD: Yeah.

COMMISSIONER DUNN: But you would want total volume, including fresh water? Total water and fresh water delineated out so you have the amount?

MR. BRANCARD: Yeah.

COMMISSIONER BALCH: Mr. Welch noted that there probably would not be a whole lot of actual fresh water going in, but still 1,000 in comparison to previous years.

MR. BRANCARD: Fresh water is defined in the oil and gas definitions.

COMMISSIONER BALCH: That's the same as the BLM, the protective water limit. Okay.

CHAIRPERSON CATANACH: So we're up to 34.10. Do we need to delineate the form number in Part E at this time? The form has not yet been created, is my understanding, so -- but if we -- if we number them consecutively, I believe it would be C-148.

COMMISSIONER BALCH: In E?

CHAIRPERSON CATANACH: Yeah. The last form we have is the C-147.

COMMISSIONER BALCH: It seems like there is already a monthly reporting form that's used for a variety of other purposes.

CHAIRPERSON CATANACH: A C-115.

COMMISSIONER BALCH: That wouldn't be appropriate to this.

CHAIRPERSON CATANACH: I don't think so.

COMMISSIONER BALCH: So probably a whole new form, C-148.

MR. BRANCARD: Any other questions on Section 9?

Okay. Section 10. So that's where we would put in something more specific about the C-147, on

10A.

COMMISSIONER BALCH: I like your language to the C-147, shall ensure that sections -- regarding siting closure -- and let's see -- design and construction. And that's 11, 12, 13 and 14. Not 15. 11 through 14.

MR. BRANCARD: Well, 15 --

COMMISSIONER BALCH: You're probably right.

MR. BRANCARD: I have the C-147 form. "Shall require documentation that the containment will meet the requirements of 19.15.34.10, 11, 12, 13, 14 and 15.

COMMISSIONER BALCH: Yeah. 11.

CHAIRPERSON CATANACH: Strike 11.

COMMISSIONER BALCH: 11 and 14. And I think that Section 10 is specific enough about what you're monitoring that we don't need any more about that, keeping track of the protection system. Is that "circular," because of the Section C-147 requirements?

MR. BRANCARD: The C is a 147 for extending it five years. That's what you file at the end of five years, and then another C-147 has to extend it --

COMMISSIONER BALCH: Right. So you're -- you're right. So 13 is operations, where we're going to be covering the monitoring operations.

CHAIRPERSON CATANACH: Before we leave 10, recycling containments, do we want to talk about notice on the construction of these containments?

COMMISSIONER BALCH: These can be very large. I can actually wake up and find a 100-acre containment on the land without somebody telling me about it. I think there are requirements that there is notice.

MR. BRANCARD: But we have -- for some injection wells, et cetera, we do do lots of notices, certain types of --

CHAIRPERSON CATANACH: But under the Rule 17, notice is not required.

COMMISSIONER BALCH: I'm starting to stretch my memories of Rule 17. That was towards the end. There's notice that's built into the permit process.

COMMISSIONER DUNN: So would there be a limit on time, 10 years or 15 years?

COMMISSIONER BALCH: I think the way it's written, you could run it for as long as they let you and then tear up the liner and test the ground and put a new liner down if you want, re-register it as a new pit. So I think practically speaking you would probably see that occurring by -- as a permanent pit, except

permanent pits have a defined size limit to them. So if you were some well service company and you decided to build a recycling containment and use it to service a broad area, who knows?

COMMISSIONER DUNN: I mean, this is done under the guise that it's a five-year process with a couple of extensions, is pretty much the way it reads to me.

COMMISSIONER BALCH: Well, it doesn't say about how many extensions you can have either.

COMMISSIONER DUNN: Right.

COMMISSIONER BALCH: You could have 12 extensions, run it for 17 years.

COMMISSIONER DUNN: Or longer.

COMMISSIONER BALCH: Yeah.

COMMISSIONER DUNN: I mean, what was the intent with the five years? Just to match bonding?

COMMISSIONER BALCH: In Rule 17? I'd have to go back and look. I think it was more of a concern of the integrity of the pit and making sure it wasn't there longer than it needed to be. They didn't want someone to permit it for five years, be done with all their operations in two years and take -- and then three years before you clean it up. I think that was the primary reason for a time limit.

I did look up -- at lunch, I read the GRI White Paper Number 6 about the liner materials exposed to sun, and it turned out that they're modeling it to Arizona, so --

COMMISSIONER DUNN: It should be representative.

COMMISSIONER BALCH: -- the UV should be good for New Mexico. We're a little higher up.

MR. BRANCARD: But that was the nature of your questioning of the witness who testified about liners, was how long is this going to --

COMMISSIONER BALCH: How long is it going to last?

So, of course, when you're testing a liner for a paper, you're testing it under very controlled circumstances. So if you have just liner exposed to your UVA radiation under a lamp for 40,000 hours and then you figure out a relationship between that and some known surface facility, that's what they did in their paper. What they're not accounting for is the fact that you have other stuff going on there. You have fluids, water, chemicals, other stuff that may come into play. That's where the inspection requirement comes in, and the practical life span of these things is probably not really known until the first one lasts for a while.

COMMISSIONER DUNN: Okay.

MR. BRANCARD: So yeah, I mean, 10C is where you want to address that issue. That's your duration provision.

COMMISSIONER BALCH: I think it's fine the way it is. It's a good starting point, and it mirrors what we labored over extensively in Rule 17.

COMMISSIONER DUNN: So is there an extension in Rule 17 also?

COMMISSIONER BALCH: Five years is -- the life span is five years, and you can get one-year extensions.

COMMISSIONER DUNN: With no limit?

COMMISSIONER BALCH: I can't remember if there was a limit or not. There may have been a limit.

MR. BRANCARD: Well, I mean, the duration of the multi-well fluid management pit is driven by the wells that are attached.

COMMISSIONER BALCH: But there was an overall five-year desired lifetime. I remember that. I think it might have been mentioned in today's testimony as well.

Commissioner Dunn, I'm a big fan of good engineering practices, and I'd rather let it play out and see how long they last.

COMMISSIONER DUNN: Okay.

CHAIRPERSON CATANACH: Well, did we address the notice yet, or are we --

MR. BRANCARD: Yeah. I don't know if this is the right place to do it, but do you want to talk about that issue?

CHAIRPERSON CATANACH: Well, I'm kind of in agreement with Mr. Balch. I'm not sure that being a landowner I'd want to make wake up one day and see a huge pit on my property and I wasn't notified about it. And I'm not sure how Mr. Dunn feels about that with regards to state land. When you start talking about notice requirement to the surface owner, do you then get into all the things that go along with that, objections to the containments, procedures when you get an objection, you know, hearings, things like that? So that goes all along with that.

COMMISSIONER BALCH: In Rule 17, did we explicitly notify surface owners?

MR. BRANCARD: I don't think so.

COMMISSIONER BALCH: I don't think so either.

MR. BRANCARD: I mean, there is just the closure-in-place issue with a temporary pit, but that's about it, which is obviously a real issue for surface

landowners the way they are defined.

COMMISSIONER BALCH: Right.

COMMISSIONER DUNN: They'd have to include that in the permit, wouldn't they?

COMMISSIONER BALCH: Yes. You have to notice -- you have to -- when you're filing your permit, you have to indicate that you're planning to close on site, I believe.

MR. BRANCARD: I don't know that you have to make the decision, but you have to notify the surface owner that you're going to close.

COMMISSIONER DUNN: Do you have to give a closure plan up front in the permit process?

MR. BRANCARD: Yes. You have to give a closure plan, but you give it to the agency, not the --

COMMISSIONER BALCH: So for these pits, essentially it's containment. Essentially, you already have a closure plan here (indicating), defined in the rule. That generally mirrors the requirements in Rule 17. I mean, notification, I think if the Chairman approves, you have an obligation there. If you have notice, then that suddenly opens up a whole can of worms that they don't want.

COMMISSIONER DUNN: Well, there might be valid reasons not to want it, too.

COMMISSIONER BALCH: Oh, sure. But you have to also put in place a process for giving the location of the pit or whatever you try to do with it. The permit by rule could mean that nobody's looked at it until it's already started to be constructed.

COMMISSIONER DUNN: Or constructed.

COMMISSIONER BALCH: If it's fast, yeah, 29 days or if you have a busy office.

Where would -- where would the State Land Office want to be noticed?

COMMISSIONER DUNN: Prior to construction.

COMMISSIONER BALCH: Prior to construction.

CHAIRPERSON CATANACH: Well, I think a prudent operator would -- if they know they have to give notice, they would not give notice before -- I mean, they would not start constructing their containment before they knew that it was going to be okay, I would venture to say. But when you give notice, then you also give -- you know, basically all of the rules have time limits, you know. You have 20 days to object to this and things like that. So do you want to get into all that, also?

COMMISSIONER BALCH: That's the sort of material that is in Rule 17 with regards to closure on site. You do get a notice and a timeline, and there is

a defined process -- hearing process, appeal process that you go through.

I guess my next question for the Land Office is what would you do if you got one of these and they insisted they want to build a containment?

COMMISSIONER DUNN: Well, I think you can go through and see what the surface -- what's going on at the surface as far as the lessee or -- I mean, how do we know there isn't a solar project coming in that area? I mean, there could be multiple uses that -- you know, if you've got a well site there now, but somewhere maybe solar's targeted in Lea County. I mean, there are reasons to get notice.

MR. BRANCARD: But the public agencies, Land Office, BLM, have their own leasing regulatory processes that they can use to sort of cause these operators to have to get their approval, say, before they can even submit an application.

COMMISSIONER DUNN: Whether or not this falls under the mineral lease, which is statutory, which we wouldn't change --

COMMISSIONER BALCH: Well, as a leaseholder, though, you do have a good amount of leeway of what you -- what you can do on the surface, right?

COMMISSIONER DUNN: Not if it's ancillary

to drilling a well. Is it?

COMMISSIONER BALCH: A lot exceptions there.

COMMISSIONER DUNN: I mean, as far as easements for pipes and anything else, as far as in the lease, no, we don't get lease. There is no --

COMMISSIONER BALCH: What are the -- are there any notice requirements for the multi-well fluid management pits?

MR. BRANCARD: I don't think so. I think it's the same issue that the Chair has brought up. The notice generally means -- you need to do notice and give people an opportunity to comment, or you require just flat-out approval, you know, that you have to bring in approval from the -- we haven't done that with pits other than the issue of, you know, closure in place.

COMMISSIONER BALCH: So we have a couple things we're supposed to protect as the Commission. One of them is correlative rights. So the place where you run into friction here is how do you balance the right of the landowner with the right of the producer to get at resources? And this could be construed to be --

COMMISSIONER DUNN: Restrictive?

COMMISSIONER BALCH: -- a valuable tool for being able to drill. And that's probably why people

haven't --

COMMISSIONER DUNN: Haven't tackled the issue?

COMMISSIONER BALCH: Yes. And it's something that in my time on the Commission I've always wondered about.

MR. BRANCARD: Well, I mean, that's a good point. I mean, that -- you know, you compare this agency, say, you know, to the BLM, which is doing all of the above. They're -- you know, they're leasing the minerals. At the same time, they're protecting their surface estate, and so they're trying to do all of that. Whereas, we have kind of a more limited focus on dealing with correlative rights, waste, dealing with the waste products of the industry, which is why we have the authority to deal with these rules.

COMMISSIONER BALCH: So with an oil -- these may not necessarily be on an oil and gas lease, right?

COMMISSIONER DUNN: Right.

COMMISSIONER BALCH: An oil and gas lease, you trade some of your control of your surface for the potential of royalties --

COMMISSIONER DUNN: Right.

COMMISSIONER BALCH: -- and you'll be

reimbursed.

For this thing, you might not necessarily be reimbursed. Those aren't an oil and gas lease. It would probably be related to the production and then that would indirectly benefit you, but if this is sited on somebody else's land, there would probably be a different agreement with that landowner.

MR. BRANCARD: Or the Land Office. There may be a business lease.

COMMISSIONER DUNN: Right, a business lease.

COMMISSIONER BALCH: Maybe it's already taken care of by that landowner.

COMMISSIONER DUNN: It's just -- you know, the fear would be that one of these facilities is built in the middle of a section where one company has all the minerals for that section. And how are we going to know, once it's constructed, that they're not going to bring drilling fluid from other well sites onto that lease?

COMMISSIONER BALCH: I think they're going to. I think they explicitly say that.

COMMISSIONER DUNN: Right. But from our standpoint, that wouldn't -- they couldn't do that. It could only be related to the wells within that section.

COMMISSIONER BALCH: Probably what they're asking for is flexibility to be able to -- particularly if you're talking about, like, a third party with a business lease, presumably. Maybe it would be on a mineral lease. I don't know. But they want to be able to sell and take that water from all over the place.

COMMISSIONER DUNN: Right. And from our standpoint, we don't want them to enter into a business lease, period, which may be just a rule for us.

COMMISSIONER BALCH: I think there is nothing to stop you from doing that. That might be the cleanest way. And then, presumably, some other landowner would have their own lease agreement with the company.

COMMISSIONER DUNN: Right.

COMMISSIONER BALCH: They wouldn't be unnoticed that something was going to happen there.

COMMISSIONER DUNN: Let's go on.

MR. BRANCARD: Okay. So then are we comfortable with Section 10?

COMMISSIONER BALCH: I think so.

COMMISSIONER DUNN: Section 11 supposedly mirrors completely.

MR. BRANCARD: Section 11. Any questions?

CHAIRPERSON CATANACH: No.

COMMISSIONER BALCH: It's completely taken from the Pit Rule. I don't think we need to spend any more time on the siting requirements.

MR. BRANCARD: Okay. Section 12?

COMMISSIONER BALCH: Some language changes.

COMMISSIONER DUNN: Under 17, what was the fencing requirements that makes it different than --

MR. BRANCARD: Where are the exhibits?

COMMISSIONER BALCH: Really they just took out stuff that was specific to -- it's in Exhibit 14. It just takes out language that's specific to pits and tanks.

MR. BRANCARD: Well, but if you look at D(1), there is a difference here between the Pit Rule, which deters unauthorized access. Period. In this rule, it says "unauthorized wildlife and human access."

COMMISSIONER DUNN: So this is going to require a fence, even if there is a fence around the perimeter, around the rest of the site?

COMMISSIONER BALCH: Well, I think this discussion came up also in the Pit Rule, and the original language was to prevent, how can you prevent unauthorized access.

COMMISSIONER DUNN: Right.

COMMISSIONER BALCH: And so what you want

to do is deter it. And I think what they're trying to do with their shortened version of the wording here is allow for best practices. If you already have a fence around the entire site, why do you need a separate fence around the pit or containment?

COMMISSIONER DUNN: This looks like it's going to require that.

COMMISSIONER BALCH: Well, I don't think it says how far away the fence has to be.

MR. BRANCARD: And the other issue that Commissioner Balch raised was the netting issue.

COMMISSIONER BALCH: Yeah. "Protective of wildlife and migratory birds" was the Rule 17 language. I think I explicitly asked if they would be okay putting that back in. I think there are non-migratory birds and other wildlife also around.

MR. BRANCARD: So to make it consistent with Rule 17, it would be "screen netted otherwise protective of wildlife, including migratory birds"?

COMMISSIONER BALCH: I guess so.

MR. BRANCARD: Is that okay with the Commissioners?

CHAIRPERSON CATANACH: Fine with me.

COMMISSIONER DUNN: Uh-huh.

COMMISSIONER BALCH: Where we at now?

MR. BRANCARD: We're finishing up 12.
COMMISSIONER BALCH: Okay. So the other part in 12 that was new was the possibility of using the geo --
MR. BRANCARD: Liners.
COMMISSIONER BALCH: Instead of having 2 feet of packed dirt, instead of having -- I think it's 30 or 31 or 32, geonet leak-detection layer.
COMMISSIONER DUNN: What is that? 7?
MR. BRANCARD: Yes.
CHAIRPERSON CATANACH: Yes.
COMMISSIONER BALCH: And it's an option. It's not a requirement that they use that.
COMMISSIONER DUNN: So have you seen that?
COMMISSIONER BALCH: I've never seen it, but I've seen bulldozers running around in lined pits, and it's not pretty. It seems like a little lower-impact way to get a similar result.
You brought up the point in cross-examination that would it provide as much penetration or puncture resistance, say, if a spar falls off of a frame or something and spears through it. Probably not, but that's what the leak-detection system is for, to prepare for --
COMMISSIONER DUNN: I don't think it would.

If it went through the bottom layer, then it wouldn't drain down to the -- it could just go straight in the ground, not into the leak-detection system.

COMMISSIONER BALCH: I mean, some of it would get to the leak-detection system. I'm not a liner expert.

There was a good amount of discussion in Rule 17 about the secondary layer, and one of the proposals was to not have a secondary layer at all because of too much potential from a tractor driving over it, it may produce this while you're trying to put down 2 feet of dirt. I think that this is -- it sounds like or it was testified that this is a better way, to the people who are adopting this practice.

COMMISSIONER DUNN: I would agree. A puncture's going to be -- that would be different.

COMMISSIONER BALCH: Yeah. I guess you'd probably know not to drop a piece of your crane in your pit. So I think I'd be okay with the use of the geonet.

CHAIRPERSON CATANACH: I would also. And they also have the option -- they can use either/or.

COMMISSIONER DUNN: Have you seen the geonet?

CHAIRPERSON CATANACH: I have not.

Can we please go on to 13?

MR. BRANCARD: Is that it for Rule 12?
Okay. Rule 13.
COMMISSIONER DUNN: Anything on 13?
COMMISSIONER BALCH: They changed the wording of the operations. The Pit Rule was very specific about how you put the water in -- or how they dump the pit, I believe. Yes. It's Exhibit 17. So it basically replaced 6, on the right-hand side, with simpler language.
CHAIRPERSON CATANACH: I actually like 6 better than what they're proposing.
COMMISSIONER BALCH: I don't think 6 is particularly restrictive. It says "or other hardware." That can include just about anything.
CHAIRPERSON CATANACH: It seems to me to be more protective in the way it's written. Can we substitute that out? Does the Commission want to retain that language that they propose?
MR. BRANCARD: Any discussions?
COMMISSIONER DUNN: I'm okay with that, 6.
COMMISSIONER BALCH: We'd have to change "from a pit" to "from a containment" or "from the containment." I'm indifferent to whether we need to keep one wording or another. We can go with the majority on that.

CHAIRPERSON CATANACH: Let's go to 6, and we'll change that to "a containment."

MR. BRANCARD: Anything on Section 13? Subpart C is the 20 percent rule.

COMMISSIONER BALCH: So "used every six months." The C-147 would have to specify a time period as tested, or is it a rolling six-month period?

CHAIRPERSON CATANACH: Well, if it starts on the date following the first brick [sic] wall, that states specific to that.

COMMISSIONER BALCH: Six months later, you would --

CHAIRPERSON CATANACH: Six months later --

COMMISSIONER BALCH: You would measure it?

CHAIRPERSON CATANACH: Yeah.

COMMISSIONER BALCH: And then six months after that, you would measure it again. I presume that's something that's included in the C-147 schedule.

COMMISSIONER DUNN: It would be easier to track, from the agency standpoint, if you did it on the first and sixth of the month, semiannually.

COMMISSIONER BALCH: But you already have the C-147 covered in every month that has your inflow and outlet.

COMMISSIONER DUNN: Okay.

COMMISSIONER BALCH: Pretty much just every six months, you make a notation to calculate how much has gone out. It can be done on the Division side. It probably ought to be done on the Division side.

COMMISSIONER DUNN: Right.

MR. BRANCARD: Do we want to add that they have to report this information on a C-147?

COMMISSIONER BALCH: I don't think so. They already have to report the inflow and outflow. I'd leave it to the Division to calculate 20 percent. That was the new part, 13.

CHAIRPERSON CATANACH: Are we going to know the total volume of the pit -- of the containment?

MR. BRANCARD: That should be on the initial registration.

COMMISSIONER DUNN: Evaporation doesn't count?

COMMISSIONER BALCH: It will count.

COMMISSIONER DUNN: You wouldn't know then.

COMMISSIONER BALCH: It will be counted. Well, no. So you're measuring -- you're metering outflow, so that's what's going out through a pipe or a pump. So the evaporation wouldn't count.

For the record, evaporation produces, essentially, fresh water. I don't see any problem with

evaporating water.

COMMISSIONER DUNN: Right.

MR. BRANCARD: So are we okay with Section 13, 13C?

COMMISSIONER BALCH: Looks like it.

CHAIRPERSON CATANACH: Yes.

MR. BRANCARD: Section 14, Closure.

COMMISSIONER DUNN: Is this a new closure form?

COMMISSIONER BALCH: The only language change is on testing. Yeah. That's the other question. Is there a closure form?

CHAIRPERSON CATANACH: Not to my knowledge. Not at this point.

MR. BRANCARD: You mean a closure plan?

COMMISSIONER BALCH: A closure plan. I mean, there is basically a boilerplate closure plan in the rule.

MR. BRANCARD: Well, it'll be written that the C-147 has to have evidence showing that you will comply with this, so the C-147 could be written to sort of have checkoffs or have attached a plan or however we do it. So is this closure report going to be 149?

CHAIRPERSON CATANACH: Yes, I would say so.

COMMISSIONER DUNN: So on G, can we go

ahead and add "State Trust Lands"?

CHAIRPERSON CATANACH: Yes.

MR. BRANCARD: Then we have Table 1 which has -- that goes along with Section 14, which has the testing methods.

COMMISSIONER DUNN: I don't have any changes.

CHAIRPERSON CATANACH: I find the table -- I'm fine with the table as is.

COMMISSIONER BALCH: I thought there was ample evidence to switch the testing method, particularly 418.1 to 8015M. And then the benzene test, why have two tests when one test will give you the same result?

MR. BRANCARD: Okay. Are we done with Section 14, Table 1, then?

CHAIRPERSON CATANACH: Uh-huh.

MR. BRANCARD: Section 15, Financial Assurance.

COMMISSIONER DUNN: This number of 25,000 seems to be on a lot bonding issues. Where did that number come from in the original rule?

MR. BRANCARD: We don't have bonding for the pits in Rule 17, but what was talked about and what are called surface waste management facilities, oil and

gas landfills --

COMMISSIONER DUNN: Uh-huh.

MR. BRANCARD: -- we regulate under what's called Rule 36, and we do require financial assurance for those facilities. I don't know that that's where the dollar amount came from. The 25,000, you know, is a minimum.

COMMISSIONER DUNN: Right. I mean, if the number's from 20 years ago, then I'm not sure it's applicable.

COMMISSIONER BALCH: I think there is a rumor that Rule 36 is going to be looked at sometime.

COMMISSIONER DUNN: So is this going to mirror Rule 36?

COMMISSIONER BALCH: Well, I presume there will be proposed changes to Rule 36.

But I guess the real crux of it comes to the review of adequacy of financial assurance. It looks like the Division has an opportunity to review that number and decide if it's correct. With that said, if we're taking another example, force pooling, that 200 percent number gets filed almost every time, without looking at it.

COMMISSIONER DUNN: All right.

MR. BRANCARD: 25,000 does come from Rule

36.

COMMISSIONER DUNN: When was it promulgated?

MR. BRANCARD: 2009, 2008.

COMMISSIONER BALCH: And the bond is just -- I mean, it's like -- the bond is like you're buying an insurance policy for a greater amount than the bond, right?

COMMISSIONER DUNN: No. No. You'd pay $1,000 for a $25,000 bond.

COMMISSIONER BALCH: Okay.

CHAIRPERSON CATANACH: Yeah.

COMMISSIONER BALCH: I was thinking about it the other way around. 25,000 doesn't seem like very much tractor time. But I think that the review of adequacy would then be left to the Division.

COMMISSIONER DUNN: So we're back to Form 148 or whatever the application --

COMMISSIONER BALCH: 147?

COMMISSIONER DUNN: 147 or whatever.

CHAIRPERSON CATANACH: Well, on the C-147, would they be required to estimate the closure cost? Is that going to be part of it?

COMMISSIONER DUNN: You don't want the bond until they build it, do you?

MR. BRANCARD: Yeah. We just added financial assurance as one of the elements that would have to be in the C-147 when they registered. Yes, they would have to estimate the closure.

COMMISSIONER DUNN: Would there be a time limit to go along with that?

MR. BRANCARD: Yeah. Yeah.

COMMISSIONER BALCH: So all of this would occur -- I'm sorry. All of this would be reviewed by the Division potentially after the construction's already started?

COMMISSIONER DUNN: So you don't have a bond.

COMMISSIONER BALCH: Is there a problem adding a bond after the fact? Well, that's for closure that the bond is for.

COMMISSIONER DUNN: Sometimes they do that.

COMMISSIONER BALCH: So I guess there are a lot of issues there.

COMMISSIONER DUNN: Well, I mean, if I they start and don't prove it, what do you do? How do you get it fixed?

MR. BRANCARD: A notice of violation and tell them they have to meet a higher bond. A notice of violation, if they've already started working, can tell

them, Stop work.

COMMISSIONER DUNN: Do you have a way to ensure that?

COMMISSIONER BALCH: Commissioner Dunn has a pretty good point. If you have -- the worst case situation, which will probably never happen, but you put in the registration and the OCD responds 30 days later and you've already started construction and you've moved 20 acres of soil and dug each pit and started to lay down and we say, No, you've got to close it down. Where's the assurance bond, at that point, for closure?

MR. BRANCARD: Well, you would have submitted the bond with your C-147, but the issue I think you're raising is is it adequate.

COMMISSIONER BALCH: Right.

COMMISSIONER DUNN: You wouldn't know it was adequate if you hadn't reviewed it.

COMMISSIONER BALCH: But the review of adequacy wouldn't have occurred until potentially you have started construction.

Is there a particular timeline right now for review of, I'll call it, registration coming in? Is there a 30-day time limit? No 60-day time limit? That could happen whenever they get around to it?

CHAIRPERSON CATANACH: I don't know that

there is a set time limit at this point. It depends on the workload in the district office. And all I can say to that is we are asking for some additional people, which may alleviate some of that problem, but I don't know what the time frame is right now.

COMMISSIONER BALCH: So as it's been noted in the rule by -- I'm sorry -- the permit-by-rule process, essentially shifts the burden to the company. If they screw up, they're responsible, or if they neglect something.

COMMISSIONER DUNN: The only thing is that at the beginning of the property -- of the project, you have an operator. At the far end of the project, you don't have an operator. So the odds of getting collection at the beginning are greater than the end.

COMMISSIONER BALCH: If you've got a company, you have some leverage. You can pull their license to operate, things like that, I presume, at the administrative level, if they don't comply with closure request.

MR. BRANCARD: Right. I mean, your concern is just strictly the adequacy of the bond?

CHAIRPERSON CATANACH: And this only applies to companies that don't have existing financial insurance. If you're a large company that has a bunch

of wells up there, you're already covered under a $50,000 blanket bond. I don't know that there are going to be that many operators that don't have existing financial assurance.

COMMISSIONER DUNN: Well, but if the closure is more than 50,000 --

COMMISSIONER BALCH: Yeah. I mean, you do see a lot of companies going to LLC status because it protects them, for good reasons. I'm not trying to say LLC is bad. But could you foresee a circumstance where somebody shuts down and nobody pays, and you don't have much recourse? And I think the Division, in the past, has had a difficult time getting money from producers that have failed to meet their obligations, particularly with closure wells, plugging and abandonment.

CHAIRPERSON CATANACH: Right. And we do have the reclamation fund to back us up in that regard.

COMMISSIONER DUNN: Can it be used on this?

CHAIRPERSON CATANACH: My understanding is yes, it can.

COMMISSIONER BALCH: I think it was mentioned in there.

MR. BRANCARD: You would first go forth with the bond, and then --

COMMISSIONER DUNN: How much is in the

fund?

CHAIRPERSON CATANACH: Several million dollars.

COMMISSIONER BALCH: I know of a company in Roswell that had a pipeline spill, saltwater, and they just keep digging and digging and digging until you don't have floor [sic] anymore; million dollars for that particular case. Seems like it's covered. I think that the permit-by-rule process maybe streamlines things, but a smart company might wait until it's reviewed anyway.

CHAIRPERSON CATANACH: I agree.

COMMISSIONER DUNN: I have a general question on the 25,000. Where did it come from?

MR. BRANCARD: Rule 36.

COMMISSIONER DUNN: Right.

COMMISSIONER BALCH: It just seems like a really low number, which I think is what you're getting at.

COMMISSIONER DUNN: Yeah.

COMMISSIONER BALCH: $25,000 doesn't buy you very much in an oil patch.

MR. BRANCARD: That's why it's whichever is greater. Same thing when you're thinking about Rule 36 and landfills. It seems like a really low number.

COMMISSIONER DUNN: That's true.

MR. BRANCARD: Can we move on to Section 16?

COMMISSIONER DUNN: Yes.

MR. BRANCARD: Okay. "Variances." Commissioner Balch raised the question of A2, the change of the standard.

COMMISSIONER BALCH: You know, variances were a new thing that were introduced with Rule 17. I probably should have asked some of the witnesses about their experience with variances. There was an anecdotal comment that a couple of the variances did slow down and that this was a multi-well fluid management pit proposal, but I think in Rule 17 we spent quite a lot of time on the concept of the variance, in particular it shouldn't even be allowed, versus an exception. I would probably be most comfortable with maintaining the language from Rule 17 completely at this time.

CHAIRPERSON CATANACH: And that would not allow any variances?

COMMISSIONER BALCH: No. It does allow variances.

MR. BRANCARD: It's the standard. Here in 24 -- Exhibit 24 shows how it was changed.

CHAIRPERSON CATANACH: Equal or better?

MR. BRANCARD: Yeah. Rule 17 sort of

compared the specific thing you were varying, and what you were replacing it with, is that equal or better protection.

COMMISSIONER DUNN: I think I would agree with that.

COMMISSIONER BALCH: So I don't know if there is any reason not to just keep the language from Rule 17 without any changes, I guess is my comment. Most of what appears to be changes was more or less wordsmithing to make it a little bit shorter. It didn't change the content except for the "afford reasonable" -- which turns out to be the original statute.

MR. BRANCARD: Right. Kind of an overall standard as opposed to a comparative, what exactly you are varying. Is it equal or better?

COMMISSIONER BALCH: Which is kind of the point of a variance. You didn't want a variance unless it was an improvement or just the same, but it would allow better engineering practices without a full exception, which would require you to go to large-scale notices and potentially a hearing process. And that puts the control of that down at the Division level.

MR. BRANCARD: Are you okay with going back to the Rule 17 language?

COMMISSIONER DUNN: Uh-huh.

CHAIRPERSON CATANACH: Yes.
MR. BRANCARD: Was there anything else?
CHAIRPERSON CATANACH: The only thing I would point out is in Part F, because they can go to hearing and get a variance. This states "variances must receive division district office approval." I would just strike "district," and "variances must receive division approval," because a variance can be approved up here in Santa Fe as well.
COMMISSIONER BALCH: So I think I would make a motion just to keep all the language on the right-hand side and strike everything on the left-hand side.
COMMISSIONER DUNN: Sounds good to me.
COMMISSIONER BALCH: That makes it the same as Rule 17, where we introduced variances.
MR. BRANCARD: Okay. I had just taken that "provide" language and replaced the "afford" language with the "provide" language. But you want to go back to the entire --
COMMISSIONER BALCH: Well, I'd certainly like to discuss it.
MR. BRANCARD: Okay.
COMMISSIONER BALCH: Oh, I think you're right. The only substantive change is the wording in

A(2).

MR. BRANCARD: Is everybody okay with the change I made?

COMMISSIONER DUNN: Yes.

COMMISSIONER BALCH: That would work as well, although if you keep all the language, you might be able to just put a pointer.

MR. BRANCARD: And then the Chair's request for paragraph F, "district office"?

COMMISSIONER DUNN: Sounds good.

CHAIRPERSON CATANACH: "District and Division office."

MR. BRANCARD: Okay.

COMMISSIONER BALCH: What's the difference there? Division means Santa Fe, right?

CHAIRPERSON CATANACH: Well, Division takes into account the district office and Santa Fe. Since they can get a variance at either place, we should just reflect that. Because the way it was written, you could only receive a district -- a variance from the Division district office.

COMMISSIONER BALCH: Can we say "Division or district office approval"?

CHAIRPERSON CATANACH: We could say that, yes.

MR. BRANCARD: I think your language creates the ability to have it go to the appropriate place.

COMMISSIONER BALCH: Okay. I just want to make sure that variances don't end up happening in Santa Fe because it defeats the purpose.

MR. BRANCARD: Okay. Much of the remainder of the language -- well, 17 through 20 is language from the current Rule 34. So 17, 18 and 19 deal with transportation, which hasn't really been addressed in this rulemaking, but it is carried over from the original Rule 34. And then 20 was sort of this general statement about other disposition of produced water. Everything is carried over from the original rule.

Any questions about 17 through 20?

COMMISSIONER DUNN: No.

MR. BRANCARD: All right. So 21 is the last part of the enforcement provision. Any questions about 21?

COMMISSIONER DUNN: No.

COMMISSIONER BALCH: Looks fine.

Have you captured all of our comments and changes and adjustments?

MR. BRANCARD: I certainly hope so. I've tried to circle actual changes as opposed to my little

scribble.

Okay. So we have, then, a new Part 34 to repeal and replace the old Part 34 as proposed by the NMOGA with amendments from the Commission?

COMMISSIONER BALCH: I would make a motion to adopt the rules, as you specify, with our changes, but I would want to specify that we review the final rule, review the Form C-147 and the order before we close deliberation completely. That's my motion.

CHAIRPERSON CATANACH: I would second that.

COMMISSIONER DUNN: All for the vote.

CHAIRPERSON CATANACH: All for the vote on the motion?

COMMISSIONER BALCH: Aye.

CHAIRPERSON CATANACH: Aye.

COMMISSIONER DUNN: No.

MR. BRANCARD: Okay. So you have a meeting scheduled for March 12.

Mr. Feldewert, do you want to take a crack at a draft order, a proposed order? I'm saying this because I'm struck in the middle of a legislative session here.

MR. FELDEWERT: Yes. I'll take a shot at that.

So you're going to circulate the rule with

your changes, so I don't need to worry about that? You're talking about a draft order implementing the new rule?

MR. BRANCARD: Right.

MR. FELDEWERT: Yes, sir.

MR. BRANCARD: And I guess the Division can work on a new C-147?

MR. WADE: We can do that.

CHAIRPERSON CATANACH: Does the Division want to also start thinking about the C-148 and C-149?

MR. WADE: Yes, with the caveat that those numbers may not apply. I have to go look and see what form numbers are available, but I understand the concept that's wanted, and we can start looking at those.

COMMISSIONER BALCH: Before we close for the day, Commissioner Dunn, I guess you registered a "no" vote on this?

COMMISSIONER DUNN: Uh-huh.

COMMISSIONER BALCH: Is it the process or procedure or some particular element?

COMMISSIONER DUNN: I think it would be nice, really, to get the notice portion in the deal.

COMMISSIONER BALCH: So that's going to be in the C-147, or --

COMMISSIONER DUNN: No. It never did end

up anywhere.

COMMISSIONER BALCH: Okay. So probably when we meet again, we'll go through section by section, and you can note at that point that you disagree with just that one component.

MR. BRANCARD: If you want something in the final order, you can state the reasons for your dissent, and we can put that in.

COMMISSIONER DUNN: Okay. Okay. All right.

COMMISSIONER BALCH: But in principle, you're okay with most of it? It's just that one part?

COMMISSIONER DUNN: Right.

CHAIRPERSON CATANACH: With regards to the notice, I find it odd that under the variance rule, you have to provide notice to the surface owner.

COMMISSIONER BALCH: I think that that's definitely a portion of the rule that needs consideration, along with compulsory pooling, but we have to wait for somebody to bring those to us, right?

COMMISSIONER DUNN: Thank you for affording me to be here, and it was just an enjoyable time. What can I say?

(Laughter.)

COMMISSIONER BALCH: I'll give you credit.

I couldn't say that with a straight face (laughter).

MR. BRANCARD: Motion to adjourn?

COMMISSIONER DUNN: So moved.

COMMISSIONER BALCH: And seconded.

(The proceedings conclude, 5:23 p.m.)

STATE OF NEW MEXICO
COUNTY OF BERNALILLO

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