## 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 CONSERVATION DIVISION FOR REPEAL OF EXISTING RULE 50 CONCERNING PITS AND BELOW GRADE TANKS AND ADOPTION OF A NEW RULE GOVERNING PITS, BELOW GRADE TANKS, CLOSED LOOP SYSTEMS AND OTHER ALTERNATIVE METHODS TO THE FOREGOING, AND AMENDING OTHER RULES TO MAKE CONFORMING CHANGES; STATEWIDE

CASE NO. 14,015

ORIGINAL

# REPORTER'S TRANSCRIPT OF PROCEEDINGS

# COMMISSION HEARING

BEFORE: MARK E. FESMIRE, CHAIRMAN JAMI BAILEY, COMMISSIONER WILLIAM OLSON, COMMISSIONER

Volume III - November 6th, 2007

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission, MARK E. FESMIRE, Chairman, on Tuesday, November 6th, 2007, at Morgan Hall, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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### APPEARANCES

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FOR NEW MEXICO OIL AND GAS ASSOCIATION; CONOCOPHILLIPS COMPANY; DUGAN PRODUCTION CORPORATION; and ENERGEN RESOURCES CORPORATION; and an INDUSTRY COMMITTEE comprised of BP America Production Company, Inc.; Benson-Montin-Greer Drilling Corporation; Boling Enterprises, Ltd.; Burlington Resources Oil and Gas Company; Chesapeake Energy Corporation; Chevron USA, Inc.; ConocoPhillips Company; Devon Production Company; Dugan Production Corporation; Energen Resources Corporation; Marathon Oil Company; Marbob Energy Corporation; Merrion Oil & Gas Corporation; Occidental Permian, which includes OXY USA, Inc., and OXY USA WTP Limited Partnership; Samson Resources Company; J.D. Simmons, Inc.; Williams Production Company, LLC; XTO Energy, Inc.; and Yates Petroleum Corporation:

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(Continued...)

# APPEARANCES (Continued)

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FOR NEW MEXICO CITIZENS FOR CLEAN AIR AND WATER:

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(Continued...)

# APPEARANCES (Continued)

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\* \* \*

WHEREUPON, the following proceedings were had at 9:00 a.m.:

CHAIRMAN FESMIRE: Let's go on the record. Let the record reflect that it's nine o'clock a.m. on Tuesday, November 6th, 2007. This is a meeting, a special meeting -- actually the continuation of a special meeting of the New Mexico Oil Conservation Commission.

The record should also reflect that because of a power outage in Porter Hall, we have moved to Morgan Hall in the State Land Office building. The notice of that move was announced before the adjournment of the Commission meeting on Monday, November 5th, that signs to the effect and giving the address -- signs to the effect that the meeting had been moved and giving the address were also posted on all the doors to Porter Hall and the entrance to the Chino building, the location of Porter Hall.

Let the record that Commissioner Bailey,

Commissioner Fesmire and Commissioner Olson are all

present, we therefore have a quorum, and the case before us

is Case Number 14,015, in the matter of the Application of

the New Mexico Oil Conservation Division for repeal of

existing Rule 50 concerning pits and below grade tanks and

adoption of new rules governing pits, below grade tanks,

closed loop systems and other alternative methods to the

foregoing, and amending other rules to conforming changes;

1	statewide.			
2	At this time we'll take the entry of appearance			
3	or the reaffirmation of the entry of appearance, I			
4	guess, of the attorneys present. We'll start with Mr.			
5	Brooks.			
6	MR. BROOKS: David Brooks of the Energy, Minerals			
7	and Natural Resources Department, for the Oil Conservation			
8	Division.			
9	CHAIRMAN FESMIRE: Ms. Foster?			
10	MS. FOSTER: Karin Foster on behalf of the			
11	Independent Petroleum of Association of New Mexico.			
12	CHAIRMAN FESMIRE: Mr. Hiser?			
13	MR. HISER: Eric Hiser on behalf of the New			
14	Mexico industry committee and Yates Petroleum Corporation.			
15	CHAIRMAN FESMIRE: Mr. Carr?			
16	MR. CARR: William F. Carr on behalf of the New			
17	Mexico Oil and Gas Association, the New Mexico industry			
18	committee, and ConocoPhillips.			
19	CHAIRMAN FESMIRE: Ms. Belin?			
20	MS. BELIN: Lettie Belin for the New Mexico			
21	Citizens for Clean Air and Water.			
22	MR. JANTZ: Eric Jantz, New Mexico Environmental			
23	Law Center, for the Oil and Gas Accountability Project.			
24	CHAIRMAN FESMIRE: And Mr. Huffaker?			
25	MR. HUFFAKER: Gregory Huffaker here for			

Controlled Recovery, Inc.

other party who've made an entry of appearance, filed an entry of appearance with the Commission clerk, who is not present. If they come in I will stop the proceedings at a convenient time and get them to make their entry of appearance.

Yesterday when we sort of hurriedly adjourned, we were in the middle of the cross-examination of one of the State's witnesses. But yesterday, because one of the attorneys couldn't be there on time, we left pending some housekeeping matters that I think we need to take up now, and the first one is the motion to compel by the Independent Petroleum Association of New Mexico concerning the Small Business Regulatory Relief Act.

Ms. Foster, you filed this motion?

MS. FOSTER: Yes, sir, I did.

CHAIRMAN FESMIRE: Do you have anything to add?

MS. FOSTER: Well, I believe that it was discussed sufficiently yesterday. I believe that I understand what the Commission's ruling is, but if you'd like to reiterate for the record that would be fine with me. Thank you.

CHAIRMAN FESMIRE: Okay. Mr. Brooks, have you complied -- at the end of the meeting on the 22nd of

October, the Commission -- the Chair instructed you to comply with this -- with the Act. Have you done so?

MR. BROOKS: Mr. Chairman, members of the Commission, I refer to the response that was filed in this case. I want to be as complete and accurate in informing the Commission where we are as possible so the Commission could make appropriate ruling.

The Division's interpretation of this Act is that the only thing the Division is required to do prior to the adoption of this by the Commission is to give notice to the Small Business Regulatory and -- I believe it's Committee, I don't remember the exact style of that agency, and I don't have the Act in front of me, but the agency is an adjunct of the Economic Development Department, and there is a requirement that an agency proposing rules give notice.

The other requirements of the Act pre-enactment

-- the other requirements of the Act that apply prior to
enactment are that the agency will consider the effects on
small business. Since that directive is directed to the
agency that adopts regulations, we construe that as being
the obligation of the Commission to consider that matter.

We will present some evidence, primarily through our witness Mr. Chavez, which has relevance to that issue. However we do not regard it as being an issue on which we have the burden of proof. We are merely presenting evidence. The Commission can consider that issue. It's not directed by the statute to refrain from enacting a rule because it has an effect on small business if the Commission concludes that it does. So...

And the remaining obligations that Ms. Foster has pointed out in her motion, we believe, only apply after enactment of the rules.

There is a directive to agencies to periodically review their rules, including both pre-existing rules -that is, before that statute was passed -- and new rules
they subsequently adopt, and to assess them in the light of
various factors. However, that section of the statute, as
I say, we contend applies only to existing rules after
they're adopted and does not apply to the rulemaking
process.

So coming back to your question, Have we complied? The only thing we are required to comply with is the notice, in our view.

The notice requirement states that we will notify the Small Business Regulatory Advisory Committee of a proposed rulemaking at the time that the public notice is given.

Now we made an effort to comply with that. At the time the public notices were sent to the newspaper and

to the docket distribution list of the Commission, we also sent those notices, as Exhibits 1 and 2 will reflect, to Mr. John Tull. That is my responsibility because we had that name on our list. He was the person responsible for administering the Small Business Regulatory Committee's affairs at the time we did our last rulemaking approximately one year ago.

I was unaware of the fact, at the time that I prepared those notices, that he no longer occupies that position. Mr. Tull did receive that. When we became aware that Mr. Tull no longer occupied that position, and that was on October 14th of 2007, we then gave notice to Kelly O'Donnell, who is presently the responsible person, we understand, to whom that notice should have been given.

So the notice has been given, it was probably not effectively given on the date on which it was required to be given, however we are aware of no provision of that Act or anywhere else which states that delay in giving that notice beyond the time stated invalidates the proceeding or requires a change in the hearing date.

So our position would be that we are in compliance.

CHAIRMAN FESMIRE: Okay. Ms. Foster, is that sufficient to comply with your motion, or do you want to preserve --

MS. FOSTER: Well, I reserve all my rights of appeal on this issue. I believe that the statute has not been complied with sufficiently.

In my motion I did specifically request for a copy of the notice that was provided to the advisory commission. If I didn't provide it -- if I didn't put it in my written request, I do believe that I did ask for it orally when I made the presentation. I believe it was on the 22nd. I have not seen a copy of that motion.

The statute specifically states as well that the advisory commission must be notified at the same time as persons who request advance notice of the ruling. And as Mr. Brooks stated, that notice was not given to the appropriate person at the -- in the Economic Development Department, the advisory commission individual who's responsible, until October 14th.

We further contend that -- we further contend that basically this is a modification of an existing rule, and therefore the provisions of the Small Business Regulatory Relief Act that mandate that an agency must review the economic effects of a rule, particularly as they pertain to small business, do come into play in this instance, because this is a modification of an existing rule.

And if you read the statute, it basically says if

an agency is going to be reviewing its rules prior -- after the date of the promulgation of the Act, which was July 1, 2005, and prior to 2010, that these economic factors must be considered.

Now if the OCC, in your capacity as the Chairman of the OCC and the Commission, is going to consider economic evidence as part of this hearing, again I would have liked to have had the proper advisory commission be notified and have the information that the agency was intending to present to you, oversight board, so that that advisory commission could be adequately notified in case that we as a small business entity have any issues with this rule.

It's my understanding of -- reading of the statute, that that advisory commission is to protect the small business entities of the State of New Mexico and that if there is any sort of a question as to rulemaking processes affecting small business entities, that advisory commission is at our disposal for assistance.

But if I don't have any information to give them, based on what the OCD is intending to present, I have nothing to give to the advisory commission. So therefore my rights under this Act have been basically vitiated.

CHAIRMAN FESMIRE: And your argument is that you have rights under this Act. And is the Commission in any

1 way your client? MS. FOSTER: No, the Commission is not my client, 2 but I have rights as a small business entity of the State 3 4 of New Mexico that clearly will be affected by this rule. CHAIRMAN FESMIRE: And does the rule require that 5 you receive a copy of that announcement to the Commission? 6 MS. FOSTER: No, it does not, but I requested one 7 in my motion. 8 9 CHAIRMAN FESMIRE: Okay, and has that been complied with yet? 10 MS. FOSTER: No, I have not received a copy of 11 12 that letter to the advisory commission. CHAIRMAN FESMIRE: Mr. Fesmire, my impression was 13 that a copy was attached to our response and that that was 14 served on Ms. Foster by e-mail. Give me a moment, I will 15 check the file here. 16 17 It does not appear that I have a copy of the e-mail attached to the -- to my copy, and because our 18 e-mail system is down, it will probably be impossible for 19 20 me to retrieve another copy to provide to Ms. Foster until our e-mail system comes back up, but I will undertake to do 21 22 so as soon as that occurs. 23 CHAIRMAN FESMIRE: But you believe a copy was sent to her with your response to the motion? 24

That was my recollection.

Now the

MR. BROOKS:

Commission clerk can check to see if a hard copy of that is attached to the response that was filed with the Commission.

CHAIRMAN FESMIRE: Okay.

MR. BROOKS: If not, I stand corrected.

CHAIRMAN FESMIRE: Okay. If Mr. Brooks would be so kind as to, as soon as possible, make sure that she gets a copy of that, we're going -- the Chair is of the opinion that that is a courtesy rather than a requirement under the statute. We will provide it as soon as possible, and we are going to -- I am going to overrule your motion.

MS. FOSTER: Thank you.

CHAIRMAN FESMIRE: The next motion is a request for alternative dispute resolution. Ms. Foster, this is your motion. Do you have anything further to add?

MS. FOSTER: Well, in light of the Small Business Regulatory Relief Act which we believe complies, but also the other issues, specifically the task force process that went on, we don't believe that we had the opportunity to discuss the economics as they impacted small businesses, and we don't believe that the task force, which was not an alternate dispute resolution adjudication, really addressed the small business issues.

And again, as a business entity and association, industry association, that is impacted by this rule, both

economic and the environmental effects which we will present in our testimony, and I believe has already been testified to yesterday, we believe that we would have the right under the Alternate Dispute Resolution Act, which was passed -- I'm sorry, the official name of the Act is the Governmental Alternate Dispute Resolution Act, which was passed by the Legislature this year, 2007, and became effective July 1, 2007 -- that we would have the right, since this is a formal rulemaking process, to ask for formal adjudication, formal alternate dispute resolution with a formal mediator and facilitator in that process. CHAIRMAN FESMIRE: Okay, and you understand that this has already been through the stakeholder process, through the task force process and that the Chair is of the opinion that any further attempt at remediation -- "at remediation" -- at mediation would be probably unsuccessful. Also it's my reading of the statute that that procedure is voluntary and that it is discretionary on the Commission whether or not to pursue it; is that correct? MS. FOSTER: Yes, it is. It is voluntary, that's correct. CHAIRMAN FESMIRE: Okay, the Chair will therefore overrule that motion also.

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Thank you.

MS. FOSTER:

away, I would like to ensure that since the Division attorney has stated that it's up to the Commission to make a determination about its impact on small businesses, that Mr. Chavez, you said, would be the Division person to testify on that topic?

MR. BROOKS: Well, first -- That is correct, Mr. Chavez will offer some testimony on that subject. What I said and what I believe that the Act justifies is that the Commission will consider the effects on small business. I do not believe the Act requires the Commission find that it will not have an adverse effect on small business, I don't believe that is a prerequisite to enactment of the rule. But it does say the Commission will consider the effects on small business.

We will present evidence through Mr. Chavez to the effect that in the long run the rules we propose may even save money for the industry. But that's in that context.

COMMISSIONER BAILEY: In that regard, I would like to bring up a website of the Department of Energy and a financial statement that was issued in September of this year concerning the contrast between the total revenues and the total income that are attributed to oil and gas producers as independents. That website is at

http://www.eia.doe.gov/emeu/perfpro/news, and I'm sure you can find it from that. It's titled Financial News for Independent Energy Companies, Second Quarter, 2007, and I would like to see that as part of his testimony.

MR. BROOKS: Thank you, Commissioner.

CHAIRMAN FESMIRE: The next motion before the Commission -- Hang on just a second.

(Off the record)

CHAIRMAN FESMIRE: The next motion before the Commission is the Oil Conservation Division's motion to strike IPANM's prehearing statement, witnesses and exhibits.

Mr. Brooks, this is your motion.

MR. BROOKS: Mr. -- Honorable Chairman and Commissioners, I have presented this motion, I guess, somewhat reluctantly. As an attorney I'm not in a position to waive the rights of my client. At the same time, throughout my career I've never been a fan of exclusionary rules. I would suggest that the Commission clerk, who is present, can verify or refute the facts that are asserted in my motion and the Commission can make an appropriate decision as to what it feels is the appropriate course of action to follow in this case.

CHAIRMAN FESMIRE: Ms. Foster, have you seen the motion?

MS. FOSTER: I have.

CHAIRMAN FESMIRE: And are there any facts in there in dispute?

MS. FOSTER: I don't believe so, no.

CHAIRMAN FESMIRE: Okay, Mr. Brooks, continue. We'll accept the facts as asserted.

MR. BROOKS: Thank you. I -- As I said, I've never been a fan of exclusionary rules. I do believe that our rule provides -- I do believe the rule has not been complied with, and under the rule it is within the power and right of the Commission to limit IPANM to factual testimony and general comment and not to receive any technical testimony and exhibits.

I believe the Commission has the discretion to apply that rule or to waive it in the interest of whatever interests -- whatever hardship the Commission feels that it imposes on the party or the Commission, so I leave that to the Commission's discretion.

CHAIRMAN FESMIRE: Ms. Foster?

MS. FOSTER: Well, in terms of a hardship issue,
I mean, I am a new attorney to this process and that is not
an excuse for my having filed the exhibits 30 minutes late.
However, it was my understanding that this Commission on a
routine basis has accepted prehearing statements late. I
do apologize if they were late, and if the Commission seeks

to strike all those exhibits, I feel that I could probably still refer to them in cross-examination to question witnesses.

A lot of those exhibits did end up in that packet, and that's one of the reasons why it was so large, because I was intending to at least give the Commission — or the Division, the ability to look at documentation prior to my cross-examining them on those documents. If the Commission would like to throw all those exhibits out, then we would really have no grounds for opposition at this time.

I would commend the Commission on the professional working relationship that Ms. Davidson extends to industry as well as all the parties here. She's been very easy and professional to work with and I apologize if I've made her job more difficult.

CHAIRMAN FESMIRE: Okay. Ms. Foster, I'm, you know, not a big fan of not following the rules. But as you've noticed, our rules are a little bit fle- -- You disagree?

MR. YAHNEY: Yes.

CHAIRMAN FESMIRE: Okay, what's your name?

MR. YAHNEY: My name's Gordon.

CHAIRMAN FESMIRE: Okay, I wish you'd make a statement during public statement portion, please.

MR. YAHNEY: I'm not making any kind of statement.

CHAIRMAN FESMIRE: Mr. Gordon, would you please make a statement during the public comment period before lunch this afternoon, okay? If you have something to say, that's the time to say it.

Ms. Foster, I was on the verge of saying due to the importance of this hearing and the importance of what your clients have to say I'm going to deny this motion. I came real close to not doing that. Okay? So we'll deny this motion and proceed.

Thank you, all.

Are there any other motions that don't involve scheduling before the Commission?

MS. BELIN: Mr. Chairman, members of the Commission, there is a procedural -- a looming procedural dispute between New Mexico Citizens for Clean Air and Water and the industry that I think might be best to take up at this time, because it has to do with how we conduct our cross-examination.

CHAIRMAN FESMIRE: Okay, and what is that?

MS. BELIN: I'll let industry speak for themselves, but counsel has informed me -- in our prehearing statement we noted that we intended for both -- for either Dr. Neeper our technical witness, or myself, to

be conducting cross-examination.

When the hearing got postponed, we have some scheduling problems and difficulties, and so that we would be efficient with our cross-examination it might be either one of us, and he has been duly authorized by this organization. Industry has informed me that they will oppose that arrangement, so I thought we ought to just deal with that right now.

CHAIRMAN FESMIRE: Okay. Mr. Hiser, are you speaking for industry?

MR. HISER: Mr. Chairman, members of the Commission, the issue is, the New Mexico industry committee has no objection to Dr. Neeper serving either as a representative for the New Mexico Citizens for Clean Air and Water or as an expert witness for the New Mexico Citizens for Clean Air and Water, but we are troubled by a person trying to play both roles at the same hearing because it can lead to confusion as to whether the person is speaking in their expert capacity, whether they're speaking in their advocate capacity, and it makes it very difficult to know what is cross-examinable and what is not, whether we can cross-examine him on the questions that he's asking and all that, and it's just something that's generally not done in the American system of sort of doing hearings.

And so we agree with Lettie that it would be good to get this issue sort of resolved beforehand. It's not that we have any particular objection to Dr. Neeper, but it's a concern about the confusion of the roles that may arise.

CHAIRMAN FESMIRE: Mr. Hiser, how could we accomplish their goals and still comply with your -- with what is a valid point here?

MR. HISER: Mr. Chairman, members of the

Commission, I wish that I had a really good solution for
that quandary. I know that in some cases Dr. Bartlit,
who's the chairman of New Mexico Citizens for Clean Air and
Water, may be available, and certainly as the chairman of
that he would be qualified as a representative of that
organization. We'd be happy to accept him as the
representative in cases where Lettie might not be able to
attend. Similarly, they may have another person they could
designate to do that, or -- I think they really need Dr.
Neeper as their witness, and so to me it seems that he's
more appropriate as their witness. But I'm not in a
position, obviously to instruct the New Mexico Citizens for
how best to use their personnel.

CHAIRMAN FESMIRE: Ms. Belin, given that he does have a valid point on the dichotomy of the roles, how would you address it?

MS. BELIN: Might I respond?

CHAIRMAN FESMIRE: Yes, ma'am.

MS. BELIN: First of all, the rules. If you look at the rules, we have fully complied with the rules. There's nothing in the rules prohibiting this sort of arrangement. I would just remind the Commission that this is a rulemaking proceeding, it's not a jury trial, it's not even an adjudicatory proceeding, and the rules of evidence, the rules of civil procedure, cannot apply here.

And more important, going to the objective of the rulemaking process as stated in the Commissions rules, the rules emphasize that the hearings are to be conducted so as to provide a reasonable opportunity for all persons to be heard, without making the hearing unreasonably lengthy or cumbersome, without unnecessary repetition.

They also state their objectives for encouraging participation in the hearings, for making possible effective presentation by members of the public, for allowing all participants a reasonable opportunity. I would note that other agencies, the Mining Commission, other boards and commissions, certainly allow this type of procedure that we'd be doing today.

And as a practical matter, I mean, even if I can be here, I assure you it will be more efficient, less cumbersome, more effective to allow Dr. Neeper to ask

questions directly than for him to be writing out questions and passing them to me, and then when there are follow-up questions, having the problems ensuing with that.

I would also note that in the surface waste rule hearing, Dr. Neeper participated in both capacities without objection from Mr. Hiser, without objection from industry, and no one had any problem with that. I would venture to say that Dr. Neeper was -- he certainly would respond if anybody has a problem with any particular question that he'd ask, that he will listen and do whatever he can to accommodate that.

We are really trying to make this an efficient process that gets the facts out. I think everyone knows the Commission members are certainly capable of differentiating between Dr. Neeper as a cross-examiner and this witness. I really think this will help get information out in an efficient and reasonable manner.

And as the Commission has just relaxed its rules right now for industry -- We aren't even asking that you relax the rules, we just ask that we be able to participate according to the rules.

CHAIRMAN FESMIRE: Okay, Ms. Belin, when Dr.

Neeper makes a statement as a prelude to a question or

anything else, I would advise that that would be open to

cross-examination from -- to the extent that it is a

1 statement. Would that be satisfactory? MS. BELIN: That would be satisfactory, and I 2 3 will certainly -- we will discuss it. He will minimize 4 that, he will only say in his question the minimum that he 5 has to say to make the question clear. CHAIRMAN FESMIRE: Okay. Mr. Hiser, would that 6 7 be satisfactory to you? MR. HISER: Mr. Chairman, members of the 8 Commission, obviously our goal is to reach the best result 9 10 for the State of New Mexico. Whatever you believe may be most appropriate. 11 12 CHAIRMAN FESMIRE: Okay. Ms. Belin, we will do it that way if -- in acting as his representative capacity, 13 if Dr. Neeper makes a statement, the counsel present will 14 have the opportunity to cross-examine him on those 15 statements. 16 17 MS. BELIN: Thank you very much. 18 CHAIRMAN FESMIRE: Thank you, ma'am. Are there any other matters before the 19 20 Commission, before we go back into the evidentiary portion? 21 Okay. 22 I believe, Mr. Brooks, your witness -- your witnesses, were being cross-examined, and the person who 23 indicated that they were to be cross-examined is not 24 25 present.

I had a couple of questions. MS. BELIN: 1 CHAIRMAN FESMIRE: Okay. Ms. Belin, would you 2 3 like to begin then? Where would you like me to --MS. BELIN: CHAIRMAN FESMIRE: Ms. Belin, would you like to 5 stand at the podium? And since you're facing the wrong 6 7 direction, could you speak up? I'm the right direction for you --8 MS. BELIN: CHAIRMAN FESMIRE: The right direction for us, 9 10 but the wrong direction for them to hear. MS. BELIN: Yes, I'll try to speak up. 11 WAYNE PRICE and GLENN VON GONTEN (Continued) 12 the witnesses herein, having been previously duly sworn 13 upon their oaths, were examined and testified as follows: 14 **EXAMINATION** 15 BY MS. BELIN: 16 Good morning, Mr. Price. 17 Q. (By witness Price) Good morning. 18 Α. I believe -- I just have a few questions. 19 Q. Ι 20 think during your cross-examination the topic of closure standards for deep-trench burial arose. My first question 21 22 is, are there other witnesses that will be addressing that more than you? 23 24 (By Mr. Price) Yes, there will be Mr. Brad 25 Jones.

322 1 Q. Okay. (By Mr. Price) He'll go into detail, line by 2 Α. line, on that issue. 3 I'll direct my questions on that to him, then. 4 0. 5 Also in cross-examination yesterday, there was a dialogue between you and Ms. Foster about out of state 6 members on the task force. Well, actually it was about 7 OGAP and the fact that perhaps the are based out of New 8 Were there any industry members on that task force? 10 11 Α. (By Mr. Price) Yes. 12 Q. Were any of them from out of state? (By Mr. Price) I think there was one, yes. 13 Α. Do you think there was one, or there was one? 14 Q. (By Mr. Price) I'm pretty sure there was one. 15 A. So there were out-of-state members of the task 16 0. 17 force from both the industry side and from the public? Α. (By Mr. Price) I know on the industry side there 18 I'm not sure about the landowners. I'm sure they 19 were all -- I think they were all inside the state. Just 20 let me think a minute. 21

I believe the only out-of-state member was the industry task force, one member.

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Q. Thank you. Another topic that came up in cross-examination was in talking about the 100-mile limit, that

wells within 100 miles of the permitted landfills would
have to dispose -- transport and dispose to the permitted
facilities. And there was discussion about some of those
facilities in the northwestern part of the state and
southern Colorado and the possibility that at some point
they might stop accepting oil and gas waste. Do you
remember that dialogue?

A. (By Mr. Price) I do remember.

- Q. So if we assume that at some point in the future the permitted landfills in the northwest were actually filled and decide not to accept any more oil and gas waste, is there any reason that the industry or the industry committee could not cooperate establish some sort of approved landfill as the need arises?
- A. (By Mr. Price) Well, anyone could be an applicant to put a landfill in. We're not limited on who could apply to put a landfill in.
- Q. So if some facilities fill up, would you expect that there will be efforts to establish additional facilities?
  - A. (By Mr. Price) Oh, absolutely.
- MS. BELIN: Thank you, I have no further questions.
- 24 CHAIRMAN FESMIRE: Mr. Jantz, did you have any 25 questions?

MR. JANTZ: I do, Mr. Commissioner.

MS. FOSTER: Mr. Chairman, if I might ask a question concerning OGAP, yesterday there was a gentleman i the room who I believe identified himself as an OGAP attorney. Just in terms of notification and conversations with OGAP, I would just like to ask some clarification as to who is their lead attorney, for lack of a better word.

CHAIRMAN FESMIRE: Okay, Mr. Jantz, would you respond?

MR. JANTZ: Yes, Mr. Chairman and members of the Commission, Ms. Foster. I'm the lead attorney on this pit rule hearing for OGAP. Mr. Frederick who has entered his appearance in this matter is also staff attorney at the law center will be second-chairing in my absence.

## EXAMINATION

### BY MR. JANTZ:

- Q. Good morning, Mr. Price.
- A. (By Mr. Price) Good morning.
- Q. There were a couple -- there was some discussion during your direct examination and during your cross-examination about staffing issues at OCD. Could you tell me, remind me again, how much staff you had to conduct inspections and to make sure that the current rules are complied with?
  - A. (By Mr. Price) The Environmental Bureau consists

of five members including myself, and we have an environmental engineer or representative in each of the districts. So there would be a total of eight people just from the environmental standpoint.

Q. Eight folks?

A. (By Mr. Price) Yes, for the whole state.

Q. And I think in your direct testimony you also

- Q. And I think in your direct testimony you also mentioned that there was some backup, something like 200 permits, applications, on your floor?
  - A. (By Mr. Price) At least.
- Q. Okay. And those are all under the current rule, right?
  - A. (By Mr. Price) Yes.

- Q. Now it's my understanding that it's your opinion that this new pit rule will make environmental protection easier, or will better -- this new rule will better be able to protect the environment; is that correct?
  - A. (By Mr. Price) That's my opinion.
- Q. Okay. Will it also make it easier for OCD to administer the Act, Oil and Gas Act, and the rules?
  - A. (By Mr. Price) Yes.
- Q. Thank you. Let's talk a little bit about economic information. I think it was you -- it may have been Mr. von Gonten -- who testified about the price per well. It was something like \$30,000 to \$80,000 per well

for estimated -- estimated to dig and haul; is that correct? Was that you?

A. (By Mr. Price) That was me.

- Q. Okay. And where did you -- could you remind me of how you arrove [sic] at that information?
- A. (By Mr. Price) Well, myself and my staff, we made various telephone calls to disposal and trucking companies, and that's where we came up with those estimates.
- Q. Okay. Did you get any input about that during the process of this rulemaking from industry about the economic effects that this rule might have on them?
- A. (By Mr. Price) Are you talking about during the task force?
  - Q. During the task force.
- A. (By Mr. Price) I didn't, because I only sat in on the task force probably the last two events. Mr. von Gonten was there more than I was, and so was Mr. Hansen. So those would probably be better questions for them.
  - Q. Mr. von Gonten, could you answer the question?
- A. (By witness von Gonten) Well, I didn't testify yet about the task force proceedings, but we did hear from one industry representative that they had at least one case that they were familiar of -- familiar with, where there were similar wells located close together, where they

actually did a dig-and-haul, and it was \$100,000 more, is 1 the anecdotal discussion that we had. 2 Q. Was that the extent of the industry input, to 3 4 your recollection? (By witness von Gonten) From industry, yes. 5 think there was a presentation by -- kind of a slide show 6 from -- that discussed case studies with a closed loop 7 8 system, and it was more -- there was more case studies, 9 there were some that were more expensive and some where they thought there was a cost savings. 10 So industry folks during the task force 11 Q. proceedings didn't present you with any data showing a 12 13 significant economic on industry; is that correct? Α. (By witness von Gonten) They did not. 14 Okay, they didn't bring in individual operators 15 Q. 16 to express their concerns with the economic impacts; is 17 that right as well? (By witness von Gonten) I would say the task 18 Α. force represented -- there were four members of the task 19 20 force, and my recollection is that they -- their general opinion was that it was going to be more expensive on the 21 issue of digging and hauling pit contents rather than doing 22

Q. But nothing specific?

on-site disposal.

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A. (By witness von Gonten) No, there was no --

there was no handouts, there was no case studies presented 1 that showed those economics 2 Aside from the task force, have any members of Q. 3 industry approached you with specific economic data about 4 adverse economic impact? 5 (By witness Price) No. 6 Α. Either of you? 7 Q. 8 Α. (By witness von Gonten) Not that I'm aware of. MR. JANTZ: Thank you. I have nothing further. 9 10 CHAIRMAN FESMIRE: Mr. Frederick, are you here yet? 11 MR. JANTZ: Mr. Frederick is not here, he won't 12 13 be here today. CHAIRMAN FESMIRE: Okay, and he understood that 14 he might not get a chance to cross-examine these witnesses 15 on the subjects he was wanting to talk about --16 MR. JANTZ: I think --17 CHAIRMAN FESMIRE: -- not being --18 MR. JANTZ: -- he understands that, yes. 19 20 CHAIRMAN FESMIRE: Okay. Commissioner Bailey, do you have any questions? 21 22 COMMISSIONER BAILEY: Yes, I do. **EXAMINATION** 23 BY COMMISSIONER BAILEY: 24 25 Q. I feel rather like Paul Harvey, wondering what's

the rest of the story here.

(Laughter)

- Q. You opened your testimony with a series of photographs of pits in various conditions. Can you tell me what action OCD took when it saw all of these pits?
- A. (By witness von Gonten) I can answer that. No, I can't answer that, because those were slides that were taken by our district offices. The cases only get referred to the Santa Fe office and the Environmental Bureau when there is no groundwater contamination. Those were part of the administrative record. I set a time frame to search through our files, our photos, JPG files, and I went through each district and just culled out and collected anything that looked like a pit or below-grade tank.

That collection of photographs was winnowed down to the final 106 by date. We culled out any blurry photographs, we culled out anything that were obvious duplications and repetitious.

Q. Your strategy was obviously to create an emotional impact, by beginning your testimony with 106 dirty, oil pits that some were not fenced, some -- practically none of them had netting.

And my concern is that under the current Rule 50 OCD has the authority to enforce torn pits, torn liners, lack of netting, lack of fencing. I am -- rather than

having the dismay that I think you wanted to create towards industry, I'm angry that OCD has not enforced Rule 50, because there are clear portions of Rule 50 that discuss containment, the liners that are maintained, properly managed, lined drilling pits, no measurable layers of oil. These are already on the books and need to be enforced, as they have been a rule since 2004.

So that's why I'm very curious to know what enforcement actions were taken to take care of these issues that you're using as evidence for creating a more stringent rule that may or not get enforced. So let's start with your testimony, because that started the attitude.

Was the BLM a member of the task force committee?

A. (By witness von Gonten) No.

- Q. Were an native American groups on the task force committee?
  - A. (By witness von Gonten) No.
- Q. Would the proposed rule apply to federal or to native American lands?
- A. (By witness von Gonten) I don't think I know the answer to that.
- A. (By witness Price) I do. It would apply to federal lands, but not necessarily native lands.
- Q. Are the current BLM rules more or less stringent than this proposed rule?

1	A. (By witness Price) Less stringent because,
2	Commissioner Bailey, the BLM primary emphasis is for
3	surface restoration, and our primary emphasis is for
4	protection of groundwater. Not to say that we don't
5	protect the environment but when the BLM and we work
6	jointly together, generally they handle the surface and we
7	handle the issue of groundwater contamination, or vadose
8	zone contamination that might contaminate groundwater.
9	Q. But that does bring up a topic that I did want to
10	ask about. Who in your group will be talking about surface
11	restoration and revegetation?
12	A. (By witness Price) Actually Mr. Brad Jones.
13	Q. Mr. Brad Jones?
L4	A. (By witness Price) Yes.
L5	Q. Then I'll look forward to talking with him.
L6	A. (By witness Price) Okay.
L7	CHAIRMAN FESMIRE: Did you hear that, Brad?
L8	Q. (By Commissioner Bailey) How many new wells were
L9	drilled last year?
20	A. (By witness Price) We actually I think we
21	queried that, and it was about 1200.
22	A. (By witness von Gonten) Approximately.
23	A. (By witness Price) Approximately 1200 in the
24	whole state.

So that's about 1200 new drilling pits that would

Q.

have to go through this permitting process? 1 (By witness Price) Yes. 2 Α. On an average, maybe? 3 Q. (By witness Price) Yes. 4 Α. There are four landfills that are 5 Q. Okav. 6 permitted in the southeast? 7 Α. (By witness Price) Correct. 8 0. Under the proposed rule, would the entire 9 southeastern oil and gas industry be -- there are many 10 different ways of putting this -- only be able to deal with the four current landfills with their problems with 11 acceptance of waste and their prices that have been 12 established? 13 (By witness Price) Commissioner Bailey, I'm 14 Α. sorry, I don't understand the question. Would -- What is 15 16 the question now? Would --17 Are you putting the entire southeastern oil and Q. gas industry as hostage to four owners of disposal for --18 Α. (By witness Price) That's a --19 20 -- drilling pits? (By witness Price) -- really good question, and 21 we've actually had internal discussions that we do not 22 23 believe we are. I think the free market will drive itself, and we'll actually see more facilities apply to be open. 24 Actually, we've had a number of inquiries on that --25

Q. How long --

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- A. (By witness Price) -- in the southeast.
- Q. -- would it take to permit a new landfill, given all of the public meetings and hearings and background information? What would be a reasonable time line for --
- A. (By witness Price) I think six months would be fast.
  - Q. But a year would probably be closer to the mark?
  - A. (By witness Price) Yes.
- Q. We've heard testimony that -- or comments, that enforcement of the new rule would force operators to go to other states, Oklahoma, Texas, Wyoming. Are those state rules as stringent as this proposed rule?
  - A. (By witness Price) No.
- Q. So New Mexico would have the strongest rule throughout the entire region?
- 17 A. (By witness Price) Yes.
- 18 Q. Including federal and indian --
- 19 A. (By witness Price) That is correct.
- 20 Q. -- property?
- 21 A. (By witness Price) That's correct.
- Q. But yet you talk about there's a national trend.
- Obviously it doesn't apply to the southwest or western
- 24 United States.
- 25 A. (By witness Price) Well, when I said a national

trend, Commissioner Bailey, what I was referring, there's a national trend to dispose of solid waste into municipal landfills. I wasn't necessarily saying there's a national trend for oilfield waste to go into facilities. We're probably taking the first step in that arena.

- Q. One of the requirements is to remove the liquids from a drilling pit within a short period of time. What is that?
  - A. (By witness Price) Thirty to -- Thirty days.
  - Q. Thirty days.

CHAIRMAN FESMIRE: Under the current rule or under the proposed rule?

- Q. (By Commissioner Bailey) Under the proposed rule.
- A. (By witness Price) Thirty days, and fifteen days for a workover pit.
  - Q. And so cleanup or dismantling of a drilling pit is actually a two-step operation. First you take off the liquids, and then the solids would be drying, correct?
    - A. (By witness Price) Correct.
- Q. And in areas where it's less than 50 feet, it would be part of a drying pad, as part of a closed loop system?
- A. (By witness Price) Well, it could be, yes,

  uh-huh. Or they could -- the one slide I showed you, some

wastes can be put directly into a dumpster-type -- and actually railed and hauled off at that same time, and no drying pad is required. It's just that some companies would choose to use a drying pad, others may not.

- Q. Okay. The liquids -- where do they go in the northwest?
  - A. (By witness Price) I'm sorry?

- Q. Where do the liquids go in the northwest?
- A. (By witness Price) There are a number of facilities that we have. We have disposal facilities that can take liquids, OCD-permitted facilities.
- Q. And then the solids, there are no OCD-permitted locations?
- A. (By witness Price) There are landfarms that are permitted. However, I will admit that when we were promulgating the surface waste management rule, we were basically informed that there are no salts in the northwest and so it's not an issue. But after the rule was promulgated in the past and we had the 1000 parts per million in there, we found out that there were a lot of -- well, there were salts up there and our landfills couldn't take it.

And so that created an issue about where we do need a permanent landfill.

CHAIRMAN FESMIRE: Landfills or landfarms?

mot take it, but that created an issue where we saw a need for a landfill. And so that's when we got with the New Mexico Environment Department, to make sure that they had capacity to take this. And Ed Hansen and Brad Jones, who used to work over in that division, was very instrumental in getting that set up so those type of wastes could be taken to a facility.

- Q. (By Commissioner Bailey) Several times, at least twice, you mentioned the fact if you cut the source, there's no contamination. I'm assuming that you meant once there is no fluid as a driving force, the solids of the drilling pit would not be a large source of contamination?
- A. (By witness Price) Well, what I mean to say, that that's a general hydraulic -- a hydraulic principle, that if you take the head off of it and take -- if you remove the liquid source, then it certainly would reduce the probability of groundwater contamination in a short time period.

If I implied that there would be no contamination from waste that's buried, then I led you astray because there could be but it would just take longer.

- Q. And depending on the geology?
- A. (By witness Price) Absolutely.
- Q. Which brings up page 18 of the graphs.

Α. (By witness Price) Which exhibit, Commissioner? 1 6 maybe? 2 3 It must be 6. Q. (By witness Price) Oh, here it is. 4 Α. 5 Okay, page 19. Q. (By witness Price) Exhibit 6? 6 Α. 7 Yes -- no -- Yes. Q. 8 (By witness Price) 19. Α. Modeling results. It has the two different 9 Q. responses according to 10-by-10 or 30-by-30 pit? 10 (By witness Price) Yes, yes. This is a for an 11 A. 12 unlined pit. WITNESS VON GONTEN: Excuse me, Commissioner 13 14 Bailey, would you like to see this on the screen? 15 COMMISSIONER BAILEY: I have my copy, but the audience may like to see it. 16 17 (By Commissioner Bailey) Well, first my question Q. should be the inputs. I understand that modeling is 18 19 absolutely dependent on the inputs for the model. 20 (By witness Price) Yes, that's correct. 21 Q. And on the previous page, page 18, it talks about 22 some of the inputs using 5000 milligrams per liter 23 chloride. (By witness Price) Yes. 24 Α. 25 Is that representative of the waters that we find Q.

1 in the northwestern part of the state? (By witness Price) Yes, we feel it is. Mr. von 2 Α. Gonten will testify to the sampling results that we had, 3 4 and we -- actually, that might be a little bit low. 5 Is this for a particular formation, or is this the source of most of the water, which comes from the base 6 of the Fruitland Coal? 7 (By witness Price) In this particular case, we 8 chose to model 5000 milligrams per liter because it seemed 9 to be a median of what we found in our sampling program, in 10 -- actually in the pits. 11 So I should wait until testimony later to really 12 ask about these --13 (By witness Price) Well, Mr. von Gonten -- That 14 Α. 15 would probably be a good time to do that. Mr. von Gonten 16 will certainly testify to what we found. 17 Q. Okay, because this was found in the pits, in the vulnerable area? 18 (By witness Price) Yes. Well, it was found --19 20 it was found in pits in the northwest. And as to whether in the vulnerable area or nonvulnerable area, I don't think 21 22 we differentiated between that, did we? 23 WITNESS VON GONTEN: We did not. WITNESS PRICE: We did not. 24 25 (By Commissioner Bailey) Okay. Because if this Q.

was in the vulnerable area, obviously it would have been
lined?

- A. (By witness Price) Well, this is just an example of where we're making our case here for unlined pits. This is for the presentation where we were more or less pleading with the Commission that this would be the final appeal to eliminate any unlined pits in the State of New Mexico, and we were showing here just as small as one barrel per day, which we would consider a continual source, will contaminate groundwater --
  - Q. And unlined pits --

- A. (By witness Price) -- and fairly quickly too.
- Q. -- are not going to be found in the vulnerable area or the expanded vulnerable area?
  - A. (By witness Price) I'm sorry, Commissioner?
  - Q. Unlined pits will not be found in either the vulnerable area or the expanded vulnerable area, under Order 7940?
  - A. (By witness Price) Well, that begs the question of -- they could be, because under the last rule that we had, if a person would register those unlined pits, they were allowed to continue to have them, and we have logged 2000 of those, primarily in the northwest. So yes, there are unlined pits up there.
    - Q. Another matter of enforcement?

(By witness Price) Well, they're allowed. 1 Under 2 the current rule they were actually more or less 3 grandfathered in. And so we're just making a plea that -- And by 4 the way, this was a task force -- this was consensus, that 5 even I think Mr. Carr had pointed out, said, We're with you 6 7 on this, no more unlined pits in New Mexico. And we applaud the industry for taking that step. 8 Yes, and I also do. But on any exhibits or 9 Q. presentations, I'm a stickler for accuracy --10 11 Α. (By witness Price) Right. -- and for real-life, real-world presentations. 12 Q. (By witness Price) Yes. 13 A. And so when I see something that says less than 14 Q. 15 50 feet for an unlined pit with 5000 milligrams per liter I'm questioning, Is this real-world? 16 (By witness Price) Commissioner Bailey, we 17 really do think this is real-world. This was modeled at 50 18 feet using 5000 milligrams per liter, which is certainly up 19 there, and a very, very small quantity, less than one 20 barrel per day. So we do think it's real. 21 Was geology, lithology taken into account --22 Q. (By witness Price) The answer --23 Α. -- for this modeling? 24 Q.

(By witness Price) -- to that question is yes in

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Α.

the modeling. However, I did not do this particular modeling. Mr. Ed Hansen did, and he will testify in detail to the input parameters and the output parameters. 0. Okay. Α. (By witness Price) Yeah. 0. I will save some of that for him. I am unfamiliar with closed loop systems. You need to educate me about closed loop systems. (By witness Price) Okay. If -- My first question has to do with the size Q. of the footprint of a closed loop system for a well to be drilled to 14,000 total depth. With the compaction of the soil, what size -- and the drying pads, what size of an area are we talking about that will be --Α. (By witness Price) Can I show you a picture? I would love to see a picture. Q. (By witness Price) Ed, go to -- Let's see. We're kind of jumping ahead to Mr. von Gonten's testimony, but we'd be glad to show you a picture. Q. Okay. (By witness Price) We'll bring one up. Α. actually visited a drying pad during our sampling, we actually sampled one too, so... CHAIRMAN FESMIRE: Can you all hear in the back?

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WITNESS PRICE: Pretty interesting process.

(Off the record)

WITNESS PRICE: Commissioner Bailey, we're trying to go to 13B, page number 1, closed loop drying area, southeast. We actually visited a site that had a closed loop system and a drying pad, and this kind of -- Ed, go back. There you go.

This kind of gives you an idea. We're standing on the mud tanks, the mud-mix tanks, and that kind of gives you the area. It does extend more to the left a little bit, probably an equal distance of what you're seeing there. So I'm saying that you only -- you see the trench on the right? There's an actual liner underneath all of that on that particular drying pad. But as you can see, there's very little if any liquids at all, and so they're able to really take this material off rather quickly. So that's an example of the drying pad right there.

Now for the most part, we think the drying pad -we know the drying pad for most cases is smaller than the
conventional-production drilling pit. However, there were
a couple examples, and I think one of the representatives
from Marbob had actually indicated to me that he had seen
some where the footprint was quite a bit bigger. I don't
know the reason why. But for the most part, we think the
footprint will be smaller. And Mr. Carl Chavez is going to
testify in length to this.

(By Commissioner Bailey) Really? 1 Q. (By witness Price) Yes. 2 Α. I'll look forward to that. 3 Q. It seems like, without having scale there, that 4 5 that's a rather tall berm? 6 Α. (By witness Price) That's not a berm, that's 7 actually the cuttings. This is a rather deep well down southeast of -- or south of Carlsbad, southwest of 8 9 Carlsbad. They were actually on the west side of the river, 10 so -- They were out of the Salado formation, so the salts, 11 if I'm not mistaken, were fairly low in this particular 12 pit. When we sampled it, I think our salt levels were 13 pretty low because they didn't go through a salt section. 14 15 Q. And that lined trench, what does it go to? 16 looks like it just --(By witness Price) Well, it just went to a 17 Α. little sump and they kept it drained out. They had a hose 18 over there that they threw over there, and they kept that 19 20 drained out and dried the whole time, because they could 21 use the water back in the drilling system. I just don't see where it goes to, it just seems 22 Q. to --23 24 (By witness Price) Well, you can't --Α. -- disappear --25 Q.

(By witness Price) -- there's a -- there's a 1 A. sump back on this left-hand side. They just had a hose 2 3 over there that they had a continual pump on it, and they were just pumping -- There wasn't a whole lot of water 4 there, and they were pumping out of the sump, back into the 5 6 mud tanks. 7 So we thought that was great because that decreased the chance or reduced any sort of head pressure 8 or any large amount of water that you -- you know, it just 9 10 actually pretty well makes it where you're not going to have a groundwater contamination case, because you don't 11 12 have any head pressure there or water for that to happen. Companies -- Of course, this wasn't required 13 under the rules, and as you can see, this company was --14 CHAIRMAN FESMIRE: Hang on, Mr. Price. 15 MS. FOSTER: Mr. Fesmire, I would just like to 16 17 note for the record that I do not have this exhibit in my I've done an extensive search of the OCD CD that records. 18 they gave me, and I have part -- 13B, part 2, but not 13B, 19 So I don't believe those pictures have been made 20 available to us. 21 22 WITNESS VON GONTEN: It may be mislabeled. Could you check 13C, please? 23 MS. FOSTER: 13C? 13C, part 3. 24

WITNESS VON GONTEN:

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It should just be labeled

1 13C.

MS. FOSTER: Okay, thank you. For the record it's listed as 13C, part 3. Thank you.

WITNESS PRICE: Do you have it? Okay, good.

- Q. (By Commissioner Bailey) And you just said it again: Remove the fluids, and the solids do not pose as great a source of contamination?
- A. (By witness Price) On a short-term basis that's absolutely correct.
  - Q. All right.
- A. (By witness Price) And I have a presentation that I'll go into that aspect.
- Q. You were asked the question, is it going to be easier to administer the new rule than it is the current Rule 50, which appeared to be violated and no enforcement. How is it easier to enforce the proposed new rule than the current Rule 50?
- A. (By witness Price) Well, the number one reason is that the guidelines will be in the rule now, and our attorneys have repeatedly told us that when -- for example, the 12-mil liner is in the guidelines now. And so therefore if you went out there and a company was using a 6-mil liner and it was tearing and they went right back and used another 6-mil liner, it's not in the rule and we couldn't force them to use a better liner so it wouldn't

rip and tear.

So we're attempting to put the guidelines in the rule, as we talked about during the task force and make our rules a little bit more legally enforceable. I'm not an attorney, so I get this advice from our attorneys.

- Q. So even though a rule may say, in general, pits, sumps and below-grade tanks shall be designed, constructed and operated so as to contain liquids and solids to prevent contamination of fresh water, that each drilling pit shall have a single liner and maintain to prevent contamination and to protect public health and the environment -- You're saying that those are not enforceable?
- A. (By witness Price) No, I'm not saying that. I'm not saying that. I'm just saying that once you get into those proceedings, that the enforceability becomes a little bit arbitrary.

I've been in those type of situations before, and when you have very prescriptive design requirements, it's easier to have a case than if you don't have.

COMMISSIONER BAILEY: That's all I have.

CHAIRMAN FESMIRE: Commissioner Olson?

## **EXAMINATION**

## BY COMMISSIONER OLSON:

Q. Thank you. I might follow up on something that Commissioner Bailey had. I guess I was curious why the BLM

wasn't on the task force, because you were saying that they deal with surface-use issues, but part of the new rule involves re-vegetation for surface use. So I guess I was kind of curious why they --

- A. (By witness Price) Commissioner Olson, I can't --
  - Q. -- for that purpose.

- A. (By witness Price) -- I can't really answer that question. I wasn't in the loop of the process that selected the task force.
  - Q. Would Mr. Jones maybe know?
  - A. (By witness Price) No, Mr. Jones would not know.
- Q. Okay. Do you have any estimates of the volumes of drilling mud that's going to be generated per year?
- A. (By witness Price) We have not actually put the pencil to it to estimate that. That could be done fairly easily. It would be a rough estimate, but if you take 1000 new drilling sites times 1000 yards, and that's probably pretty close.
- Q. Okay. And I guess -- as you were mentioning for southeastern New Mexico, you've only got four landfill facilities?
  - A. (By witness Price) That's correct.
- Q. Correct?
- A. (By witness Price) Correct.

Q. And how long would these facilities be able to accept 1000 times 1000 yards of drilling muds before they filled up?

- A. (By witness Price) We have not made that study.
- Q. And maybe to clarify something, I guess what happens when a disposal facility -- It's my understanding that when a disposal facility is not available within 100 miles of the site, then they can dispose of the muds onsite?
- A. (By witness Price) They can do a deep-burial trench as another option on site if they meet the siting requirements, correct.
  - Q. If they meet the siting requirements?
  - A. (By witness Price) Right.
- Q. So you have pretty good confidence that if they meet the siting criteria, they're not going to cause groundwater contamination?
- A. (By witness Price) If they meet the siting requirements, if they meet the closure standards. And we feel that -- and Mr. Hansen will show the modeling, we have modeled that. It still shows contamination, but it's -- it's way out in the future.
- Q. So I guess why would we need to require them to take it to centralized facility, if that's going to be protective --

- A. (By witness Price) Well --
- Q. -- of water quality?

A. (By witness Price) -- the biggest reason is the cumulative impact and effect. Mr. Hansen will show in his modeling that you add up thousands of pits in these areas, and you're going to have a cumulative effect.

And as I stated yesterday, we feel that from a regulatory agency we can certainly regulate one facility much better than we can thousands of them. And it's more of a -- it's an oversight and regulatory, and we think that having all this waste in one location, it's going to be handled for us and much easier in the future and for the state.

We have thousands of sites out there which we can't possibly get to, to make sure that each one of them is going to be closed properly, and we just feel very confident that this is the way to go. And there is a trend in the United States. As you know, if you take waste, your waste generally lands up -- winds in a landfill somewhere. And also we can put financial assurances on these facilities, whereas we're not allowed to have financial assurances of bonding on pits.

Q. Well, I guess that kind of comes back to what I was saying before about the existing facilities, that it seems like we don't have a lot of existing facilities right

now. Isn't that a point of concern, then, that there's not enough places to take these wastes to at this time?

- A. (By witness Price) Well, right now we have four facilities in the southeast, and I can assure you that three out of the four has ample capacity. We do have one facility that is getting close to wanting to expand. They have the room to expand, but they're going to have to expand under the new part 36, and they're reluctant to spend the money to do that.
- Q. And is that an existing facility that's currently unlined?
  - A. (By witness Price) Yes.

- Q. So under the -- they would have to come in and meet the new rules, and any expansion of that facility would have to --
- A. (By witness Price) -- have to be double-lined with leak detection.
  - Q. Double-lined with leak detection.
  - A. (By witness Price) That's correct.
- Q. And then I had a couple questions on some of your slides, just to understand them a little better. I was looking under Exhibit 6, under -- on page 15, slide 15.
- A. (By witness Price) Slide which one? Or page which one? 15?
  - Q. Yeah, slide 15 or page 15.

351 (By witness Price) Yes. 1 Α. And I guess maybe you've explained this, maybe I 2 Q. missed that in your explanation. But maybe you could go 3 over the slide again. I'm somewhat confused by what it's 4 representing. Under the 2005 numbers that you're listing 5 6 here are 400 confirmed pit groundwater contamination cases? 7 Α. (By witness Price) Correct. 8 Q. That's -- Is that 400 that are total up to 2005, or is that 400 in --9 (By witness Price) No, that's 400 confirmed 10 Α. 11 groundwater pit cases that are still open. They have a --There were some that were more than that, but they've been 12 closed properly, and so therefore... 13 I think during the 2003 pit rule testimony, I 14 believe Mr. Anderson had pointed out, there were 500 and 15 16 something. But we counted -- as of 2005 in our database, we actually counted approximately 400 confirmed pit 17 groundwater cases. 18 I guess I was a little confused by "confirmed". 19 Q. Do you mean that there --20 21 (By witness Price) We actually counted them in

the database.

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- Q. Right, but they're still open? Those are cases that are still open, not ones that have been closed?
  - Α. (By witness Price) These are groundwater --

actual groundwater cases where the pit has caused groundwater contamination, and they're not closed, they're still open. The cases are ongoing.

- Q. So the actual number of groundwater contamination cases, if you included sites that are closed, is a larger number than the 400?
  - A. (By witness Price) Yes.

- Q. Do you know how much larger?
- A. (By witness Price) I'm sorry, Commissioner, I don't.
  - Q. And these are for unlined pits; is that correct?
  - A. (By witness Price) That is correct.
- Q. And then under your 2007 numbers you list 150 abatement cases. Is that actual abatement plans or --
- A. (By witness Price) Those are -- No, we haven't actually issued abatement plans for each one. We have a list that we're going to do that, and we just haven't done that. But they're on our internal list that we have that will be -- at least 250 of these will become a high priority on abatement cases.

We have another 154 that we don't -- that we are thinking that the groundwater impact is so low that we may not have to have an abatement plan issued. Abatement plans are very cumbersome for both the staff and the operator.

And then we have another 200 estimated pit cases

-- literally, that's an estimate between what Mr. von 1 Gonten and I and Mr. Hansen -- we literally have them on 2 our floor, and that's an estimate. 3 So see if I understand that correctly then. 4 Roughly you have approximately -- in 2007 you have 5 approximately five hundred --6 (By witness Price) That's correct. 7 Α. -- four cases of groundwater contamination from 8 unlined pits? 9 (By witness Price) From unlined pits, that's 10 Α. correct, Commissioner. 11 So it's an increase of 104 cases in two years? 12 (By witness Price) Yes, sir. 13 Α. 14 Q. And then again, I guess that's not the total number, that's just active cases. That's not the total 15 16 number of cases --(By witness Price) That is correct. 17 Α. Okay. Thank you, that helps me out a little. 18 Q. And then maybe I'll look at page 24 under that 19 same exhibit. 20 (By witness Price) Yes. Α. 21 You're listing there in the center that the best 22 Q. estimate is that there's 2000 unlined pits remaining in the 23 state? 24 (By witness Price) That's correct.

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Α.

- 354 1 Q. Where are most of these located? 2 (By witness Price) In the northwest. Α. 3 So most of those are in the nonvulnerable area of Q. 4 the northwest? 5 Α. (By witness Price) I can't tell you if they're 6 in the vulnerable area or the nonvulnerable area. 7 just tell you that they're in the northwest. Do you know how many of them were in the 8 0. . 9 southeast, or did you break it down that far? (By witness Price) I did not. Almost -- We did 10 Α. not include the southeast pits in this estimate. 11 staff member take all of the -- and before we got this is, 12 we actually have a database -- The 2003 rule required 13 registration, and this is what we roughly counted in the 14 pits that were registered at the district, unlined pits 15 16 that were registered at the district. And so we had a 17 staff member that just counted these pits. And that's an estimate, but I think it's within plus or minus 10 percent. 18 19 I do believe that there are -- you could probably 20 add another 200 to that for the southeast. That would be a 21 guess on my part. 22
  - Q. And then for the location of those 200 in the southeast, those are largely going to be in the exempted area that's -- the 3221 exempted area?
    - A. (By witness Price) That is correct,

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355 1 Commissioner. I guess maybe I'll look at -- Oh, this is Mr. von 2 ο. Gonten's testimony. I guess that would be a question for 3 4 him on Exhibit 12. 5 A. (By witness Price) Does Mr. von Gonten need to 6 sit down, or should he stand for your question? I only have a couple, so I think it's... 7 Q. I was looking at page 19 in Exhibit 12. 8 (By witness von Gonten) Water wells located in 9 Α. nonvulnerable areas? 10 Right. And I guess what I was wondering was, 0. 11 what -- is there any information on what the depth to water 12 was in these area? 13 (By witness von Gonten) No, Commissioner Olson, 14 A. only the general exhibit that I showed, that in the area of 15 San Juan County and Rio Arriba County, which is where most 16 of these water wells are located, the depth to groundwater 17 was less than 60 feet, 80 to 90 percent of the time. 18 I did not -- with this database I wasn't able to 19 20 query the information on that water well. 21 Q. Okay. (By witness von Gonten) That information is 22 A. probably available on the State Engineer's database. 23

the siting criteria for potential burial on site.

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Because I was curious whether these would meet

So

you're saying you don't have that information? 1 (By witness von Gonten) That information is Α. 2 probably available. I did not -- with this software that I 3 was using I wasn't able to integrate, I was just able to 4 get the location plotted on this map. 5 I guess maybe a similar question on page 27 of 6 0. Exhibit 12 as well, listing a lot of the water wells that 7 are in the exempted area in southeastern New Mexico. 8 (By witness von Gonten) Correct, I was not -- I 9 did not query the depth to water in these 64 water wells 10 either, for the same reason. 11 COMMISSIONER OLSON: Okay, I guess that's all I 12 have at this time. 13 **EXAMINATION** 14 BY CHAIRMAN FESMIRE: 15 16 0. Mr. Price, going to Exhibit 12-37 again -- let me start with 6-15, I'm sorry. 17 (By witness Price) 6-15? 18 Α. Yes. By my hearing under questioning from 19 Commissioner Bailey, did you say that that 400 confirmed 20 groundwater pit cases all came from unlined pits? 21 (By witness Price) Yes. 22 Α. 23 Q. And none of those were lined? (By witness Price) Commissioner, I'm almost 24

positive that in 2005 when we looked at the database we

were looking for unlined pits, because it fitted into our presentation for unlined pits, that's correct. I'm not saying that there's not lined pits that haven't contaminated groundwater, but in this particular case these are unlined pits.

- Q. Okay. And so the pictures you showed us of failed liners, they wouldn't be included in this?
  - A. (By witness Price) Oh, no, sir. No, no.
- Q. In Ms. Foster's cross-examination, she started talking about the idea of having to haul from a well that was located just across the section line from a facility. Do you remember that line of questioning?
  - A. (By witness Price) I do
- Q. Why would an operator want to haul to the facility from a well that was close to that facility?
  - A. (By witness Price) Why would he?
- 17 | Q. Yes.

- A. (By witness Price) His disposal costs would be extremely cheap compared to probably burying it on site if he's right next door to it.
- Q. So it would be cheaper for him to haul it to the next section than to bury it on site?
  - A. (By witness Price) Absolutely.
- Q. So this could be kind of a self-correcting
  problem out to some radius where the costs to dig and haul

are less than the costs to bury on site, right?

A. (By witness Price) Yes.

- Q. And I know you probably haven't done anything like that, and would you be able to give an estimate of how far that was under the --
- A. (By witness Price) No, we actually didn't do that. But I will say that my lower number, \$30,000, was a 90-mile haul. So that was on the low end. We had -- we actually had a surface waste management operator give us that number if everything went right and so forth, so forth. And then on the other side it could have went up to \$80,000. And so that number could be a lot cheaper, depending upon if they're closer.
- Q. Okay. So there really wouldn't be a situation, under most circumstances, where you would have -- it would be more expedient or less expensive for the operator to leave the -- to dig and haul and leave the material in place when he's got a close facility; is that correct?
  - A. (By witness Price) Oh, that's correct.
- Q. Okay. Now the slide show that you showed at the beginning of your testimony, what was the purpose of that slide show?
- A. (By witness Price) It was just to give a general overview and set the stage for what this whole case is about. It's about pits and no more, no less. And we were

just trying -- It's like Mr. von Gonten had testified, we 1 2 were trying to show that we have problems out there that we just need to address. 3 Now, a lot of those pictures in the slide show, 4 and I think you said there were 106, they showed torn 5 How would this rule address those torn liners? 6 liners. 7 (By witness Price) How does this rule address Α. them? 8 9 How does the proposed rule address the torn Q. 10 liners? (By witness Price) Well, if you have a torn 11 A. 12 liner, there's specific prescriptive language in there that indicates that they have to do something right away. 13 Q. Are most of the liners out there 20-mil, like you 14 were proposing in this? 15 16 Α. (By witness Price) 17 Q. No? (By witness Price) No, they were not. 18 Α. So --19 Q. 20 (By witness Price) They were less than --21 They're less than 20-mil. Okay, so this rule would make those liners 22 Q. sturdier in essence; is that right? 23 24 Α. (By witness Price) Minimum of 20-mil, that's

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correct.

And a lot of the failures, I think, Q. Okay. 1 according to the pretrial statement and some of the 2 exhibits, you're going to show that there have been an 3 awful lot of failures in 12-mil liners, aren't you? 4 (By witness Price) Yes. 5 And that is a significant part of what the 6 0. 7 problem is now, is it not? Yes, it is. (By witness Price) 8 A. Let's talk about the MOU with the -- up in the 9 0. northwest, with the Environment Department that allows them 10 -- that allows operators to haul to -- is it -- I keep 11 wanting to say hazardous waste, but it's not. 12 industrial waste, or is it --13 (By witness Price) It's industrial waste. 14 Α. Industrial waste facilities. 15 Q. (By witness Price) Yes. 16 Α. How long as that been in place? 17 Q. (By witness Price) The MOU that we have now? 18 Α. Approximately seven months. 19 Okay, and how long is it for? 20 Q. (By witness Price) Well, it's for until next 21 Α. April. 22 Q. Okay. So it was essentially a year from the time it was put in place? 24

Yes.

(By witness Price)

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Α.

1	Q. And to take advantage of that, the operator has
2	to apply through the OCD, does it not?
3	A. (By witness Price) Correct.
4	Q. How often has that been done?
5	A. (By witness Price) I would have to ask one of my
6	staff members who handles that.
7	Q. Okay, who should I ask?
8	A. (By witness Price) Mr. Jones.
9	Q. Mr. Jones, okay.
10	If there is not a facility available within 100
11	miles, what happens to the Let's use, for example, the
12	colored circle, 100-mile-radius circles that you had on
13	there.
14	A. (By witness Price) Yes.
15	Q. If there is not a facility available, what
16	happens to the waste?
17	A. (By witness Price) Well, they have another
18	option. They could go into the option of deep-trench
19	burial.
20	Q. Okay. So if a facility never becomes available
21	in the northwest away from 100 miles from the out-of-state
22	facilities, what happens to the waste?
23	A. (By witness Price) I'm sorry, repeat the
24	question, because I
25	Q. Okay. If a facility never gets built in the

northwest and the operators are not within a hundred miles 1 of the out-of-state facilities --2 (By witness Price) Uh-huh. 3 Α. -- what happens to the wastes that they generate 4 at a drilling site? 5 (By witness Price) Well, they would be allowed 6 Α. 7 to deep-trench bury. If they meet the other siting criteria? Q. 8 (By witness Price) Oh, yes, of course. 9 A. Okay. So if a facility doesn't get built, then 10 Q. they have that option? 11 (By witness Price) They do have that option. 12 Α. CHAIRMAN FESMIRE: I don't think I have any other 13 questions. 14 15 COMMISSIONER BAILEY: I have one comment to follow up. 16 CHAIRMAN FESMIRE: Commissioner? 17 FURTHER EXAMINATION 18 BY COMMISSIONER BAILEY: 19 (By Commissioner Bailey) If no facility is built 20 0. in the northwest, the option is to bury it in a deep-trench 21 pit on site, if the siting requirements are met and if the 22 surface owner gives permission, according to your proposed 23 rule? 24 (By witness Price) 25 Α. Yes.

1	Q. If the surface owner refuses permission, what
2	happens?
3	A. (By witness Price) They can't bury it on his
4	property.
5	COMMISSIONER BAILEY: Thank you.
6	CHAIRMAN FESMIRE: Who is the Oh, go ahead.
7	COMMISSIONER OLSON: No, go ahead. Follow up on
8	that question.
9	FURTHER EXAMINATION
10	BY CHAIRMAN FESMIRE:
11	Q. Who is the surface owner for most of the wells in
12	the northwest?
13	A. (By witness Price) BLM.
14	Q. Have they indicated that they will allow a deep-
15	trench burial under the proper conditions?
16	A. (By witness Price) Yes.
17	CHAIRMAN FESMIRE: Commissioner Olson?
18	FURTHER EXAMINATION
19	BY COMMISSIONER OLSON:
20	Q. Yeah, just to follow up a little, I guess on the
21	when we were looking at the issue of the cost of deep
22	burial versus going to another facility close by, as the
23	Chair was mentioning, is there any estimate of the cost of
24	complying with the proposed rule for deep-trench burial?
25	A (Ry witness Price) Commissioner are you asking

1 us if our agency did a cost on that? Yeah, I was wondering --2 Q. (By witness Price) No, we --3 Α. -- what approximate cost would be for the deep-4 Q. trench burial versus potentially disposal facility. 5 (By witness Price) We did look at that one day. 6 A. 7 We were in our conference room, we were kicking around 8 And I would -- I think one of my staff members can probably come up with that. I don't have the number 9 10 for you right now. But we had a special meeting on that, we kicked these numbers around, and I remember that we had 11 discussed it. And I believe either Brad Jones or Ed Hansen 12 or Carl Chavez will have that number. 13 I don't have the 14 number. 15 0. Okay. So Mr. Chavez --(By witness Price) I think Carl -- or Mr. 16 Α. 17 Chavez, will have that number. 18 Q. Okay. 19 A. (By witness Price) Yeah. 20 Q. And then --21 CHAIRMAN FESMIRE: We sure are loading up Mr. 22 Chavez. He's last. 23 Q. (By Commissioner Olson) And then it mentioned the out-of-state facilities. Are they constructed the same 24 as the New Mexico facilities? 25

(By witness Price) Once again, Mr. Chavez will 1 Α. 2 check that out. And I don't have any answer for you, but 3 he can answer that. CHAIRMAN FESMIRE: Every time you say something, 4 5 Mr. Chavez writes something else down. COMMISSIONER OLSON: That's all I have, thanks. 6 7 CHAIRMAN FESMIRE: Mr. Brooks, do you have a recross? 8 MR. BROOKS: Redirect, your Honor. 9 CHAIRMAN FESMIRE: I'm sorry, redirect. 10 MR. BROOKS: Brief, briefly. Attorneys always 11 say that. 12 REDIRECT EXAMINATION 13 BY MR. BROOKS: 14 Mr. Price, it's just been mentioned that you had 15 16 referred a number of things to Mr. Chavez. Actually, Mr. 17 Chavez is just out there chomping at the bit to get up here on the stand? 18 19 (By witness Price) Yes, he is. Α. Okay, I'm going to be very brief. 20 First of all, with regard to the slide show of 21 22 the pits that were shown, you testified that you did not know what if any enforcement action was taken; is that 23 correct? Is that your testimony? 24 (By witness Price) That's correct. 25 Α.

1	Q. And you were not testifying that none had been?
2	A. (By witness Price) I was not.
3	Q. Would that be a district responsibility?
4	A. (By witness Price) Yes.
5	Q. Involving, no doubt, our enforcement attorneys?
6	A. (By witness Price) Yes.
7	Q. But not involving the Environmental Bureau in the
8	Santa Fe office?
9	A. (By witness Price) Generally not.
10	Q. Okay. Now the Chairman asked you, with regard to
11	those pictures, was not the requirement of liner thickness
L2	relevant, so I won't re-ask that question that the Chair
L3	asked. But were there a number of pits in that slide show
L4	that had defective anchoring of the pit liners?
L5	A. (By witness Price) Yes.
۱6	Q. Does our new rule have some specific prescriptive
L7	requirements about how liners are to be anchored?
L8	A. (By witness Price) Yes.
L9	Q. In your opinion, would that new rule, if it were
20	followed, obviate some of the problems that existed with
21	some of those photographs?
22	A. (By witness Price) Absolutely.
23	Q. You were asked a number of questions about the
24	existing landfills.
5	A. (By witness Price) Yes.

1	Q. And I believe you said that there are two of the
2	landfills that are not lined?
3	A. (By witness Price) In the southeast.
4	Q. And those are two of the four that OCD permitted?
5	A. (By witness Price) Yes.
6	Q. Were those permitted by hearing order?
7	A. (By witness Price) Yes.
8	Q. And does that mean that the specific facts would
9	have been considered at a hearing before either a Division
10	Examiner or the Commission?
11	A. (By witness Price) Yes.
12	Q. I believe you also testified to your knowledge
13	about the groundwater, that there is not groundwater in the
14	vicinity of those protectible groundwater in the
15	vicinity of those facilities?
16	A. (By witness Price) Well when you say in the
17	vicinity, I don't think I meant that. I said directly
18	underneath them.
19	Q. Okay, very good. Now for new landfills, the
20	standards are set forth in part 36?
21	A. (By witness Price) Yes.
22	Q. Are those standards considerably more protective
23	than those we impose for deep-trench burial under the
24	proposed part 17?
25	A. (By witness Price) Yes.

1 It's certainly -- Commissioner Bailey had talked 2 about geological conditions, and of course it could vary either way. And so that's why --3 Glenn, back up to -- that's why we wanted to 4 5 leave some leeway here before it actually hit groundwater, and also for porosity changes. 6 Next slide. 7 Now -- Well, before you go on to the next slide, 8 Q. go back to the other slide. 9 Go back. 10 Α. 11 Q. At that rate of flow that you're showing there, how long would it take it to reach the 30-foot-down level? 12 Okay, I've got a slide that shows that. 13 Α. Okay, well, I'll wait. 14 Q. CHAIRMAN FESMIRE: You'll wait and ask that after 15 it's answered? 16 THE WITNESS: Next slide. 17 And this is just another porosity range for 18 sediments, pretty typical. Used 20-percent porosity. 19 And once again, that's just another permeability 20 for sediments. 21 Next slide. 22 This right here is just a typical volumetric 23 24 water content versus pressure head, and this is typical, this is just conceptual. What I just want to point out 25

here is that when the saturated soil that you saw on the blue begins to drain down a little bit, then the volumetric water content decreases. And of course as it decreases, then the pressure head decreases here.

Next slide.

And then what I want to show here, as your pressure head begins to decrease, then your hydraulic conductivity changes by the order of magnitudes of tens.

And so basically when you're saturated, yeah, pretty good, you know, the flow is fairly fast. And then when it drains down it slows down. Doesn't stop, but it does slow down drastically.

Now here is -- I had one of the staff members, Leonard Lowe, actually, one of our engineers, did some estimated time of fluid movement.

Go to the next slide real quick.

And here are the equations he used. They're just typical Darcy's equations, a velocity equation, nothing fancy here. Steady-state, basic hydrology principles.

Back up a slide now.

And what we calculated is, it could take six days to go 30 feet, it could be plus and minus several days there, and then -- but the next 20 feet could take as much as 400 days. And so we feel pretty comfortable with the 50 feet.

Next slide. 1 (By Mr. Brooks) Now that was the slide -- that Q. 2 last slide --3 Α. Go back. 4 -- was the slide you were referring to where you 5 said that you were going to show, and you estimate it would 6 7 take six days to get down to 30 feet? That's an estimate. 8 Α. And then 400 days to get down the remaining 20 9 Q. feet to 50 feet of groundwater? 10 That's correct. Α. 11 So if you allowed pits at a higher -- or closer 12 to groundwater, the -- based on this work would you 13 14 conclude that the contamination could reach those -- the 15 groundwater, from pits closer to groundwater, a whole lot faster, not just proportionately faster? 16 Well, the equations we used were linear. But to 17 answer your question, the closer you put the pit to 18 groundwater, then the higher probability you're going to 19 have, if you have a leak, that you impact groundwater. 20 Q. Go ahead. 21 Next. Next one. 22 Α. Now here's a real-time example. This Chesapeake 23 24 Williams 14 Federal Number 1 actually shows up on one of

our drilling pit slides where we say they have contaminated

groundwater. This particular one -- and I'm going to talk a lot about chloride enveloping in the vadose zone.

But what I want to show you here is, here's an example where the 50-foot safety net actually worked. Now we did have groundwater contamination, we had an impact. But once the head was taken off, as you can see how these chloride levels have -- it's really high. Down here at borehole number 3 we've got 5000 parts per million. Now that's in the soil. Just a general rule of thumb, if you multiply that times 5 you'll get pore water concentration. As you can see, that's quite a bit higher than the standards.

Next slide.

This is just groundwater depth of between 50 and 60 feet. As you can see, the 50 foot acted as a temporary safety net.

Next slide.

Now we did have an impact here, but the impact was very slight. And since then, this is beginning to clean up. Of course, we've got monitor wells in here to monitor the progress.

And so my point is that in this particular case it was closed, but the 50 foot did -- even though it impacted groundwater, it did provide us enough of a safety net that we had a very slight impact. Unfortunately, we

had to put monitor wells in, and we've got to continue to monitor this.

Next slide.

Now, 50-foot-to-groundwater justification. Of course, this was a task force nonconsensus item. Values ranged from two to 100 feet. This agency would certainly like 100 feet better than 50, but 50 feet has seemed to work in the past. For example, 50 foot has been established ranking criteria since 1993. Fifty feet appeared in the nonvulnerable area criteria in R-7940. Now we think that might have been inappropriately applied, because it's only been applied for benzene and not for chloride, and so that's why I have it in red there.

The new part 36 surface waste management facility rules uses 50 feet as a siting criteria to ponds. OCD district policy uses 50 feet as a dig-and-haul scenario in the southeast, not necessarily in the northwest.

A big one here is, the task force told us that the 50 will provide industry the continued use of pits. If we went to 100 foot, they felt that it would overburden the amount of closed loop systems out there and they just simply wouldn't have a closed loop system or a company to supply a closed loop system, and they just would not be able to drill.

And so the burden of 50 feet actually was placed

upon the industry when there was a nonconsensus, and so we think 50 feet will work as long as we have the new prescriptive pit and design installation requirements.

Now, all bets are off if we're not given that.

We feel that we have the new liner requirements, the insulation requirements, using a minimum of 20-mil liner, and the new monitoring requirements, then we feel that the 50 feet will provide a safety net in the case of a pit liner failure.

Next slide.

- Q. Now, Mr. Price, are there quite a lot of areas in southeastern New Mexico where groundwater is deeper than 50 feet but shallower than 100 feet?
  - A. Yes.

- Q. So using a 50-foot -- using a 50-foot rule rather than a 100-foot rule will provide a lot more opportunity for industry to operate with pits, as compared to 100 foot?
  - A. That's correct.
- O. Continue.
  - A. Next slide. Conclusions, the case for the 50foot separation. The rule requires stringent prescriptive
    controls, the new proposed rule. Fifty foot is widely
    used. Fifty-foot requirement would cover most sensitive
    areas such as river bottoms.

And -- Now there's a mistake here, I believe.

The rule requires -- Oh, no. The rule requires dewatering in 30 days and closed in three months. That's wrong.

Please correct your slides, that's supposed to be six months.

So we feel like if they get the water off in 30 days, remove the source, then we feel very confident that 50 feet is a good number.

And of course the new rules require that all pits be required to be sampled in the vadose zone. That way, in the future we'll know that these things -- if for example they have a failure, then we're going to know how deep it's gone and so forth. And so we feel that sampling is a very important part of the new rule.

Next slide.

So, what does the 50-foot separation do for us? It does not, and I want to repeat, does not provide long-term protection to groundwater if a source is available. We're talking about the liquids are still there. It does not provide a long-term protection.

Next slide.

We do think that the 50-foot separation should provide a short-term protection of groundwater if the new prescriptive methods are employed. Now I'm talking about the new liners, the new ways of installing liners, new monitoring requirements, and the fact that we'll be able to

sample underneath these pits now, to know whether they've actually contaminated the vadose zone or not.

Okay, I would like to go ahead and do my next two and then cross, if that's okay?

Q. Yes, please do.

A. Infiltration. This is -- We're going to be talking a lot about modeling. We're going to talk about, in New Mexico is there actual infiltration and is there aquifer recharge? You'll hear some specialists or some people say that there is no aquifer recharge, you'll hear some say that it's limited.

But anyway, this is just one slide and I just want to point out, I had presented this in the surface waste management rule that this was a report done by the Geological Survey, water source, in conjunction with the State Engineer's Office, and they basically -- a 20-year study, estimated a recharge of approximately a quarter to a half inch per year.

In their long-term study it turned out that .38 inches per year was a good number. I might add that in all fairness here is that there is -- there is some controversy on whether this recharge -- how this recharge occurs and where it occurs in depressed areas or focal playa-lake areas, or whether it's diffuse on flat land, so forth, or whether there's plant growth. So there's a lot of

variability in this.

But the bottom line is, yes, we do have recharge in New Mexico and it does happen.

One of the observations that we've noted is that we have data showing the rise of groundwater in monitor wells located in Lea County. We have a few wells showing a recharge of the local aquifer to rise as much as 10 feet.

And I know in one instance there was a playa lake nearby, which may be attributed to that, but then again we had some other areas where it rose nine, 10 feet, and it was on flat land and we couldn't really tell if it was influenced except a diffuse -- this normal infiltration. I will say it was probably in a sandy area, though, which should be expected.

Other wells are actually known to decrease during this time, so it's a very dynamic situation out there.

Now the next slide I have is a determination of chloride donation, and I would like to go drive, if that's possible, down there. It would help my presentation if I could be at the computer.

MR. BROOKS: Yes, the witness is requesting to sit at the computer to give his testimony. Will that be acceptable to the Commission?

CHAIRMAN FESMIRE: Is there any objection from the attorneys?

STEVEN T. BRENNER, CCR (505) 989-9317

No objection. 1 MR. CARR: MR. HISER: No objection. 2 CHAIRMAN FESMIRE: Okay. Go ahead, Mr. Price. 3 THE WITNESS: Are you going to be able to hear me 4 5 okay? COURT REPORTER: Yes, sir. 6 THE WITNESS: I have a tendency to talk loud 7 because I'm hard of hearing. 8 9 Okay, in the proposed rule we have proposed to use 250 milligrams per kilogram as a soil screening level 10 for a chloride delineation number. 11 Once again, I want to absolutely make sure that 12 everyone understands that this is a general delineation. 13 It is not necessarily for cleanup. And I want to show you 14 15 some real-time excellent data that we have. There's a 16 company, Rice Engineering, down in the southeast part of the state, has a very, very large saltwater system in which 17 18 they dispose of saltwater. It's -- the infrastructure of that system --19 approximately five, six, seven years ago, began to fail, 20 and we began to experience a lot of contamination. 21 (By Mr. Brooks) Okay. Mr. Price, before you go 22 Q. on I want to make sure that everyone understands the 23 concept that you're testifying about here. And to do that 24

I would like to refer to the proposed rule.

The proposed rule requires testing of the soils 1 beneath the temporary pit, correct? 2 Α. Correct. 3 And that would be done at the time of closure? 4 Q. 5 Yes. Α. And one of the screening levels which the 6 Q. Okay. 7 operator is required to identify is 250 milligrams per liter of chloride? 8 9 Α. Yes. Now if the operator identifies more than 250 10 Q. milligrams per liter of chloride, and it's more than the 11 background --12 13 A. Yes. Now if it's less than the background he doesn't 14 Q. have to do anything, right? If it's over 250 milligrams 15 16 per liter, but the background is over 250 milligrams per liter --17 18 Α. They can stop --19 Okay, but if the background is less than 250 milligrams per liter --20 21 CHAIRMAN FESMIRE: Mr. Brooks, could you speak 22 up? (By Mr. Brooks) If the background is less than 23 Q. 250 milligrams per liter, but the operator identifies more 24 than 250 milligrams per liter, what does the rule require 25

the operator to do? 1 Delineate. 2 Α. 3 Q. And what does that mean? That just means trace or chase the system down, 4 either with a shovel or a hoe, a backhoe, whatever, just to 5 find out how far the contamination has gone. 6 And is he required to report to the Division? 7 Q. 8 Α. Yes. Then the rule says, I believe, if the operator or 9 Q. the Division determines that a release has occurred, then 10 the operator shall comply with Rule 116 and Rule 19, as 11 12 appropriate. 13 Α. Yes. Now those rules do not necessarily -- let me --14 Q. 15 Do those rules necessarily require in every case that the operator do a complete cleanup? 16 17 Α. No. So then the 250-milligram-per-liter standard, is 18 Q. 19 that merely a standard for determining whether the operator 20 has to investigate and report, as opposed to a standard for 21 determining whether the operator has to clean up? Α. Correct. 22 And that basically is what you're saying 23 when you say that it's a delineation standard and not a 24

cleanup standard; is that --

1	A. Yes.
2	Q. All right. If I've misstated the concept in any
3	respect, please clarify it, because I had great difficulty
4	understanding it myself.
5	A. You were very good, that's correct.
6	MS. FOSTER: Commissioner Fesmire, again I would
7	state my objection that it's a standing objection based
8	on what Mr. Fesmire Mr. Brooks just stated. He
9	believes, he himself, that in the questions that he's
10	making, he is stating making statements that he's asking
11	the witness to agree to, and that is really a cross-
12	examination format, not a format used on direct
13	examination.
14	CHAIRMAN FESMIRE: Mr. Brooks, would you lead
15	your except for foundation matters, would you limit your
16	questions to nonleading questions, please?
17	MR. BROOKS: I will endeavor to do so, Mr.
18	Chairman.
19	CHAIRMAN FESMIRE: I'm sure Mrs. Foster Ms.
20	Foster will correct you if you don't. In other words, I
21	sustain the objection.
22	THE WITNESS: Can I move on?
23	Q. (By Mr. Brooks) Proceed.
24	A. Okay. A number of years ago I say a number of
25	years ago, this is probably around 2000 or so, Rice

Engineering -- once again, they came in with a generic client to try to -- and they have hundreds of these sites. We have probably logged in -- I'm guessing 500 to 700 of these type sites. Not all of them have contaminated groundwater, but in order to expedite the process -- they've done an excellent job, they've spent lots of money, they're doing an investigation, cleaning it up and rebuilding the infrastructure. It's been a win-win between the agency and the company and for the environment.

One of the things that we try to scratch our heads and try to figure out is, how do we determine, just by taking a few samples of groundwater, the probability that groundwater is going to be contaminated?

And so some time ago we described that we would use some sort of simple trend analysis. And what I mean by trend analysis, and I'll just kind of -- if I can draw that here, I'll just show you real quick.

Anytime on an upward trend, if you connect the troughs that are going up -- let's see if that's going to work or not -- you connect the troughs going up like this. And then when this crosses over, that means the trend has changed. And then you connect the troughs going down, and you project them on down.

Now what we have found, and it's been fairly accurate -- here, for example, is the groundwater standard,

right here -- we have found that anytime this trend line -and actually this trend line should be a little bit higher
-- anytime this trend line is higher than -- when this
trend line is above standard, when it crosses where
groundwater is estimated to be, then we have a pretty good
idea that groundwater may be impacted -- and I'll say may
be impacted -- then that would further cause another
investigation.

And so in this particular case, indeed, they found groundwater at 33 feet. It was impacted with chlorides.

Now the industry has proposed that this delineation number stop at 5000 parts per million, and I just want to show you in this particular case, as you can see, these are really low numbers here, all of these are low numbers, yet we've still got a groundwater impact.

Now admittedly this particular site, if I remember right -- we've got hundreds of these -- this was a slight impact, and it certainly wasn't anything really major.

Going to the next slide, here's another example.

Once again, if you draw a trend line over the troughs you can see that the trend is clearly up, 250 parts per million would be about down here, and you can see that if you -- groundwater estimation -- if you estimate ground- -- for

example, if you estimate groundwater at 80 feet, for example, then you can see the trend line is above the standard, and there's a higher probability that you can get contaminated groundwater. In this particular case, chloride impact to groundwater was encountered at 105.

Now all of these are Rice's reports.

And I think what's extremely important when you chase chlorides, whether it's from -- I showed you a drilling pit a while ago -- whether it's from a drilling pit, a single source, a single-time event, or even a multiple release, we find this enveloping taking place, we find this oscillation all the time. And if --

- Q. Now let me stop you just a minute, Mr. Price. What are you talking about when you say enveloping?
- A. Well, as you can see, the oscillation that's occurring, we see that all the time. And you can see, for example, here where it started off at 6000 parts per million, and it went all the way down to 1500 parts per million. An one might say, Well, there's a decreasing trend here, so we can stop.

But as you can see, it popped right back up and went all the way up to 9000, went all the way up to 11,000, and then groundwater was impacted at 105 feet.

The reason this is low, most likely is, you're in the water and it's diluted.

Q. Now is this one plume of chlorides that's moving down through the --

A. I can't answer that. I don't know the answer to that, that's not determined. This was at a junction-box site, the Justis H-2, and so you can't really answer that.

But I can show you -- I do know that one-time releases repeat this pattern. And so we see this enveloping happening all the time.

Now I think what's really important here, if 5000 parts per million is the standard where they stop -- and that's what the industry is proposing -- then we would see the first 10 feet. And then when we got here we would have to stop. We'd stop there, we'd stop there, we'd stop there, we'd stop there, we'd stop there.

And so basically, we would not have the ability to chase this down to determine if the groundwater is contaminated. And as you can see, groundwater has been contaminated.

And so that's why we feel very confident that 250 parts per million has been used by us in the past. It's a very good number. And as you can see, if we go to anything higher than that, then basically we tie the industry's hands -- I'm sorry, we tie the agency's hands on allowing us to determine if groundwater has been impacted.

Q. Now Mr. Price, is this enveloping typical of the

1 way a chloride plume moves through the vadose zone? Yes, we see it over and over and over. 2 Α. And given this enveloping, is a relatively low 3 Q. 4 chloride number such as 250 p.p.m. in one detection 5 location consistent with a probability of a considerably 6 higher number at a deeper level? It's possible to see false negatives like that. 7 Α. And could that occur at any level where you test 8 Q. 9 it? Yes, yes, it will. We've got tons of data that 10 A. prove that. 11 Now here's a really interesting one. This is 12 13 where you have this -- you have an uptrend and then you 14 have long-term downtrend. And once again, if you take 250 parts per million and if you -- let's say you think 15 groundwater is in the area of 70 feet, for example. 16 this trend line is above the standard, then we have found 17 that -- and this really works good. Now it's not -- it's 18 not without its faults. And I will tell you right now, 19 don't try this on the stock market, it's not going to work. 20 (Laughter) 21 THE WITNESS: You'll --22 23 Q. (By Mr. Brooks) It is often applied, though? You'll lose money. But anyway, we found that 24 Α.

it's just a good technical tool. It's not without its

faults.

But here's another example. If you use 5000, we stop right there, we stop right there. We'd stop there, we'd stop there, there. And as you can see all the way down, and we have groundwater impact at 75 feet. And so once again we have this impact here.

- Q. Would determining a trend line require several observations at different levels?
- A. It generally requires a minimum of two troughs or two peaks.
- Q. And in your opinion, is a trend line a more accurate predictor of the levels of contamination that will reach groundwater than is a single observation?
  - A. Yes.
  - Q. Continue.
- A. Now this one here is tough. You can't -- you know, you can't really determine what's going on here. I guess what's significant here is that you have 6000, and then the next one is 1500. And so we would actually -- if the standard was higher than -- if the standard was 5000, then we would stop there. And of course once again, they did find that this had a groundwater impact, so...

Here's another good one, connecting, see where the trend lines went up. And if you -- of course, this is a guesstimate -- you know, if you have reasonable data to

show that groundwater is at a certain depth out here, you 1 take 250 parts per million, you draw this line. And then 2 if we have an estimated depth, as you can see, the trend 3 line is above the standard, so chances are you're going to 4 5 impact groundwater. Once again, it's not an exact science, 6 it's just a tool that we use. And once again you can see 7 here that until you get down to this 30 feet, does it exceed the 5000 parts per million? 8 And so almost every one of these cases that I've 9 showed you is that the agency would not be able to 10 11

determine if groundwater is impacted if we have a higher delineation number than what we're proposing for 250.

Now Mr. Price, given that the -- according to Q. your testimony, the chloride levels at lower levels in the vadose zone could be considerably higher than that detected just below the pit, could you argue for -- could you argue for a lower delineation level than 250 parts per million?

MS. FOSTER: Objection.

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Okay, let me rephrase it. MR. BROOKS:

CHAIRMAN FESMIRE: I'm assuming you mean leading.

- (By Mr. Brooks) Based on your presentation, Q. could you say scientifically that you would be justified in imposing a delineation level actually lower than 250 parts per million?
  - On drilling pits I would say no. Α. And the reason

is, is the -- that's a good question. I'd like to address 1 that. 2 Okay, go ahead. 3 Q. I would say not. I think 250 is the number, it's 4 5 a good number, and I'll show you why here. First of all, let me finish this slide up here. 6 7 Chloride levels can cycle in the vadose zone, as we can 8 see. False negatives are very common. 10 250 milligrams is a good conservative number. 11 is based on numerous sampling events. 12 And a high chloride level standard ma stop 13 delineation prematurely and may prevent discovery of groundwater contamination. 14 Now I want to address what you had just said. 15 I'm going to have to go to like an Excel spreadsheet and --16 17 CHAIRMAN FESMIRE: Mr. Price --THE WITNESS: Yes? 18 19 CHAIRMAN FESMIRE: -- if you provide that spreadsheet, has it been provided to counsel? 20 THE WITNESS: 21 No. 22 CHAIRMAN FESMIRE: Okay. THE WITNESS: It's just a talking point where 23 I'll back something out. I can tell you what it is, but 24 25 graphically I'll be able to explain it a lot better --

But you're not going to CHAIRMAN FESMIRE: 1 attempt to -- you're not going to attempt to get it in 2 3 evidence? THE WITNESS: I'm sorry? 5 CHAIRMAN FESMIRE: You're not going to attempt to get it in evidence, Mr. Brooks? 6 7 MR. BROOKS: I wasn't -- didn't even know about it until Mr. Price raised it, so I did not plan to offer it 8 9 in evidence, no. CHAIRMAN FESMIRE: Okay. I will allow you to use 10 it as a demonstrative exhibit, but it won't become part of 11 the record. 12 THE WITNESS: Okay, very good. And I need to --13 14 (Off the record) 15 THE WITNESS: I think I can just graphically do 16 We'll just type in 250 parts per million. 17 would be the standard that we're wanting -- Now I will put a number of five in, and I'll explain all of these numbers, 18 19 and I'll put a number of what I'd call the -- call it the Hiser number, and I'll put another number in here. 20 21 Now I want to get -- I'm going to -- I just have to talk this through. 22 If you take a soil sample of 250 parts per 23 million on a -- I say a drilling pit, which is generally a 24 half acre or less -- if you multiply that times five -- Oh, 25

I'm sorry, let me do this. If you multiply that times five, then you get a number of 1250, and let me explain that.

Five is the default number that EPA would use -
If you have soil that's got 250 parts per million chloride

in it, you can multiply it times five. Then your pore

water concentration that's actually -- that's in the vadose

zone, that's in the water, is about 1250 parts per million.

Your pore water concentration is always higher than the

soil concentration.

This five is the default number that you take the dry bulk density, 1.5, divided by .3 for the porosity, that's an EPA default number. It can vary.

And then you can take what I call the Hiser number where you divide it by 20, which would be a DAF of 20. You come up with 62.

Now what is 62? Why is that significant? That is the normal background level that we see in the Ogallala. As a matter of fact, I think Mr. -- Dr. Dan Stephens will show in his presentations that actually the Ogallala is about 66.

And so my point here is that I was asked if we should go to a lower number. I don't think so. I think 250 would be very protective of the groundwater, and it wouldn't exceed the background standard. And that's the

reason I'm saying that I think 250 -- we don't need to go 1 any lower than 250, 250 should be a good number. 2 And I really had to do that graphically. It 3 would be hard to do that any other way. 4 5 I believe that -- so everyone can get a copy of that. And --6 7 Q. (By Mr. Brooks) Does that conclude your 8 presentation --9 A. That does conclude. -- Mr. Price? Thank you. 10 Q. Mr. Price -- Hold on one second here. Okay. 11 Mr. Price, were Exhibits 9, 10 and 10A prepared by you or from 12 published sources -- or assembled by you from published 13 sources? 14 15 Α. Yes. MR. BROOKS: Mr. Chairman, we will tender 16 17 Exhibits 9, 10 and 10A? 18 CHAIRMAN FESMIRE: Is there any objection? MR. CARR: No objection. 19 CHAIRMAN FESMIRE: Exhibits 9, 10 and 10A will be 20 admitted to the record. 21 MR. BROOKS: Pass the witness. 22 23 CHAIRMAN FESMIRE: Ms. Foster, do you have any questions of this witness? 24 MS. FOSTER: Not at this time. 25

Mr. Hiser? CHAIRMAN FESMIRE: 1 MR. HISER: I do. It will take me a minute or 2 3 two to put my head around them, though. 4 Let's see, we started with -- Mr. Price, your 5 exhibit started with 9; is that correct? And then went forward? 6 7 Yeah, why don't you talk to the Chairman? 8 MS. FOSTER: Mr. Chairman, I actually do have one 9 or two questions, which I -- Could I ask them while Mr. Hiser is getting ready for his cross-examination? 10 CHAIRMAN FESMIRE: Sounds like a pretty good use 11 of time. 12 13 MR. HISER: Thank you. 14 MS. FOSTER: Thank you. 15 CROSS-EXAMINATION BY MS. FOSTER: 16 17 Q. Okay. Mr. Price, I would ask you to go to page 17 of your Exhibit 9, I believe it is. 18 19 Α. Yes. 20 Okay, I just wanted to make sure that I 21 understand that statement appropriately, and that statement 22 basically on that slide says that a 50-foot separation does 23 not provide long-term protection of groundwater if a source 24 is available. And when you're saying a source, that is a continuing chloride source --25

Yes. 1 A. -- going down into the vadose zone --2 0. 3 Α. Yes. -- correct? 4 Q. 5 Α. Yes. All right. And again, when we're talking about 6 Q. 7 temporary pits, how long is a source on top of a location 8 in a temporary pit, under the new rule? Under the new rule? 9 A. Under your proposed rule for a temporary pit, how 10 Q. long will you have chlorides --11 After the rig -- Oh, I'm sorry. 12 Α. -- on location? 13 Q. 14 After the rig leaves, 30 days. Α. 15 Q. Thirty days? 16 Α. Right. 17 So a source will only be available for 30 days, Q. 18 in the temporary pit scenario --19 Α. Yes. 20 -- correct? Q. And in order for it to migrate, you're assuming 21 22 in your scenario that you have a sufficient enough tear in your liner to release a quantity of chlorides in the levels 23 24 that -- the 5000 level, correct?

Yeah -- Yes.

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Α.

And you're also assuming in your statements that 1 Q. your groundwater has a porosity level of 103, correct? 2 No, the 10<sup>3</sup> was the saturated hydraulic 3 Α. conductivity of the vadose zone,  $10^{-3}$ . 4  $10^{-3}$ . 5 0. One foot per day. 6 All right. And the  $10^{-3}$  is assuming that you 7 Q. have consistent materials in that vadose zone amount. 8 There's two vadose zone levels, if I'm correct. You have 9 the first 30 feet, and then you have your -- the line 10 there, and then the second 30 feet is a different porosity; 11 is that correct? 12 No, it's the same porosity and same homogeneous, 13 Α. isotropic material. 14 15 Q. So you have homogeneous material throughout that 50-foot vadose zone --16 17 A. Yes. -- is the assumption that's made in your 18 0. 19 modeling? 20 Α. Yes. 21 Q. And how is it again that you arrived at the  $10^{-3}$ level for porosity? 22 23 Α. I wonder if you could go to the slide -- Right Middle-of-the-road, semi-pervious material. Also I 24 25 can say that it's the same number that Ed Hansen used in

403 his modeling, and so it was close enough that I thought 1 that would be good to use. Obviously you can go this way 2 or you can go this way. There's no question about it, the 3 porosity could change, but --4 All right, is that number demonstrated in any 5 6 peer-reviewed literature, the use of that number for 7 modeling? The answer to that question is yes, but not in 8 9 this presentation. You know, it is in our modeling. so -- you can ask our -- Ed Hansen how he came about that 10 number, and I think we can -- I think we can answer your 11 question. 12 Okay, I will ask Mr. Hansen, then. 13 Q. And then just -- my final question is, just 14 referring to the Rice Operating locations that you showed 15 several slides --16 17 Α. Yes. -- and I won't ask you to pull those up again. 18 Do you want them up, or -- ? 19 Α. No, no, no, that's okay. I just have one 20 Q. question. And those slides -- or those locations all had 21

don't know that.

I don't know the answer to that question.

Okay, so you don't know how long the release Q.

only a one-time release, correct?

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period was, but --1 2 Α. We do not. 3 MS. FOSTER: Okay, thank you. I have no further 4 questions. 5 CHAIRMAN FESMIRE: Mr. Hiser, are you ready? MR. HISER: Yes, thank you, Mr. Chairman. 6 7 CROSS-EXAMINATION BY MR. HISER: 8 Mr. Price, going back to your Exhibit 9, I think 9 slide 8, you presented an S-curve basically showing fluvial 10 sand. Aren't fluvial sands typically associated with 11 watercourses? 12 Once again, this particular slide is only for 13 Α. conceptual viewing. It has nothing to do with the actual 14 hydraulic conductivity that I selected. It was only for 15 16 people to understand that if the volumetric water content 17 decreases, the pressure head changes --And then the next slide, Glenn. 18 19 -- and then if the pressure head changes, then the hydraulic conductivity changes drastically. 20 Q. 21 Okay. That's the only reason I put it up there. 22 Α. And then you presented us with a number of fluid 23 Q. calculations in terms of the movement --24 25 Α. Yeah.

Q. -- and that bases around slide 11, I think. And I have a couple questions about this, and they may not all be tied specifically to this equation.

First of all, why did you use the 0.2 for the unsaturated zone porosity, and isn't that more typical of the porosity in a saturated zone than an unsaturate zone?

A. Good point, but let me show you why I did it.

Glenn, go to the slide where it shows that the water has left the pit and gone down. Go back, back, keep going -- Oh, right there.

The reason I used .2 is kind of worst-case. For example, if I would have used something higher, then this wetting front would have been up in here, somewhere.

- Q. Yeah, but Mr. Price, are you not then assuming that the pit has failed, and then assuming the pit has failed on top of the already failed pit, and hence accelerating your movement? Because before the pit fails, this should be an unsaturated zone, should it not?
  - A. Oh, it would be unsaturated, yeah.
- Q. So why then are you using a saturated zone conductivity for the initial failure?
- A. I did not integrate it from zero to 30 feet, you're absolutely right, there would be some difference in it. But if it was dry enough, then it would probably be higher than the saturated hydraulic conductivity, starting

And then as the wetting front moves down, then it off. 1 would just continue to move. It's not unusual for us to 2 see water movement that fast. We've seen that before. But you would agree that at least initially the porosity would be different than the .2 that was used? 5 Absolutely. 6 Α. 7 How did you determine your Kus value? Okay, once again that was 100 times -- two orders 8 of magnitude that I selected, and I basically picked it 9 knowing that where the saturated hydraulic conductivity is 10 1, it's not unusual to see two orders of magnitude for the 11 unsaturated hydraulic conductivity. It could be more, 12 could be less. 13 Do you know what the water content would be at 14 Q. that --15 16 Α. No --17 0. -- number that ---- I didn't calculate it. 18 Α. 19 Q. Now in the calculation of the wetting front 20 travel time, did you use that also to calculate how fast the contaminant or the chloride would travel with it? 21 22 Α. Say that again. 23 Q. How did you calculate the different -- or was

there a difference in how you calculated the rate of travel

of the wetting front, versus the rate of travel of the

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contaminants?

- A. I used a saturated hydraulic conductivity of one foot per day to calculate the rate of travel from the surface down to 30 feet.
  - Q. Okay.
- A. Right. And I divided by the porosity to get the velocity, and then used the velocity to determine the number of days that it would take.
- Q. Okay, and it's your belief that it's the correct way to do that?
- 11 A. I certainly do. I think it's one way of doing
  12 it.
  - Q. Okay. And is it appropriate to use total porosity for contaminant velocity if the soil is not saturated?
    - A. Not necessarily. It could go either way.
  - Q. Now I think that you also presented some inferences that you wanted to draw from wells in the area of the Ogallala aquifer as to whether there is or is not recharge; is that correct?
    - A. Right. Glenn, go to the --
  - Q. That may be in the next exhibit, Exhibit 10. I think you said that you -- for example, OCD has data showing the rise in groundwater monitor wells located in Lea County --

1 Α. Yes. -- which is slide number 1 in Exhibit 10. 2 0. It's a separate PowerPoint, Glenn, it's called 3 A. infiltration --4 I don't know that we need the slide for it. 5 0. Α. Oh, there you go. 6 The question, really, Mr. Price, is, do you 7 Q. 8 expect that water levels in wells can rise to other 9 processes than recharge? I don't understand the question. 10 Α. Can -- If I have a monitor well, which is what 11 Q. 12 you're looking at --13 Α. Right. -- and it shows an increase in the water table 14 Q. level, can that increase occur as a result of other 15 processes besides recharge? 16 Α. Yes. 17 Can you give us a couple of examples of those 18 Q. other processes? 19 20 Α. If you have a mounding effect from contamination. or -- ? 21 0. You're allowed to lead, aren't you? 22 I'm allowed to lead. 23 0. (Laughter) 24 I'm allowed to lead, but it was fun watching you. 25 Q.

1	(Laughter)
2	Q. What about a cessation of pumping in the vicinity
3	of the area?
4	A. Yes.
5	Q. Okay. And in fact, cessation of pumping, if it
6	was in
7	A. Or the absence of a withdrawal.
8	Q. Absence of withdrawal
9	A. Yes.
10	Q would be typically sometimes would cause a
11	fairly fast rebound?
12	A. That's correct.
13	Q. Another question is
14	A. But can I say that in these particular wells, we
<b>1</b> 5	didn't there were no noted irrigation wells within a
16	one-mile radius of these.
17	Q. And you checked for that?
18	A. I was going to say, I don't think there was any
19	effect from irrigation wells or
20	Q. I see. And does water-level rise in an aquifer
21	can that be due to preferential refill in other sections
22	of the aquifer?
23	A. Yes.
24	Q. Now, if we go to the Rice exhibits, which I think
25	is 10A I may have that wrong you had a couple of

slides, and here we're showing a variety of this. 1 will beg the Chairman's indulgence if I inadvertently 2 repeat a question from Ms. Foster; I wasn't completely 3 4 focused on what she was saying. 5 CHAIRMAN FESMIRE: Well, Mr. Hiser, would this be 6 a good place to break for lunch? 7 MR. HISER: This would be a great place to break for lunch. 8 9 (Laughter) 10 CHAIRMAN FESMIRE: Okay. Before we break for 11 lunch -- and Mr. Hiser doesn't know this but it's going to be a break for everybody but the attorneys at first -- is 12 there anybody out there who is signed in, who would like to 13 make a public statement before we leave, including Mr. 14 15 Gordon? Anybody? Mr. Gordon, would you like to make a --16 MR. YAHNEY: I would like to make a statement at 17 18 some point, but I don't know that I want to do it right 19 now. CHAIRMAN FESMIRE: Okay, you'll get the chance 20 before lunch and before we quit every day, so at some point 21 we look forward to your statement. 22 23 Is there anyone else who would have a statement that they'd like to make today? 24 Okay, we're not going to adjourn, we're going to 25

1 take a lunch break, and I'm going to ask the attorneys to 2 hang behind, because we need to talk about scheduling. 3 the rest of you, you enjoy lunch in downtown Santa Fe. 4 We'll reconvene at one o'clock. And there may be 5 some -- we may need to go on the record at that time to put some information on the record, so you all may have a 6 little bit longer than you think. 7 8 (Thereupon, noon recess was taken at 11:45 a.m.) 9 (The following proceedings had at 1:00 p.m.) 10 CHAIRMAN FESMIRE: At this time we're going to 11 reconvene the Tuesday, November 6th, 2007, meeting of the 12 New Mexico Oil Conservation Commission. Let the record reflect that we've returned from lunch, the time is 1:00 13 p.m., that Commissioners Bailey, Olson and Fesmire are all 14 15 present, we therefore have a quorum. And we will continue where we left off, which --16 17 I think, Mr. Hiser, you were cross-examining Mr. Price? MR. HISER: Yes, Mr. Chairman, that's correct. 18 Thank you. 19 (By Mr. Hiser) Mr. Price, what I'd like to do 20 now is to look at a couple of the photos and the chart that 21 22 you showed about Rice Operating Company, and the photos 23 seem to show that these are mostly pipeline leaks or pipeline junction box leaks; is that true? 24

25

Α.

That's true.

And in this you expressed a concern about 1 0. something that you call enveloping? 2 3 Α. Enveloping. Enveloping? Q. 4 Right. 5 Α. And if we go, then, to Exhibit 2 and 3 -- or 6 Q. 7 pages 2 and 3 of this exhibit -- and the technology went to 8 sleep, so we'll wait for a minute. There we go. 9 And as I understand it, when you're concerned 10 about enveloping, looking at the chart on the left, it's a case where, for example, as you go down in depth you have a 11 12 low spot, and then it goes back up to a higher number, and then it goes down to a lower concentration. 13 Α. Yes. 14 And you've seen this in some of the chloride 15 Q. spills? 16 This is a pattern that we routinely see over and 17 A. over and over, but at different magnitudes, of course. 18 Q. And so if we look, then, at the next exhibit, 19 20 which is number 3, we sort of see the same thing but in a slightly different way that that loop was put together? 21 Yes. 22 Α. Now Mr. Price, with this concern can you explain 23 for me how that lower level of concentration appears -- for 24

example, the 30, 40 and 50 feet -- how is that occurring

here? 1 I do not have an explanation for that. 2 Α. So do you think that that could be as a result of 3 Q. the leaching of the salts and the chlorides from those 4 layers over time, down into the lower layer? 5 Are you saying -- Are you saying why is it low 6 Α. 7 and not decreasing from a linear -- from a high to a low? 8 Is that your question? 9 0. No, my question is, how are we getting these lower numbers in the sort of depth area here in the 20- to 10 50-foot range? 11 This is real data that they've -- from sampling, 12 and they just simply plotted -- Rice Engineering plotted 13 this, I didn't. 14 So you are not prepared at this time to advance 15 Q. any type of mechanistic understanding of how this curve 16 came about? 17 18 Α. I am not. Now you also gave an example of how you 19 Q. 20 would calculate why it wasn't appropriate to go lower than 21 250. I did. 22 A. 23 And you did that up here on the screen as sort of a demonstrative, for the benefit of the Commission? 24

25

Α.

I did.

1	Q. And one of those factors that you had, which you
2	call the Hiser factor
3	A. Yes.
4	Q is actually a dilution attenuation factor; is
5	that not correct?
6	A. That is correct.
7	Q. And that dilution attenuation factor is one
8	that's been developed sort of empirically by EPA?
9	A. Yes.
10	Q. And does that dilution attenuation factor vary
11	with the size of the source of the contamination?
12	A. Yes, it does.
13	Q. And so it may be larger or smaller than the 20
14	that you placed on the screen?
15	A. That's correct.
16	Q. And generally the smaller it is, the larger that
17	DAF becomes?
18	A. Okay.
19	Q. And then one last question on delineation that
20	you presented. You talked a little bit about how you
21	wanted to use the delineation. Did you ever explain to us
22	how the cleanup would be then handled, how you would
23	establish what would be an appropriate cleanup layer, or is
24	that going to be coming up subsequently?
25	A. I did not discuss it.

25

1	MR. HISER: Okay. I'd love to but I'm not
2	sure it's within the scope, so I don't know that I can ask
3	him that next question.
4	CHAIRMAN FESMIRE: You might ask and see what Mr.
5	Brooks says.
6	MR. HISER: All right, I will ask and see what
7	Mr. Brooks says.
8	Q. (By Mr. Hiser) And that is, so we do the
9	delineation to the 250. What is the Bureau's approach
10	going to be to setting the cleanup, then, of an area that
11	might be over that 250?
12	MR. BROOKS: I have no objection to that
13	question.
14	THE WITNESS: You do or don't?
15	MR. BROOKS: I have no objection.
16	(Laughter)
17	THE WITNESS: Mr. Hiser, that generally is on a
18	case-by-case basis, and we do not have guidance at this
19	time on those particular cleanup levels.
20	MR. HISER: Okay, thank you. That concludes my
21	questions for Mr. Price, Mr. Chairman.
22	CHAIRMAN FESMIRE: Okay. Mr. Carr?
23	MR. CARR: No questions.
24	CHAIRMAN FESMIRE: And Ms. Foster, you have no
25	questions of this witness?

No, thank you. 1 MS. FOSTER: CHAIRMAN FESMIRE: Ms. Belin, did you have 2 3 questions of this witness? MS. BELIN: I have a couple, yes. 4 5 EXAMINATION BY MS. BELIN: 6 7 Mr. Price, maybe I misheard you but in cross-Q. examination did you say that under the proposed rule 8 liquids would only be in temporary pits only -- no more 9 10 than 30 days? 11 Well, if that part of the rule is enacted, once the rig has left then the rule is asking that they dewater 12 13 the pits within 30 days. And it allows the District to extend that up to 14 Q. three more months, does it not? 15 That is correct. 16 And then someone could, through the exception 17 Q. procedure, get a further delay? 18 19 Α. Yes. And also the liquids would be in the temporary 20 Q. pits during the pit operation, as well, so the liquids 21 could be in the pits for many months under this rule? 22 23 A. Yes. 24 MS. BELIN: I have no further questions. Mr. Jantz, do you have any 25 CHAIRMAN FESMIRE:

questions of this witness? 1 MR. JANTZ: No, Mr. Chairman. 2 CHAIRMAN FESMIRE: Commissioner Bailey? 3 COMMISSIONER BAILEY: Just a couple. 4 5 **EXAMINATION** BY COMMISSIONER BAILEY: 6 Does lithology play a role in this chloride 7 0. 8 signature that you showed us from the Rice --Yes, but we have -- Commissioner Bailey, as part 9 of our study is -- Rice Engineering hired a consultant to 10 try to qualify that, but their study is not done yet. 11 12 0. When do you expect them to be done? I don't know, that's -- we're not requiring them 13 to do it, so when they get it done then they could get it 14 15 to us. But for us to decide on the rule, all we can say 16 Q. at this point is that lithology may have -- may change that 17 signature considerably? 18 Oh, I think it will. But I think the bottom line 19 Α. 20 here is that these sites are across -- primarily in Lea County, but they vary. They're on top of the Ogallala, 21 they're off the Ogallala, they're off the Caprock. And so 22 the geology varies somewhat, they're in areas where there's 23 24 clay.

And so I guess I would like to hang my hat on the

fact that the six or so examples that you saw, I literally
have a hundred or so of those, of which we have pretty well

-- the signature and the pattern just always seem to repeat

itself.

- Q. Shift gears.
- A. I'm sorry.
- Q. Let's shift gears a second.
- A. Okay.

- Q. Earlier you said there were about 1200 wells that were drilled last year? New drills?
- A. Mr. von Gonten and I did a quick query on RBDMS

  -- that's our database system -- and that's the approximate
  amount that we come up with for the state.
- Q. How many available closed loop systems do you know about in the state?
  - A. I don't have that number.
- Q. Because I know this past year there was a real problem with drilling wells because of rig availability for those companies that did not own their own rigs. I'm just curious if anybody has a handle on closed loop system availability?
- A. That was one of the reasons that was expressed in the task force, and that the industry members -- that's one of the reasons they like the 50 feet. They expressed that 50 feet would be more -- Let me put it this way, let me

back up a little bit. 1 2 That was not during the task force, that was after the task force. And in a meeting with industry they 3 indicated that they could probably live with 50 feet but 4 they couldn't live with 100 feet because there wouldn't be 5 6 enough closed loop systems to accommodate them. 7 COMMISSIONER BAILEY: Thank you, that's all I have. 8 CHAIRMAN FESMIRE: Commissioner Olson? 9 10 EXAMINATION BY COMMISSIONER OLSON: 11 12 Well, I guess just following along the lines of lithology, have you seen similar instances in dealing with 13 oil movement through the subsurface, where you'll see --14 just due to the lithology you'll see changes in, you know, 15 TPH or BTEX concentrations at depth? 16 17 Generally on oil spills it's more of a linear Α. function going from high to low than cycling. I have seen 18 that, but my experience is that when you have oil spills 19 20 they generally start off with a high TPH and end up with a very low TPH and it doesn't cycle a whole lot. 21 22 COMMISSIONER OLSON: Okay, that's all I have. EXAMINATION 23 BY CHAIRMAN FESMIRE: 24 Mr. Price, you were asked earlier about a cleanup 25 Q.

standard as opposed to the delineation standard? 1 2 Α. Yes. And you said that there had been no guidance in 3 Q. 4 that. Why is that? We have guidance for hydrocarbons, but we do not 5 6 have guidance on salts. 7 Q. Okay, and -- in the cleanups, you mean? Under our Rule 116 we have leak and spill 8 9 quidance that has a ranking criteria, and that ranking criteria is tied to hydrocarbons, but we do not have 10 rankings for salts. 11 Do you think that's something that needs to be 12 addressed in the future? 13 Yes. 14 Α. Now Commissioner Bailey asked you about the 15 Q. number of closed loop systems. We know of operators who 16 are building closed loop systems at the present time, don't 17 we? 18 19 Α. Yes. 20 Are they building a few closed loop systems, or are they building a lot of closed loop systems? 21 22 Α. I don't know the exact number, but I understand 23 that they are manufacturing quite a few, and I understand that there are a number of companies that are utilizing 24

closed loop systems.

1	CHAIRMAN FESMIRE: I have no further questions.
2	Mr. Brooks, do you have any redirect of this
3	witness?
4	MR. BROOKS: No redirect, Mr. Chairman.
5	CHAIRMAN FESMIRE: Okay. Mr. Price, thank you
6	very much.
7	Mr. Brooks, do you have your next witness ready?
8	MR. BROOKS: We would like to recall Mr. von
9	Gonten.
10	CHAIRMAN FESMIRE: Mr. von Gonten, let the record
11	reflect that you've been previously sworn. You remember
12	that, don't you?
13	MR. VON GONTEN: Yes, sir.
14	GLENN VON GONTEN,
15	the witness herein, after having been previously duly sworn
16	upon his oath, was examined and testified as follows:
17	DIRECT EXAMINATION (Resumed)
18	BY MR. BROOKS:
19	Q. Good afternoon, Mr. von Gonten.
20	A. Mr. Brooks, good afternoon.
21	CHAIRMAN FESMIRE: Speak up, guys.
22	Q. (By Mr. Brooks) Before I go into your or
23	before you start your technical presentation, I would like
24	to call your attention to what has been marked Exhibit
25	Number 6 I'm sorry, Exhibit Number 8 in the exhibit

Now on our exhibit list we have titled Exhibit 1 Number 8 -- find our exhibit list here. Oh, here it is. 2 -- we have entitled that LFC Economic Assessments. 3 that was not prepared by the Legislative Finance Committee, 4 was it? 5 No, these two paragraphs were not. 6 Α. Okay, who did prepare it? 7 Q. Director Haug -- I believe that's her correct 8 Α. 9 name, Sandra Haug -- is the Administrative Services 10 division director in the Energy, Minerals and Natural 11 Resources, prepared a draft and then asked that OCD staff 12 review it for appropriate modifications. 13 And did you participate in that review? Q. 14 Α. I did. Okay. Now do we even know if this was delivered 15 0. to the Legislative Finance Committee? 16 17 I do not know. Α. But that was the purpose for which it was 18 Q. solicited? 19 20 This was a couple of paragraphs. The document Α. that I saw during discussions was over 600 pages long, and 21 22 when it was due to be delivered -- it seemed to be like in 23 the next day or so -- there was some rush about reviewing

Would you read, beginning at the --

this.

Q.

Okay.

24

beginning at the paragraph break there, would you read the 1 first two sentences in that paragraph? 2 MS. FOSTER: Objection. Since Mr. van Gonten is 3 not the author of this document I would ask that the State 4 produce the author of this document if he would like to get 5 this into evidence. 6 7 CHAIRMAN FESMIRE: Okay, I think this is a foundational exhibit and probably should be admitted over 8 9 objection. 10 THE WITNESS: Excuse me, Mr. Chairman, I'm going 11 to need about five minutes to go plug a leak. CHAIRMAN FESMIRE: Okay, we're going to be in 12 13 recess for about five minutes, or however long it takes Mr. 14 von Gonten to quit bleeding. 15 (Thereupon, a recess was taken at 1:18 p.m.) 16 (The following proceedings had at 1:27 p.m.) 17 CHAIRMAN FESMIRE: Okay, let's go back on the I believe, Mr. Brooks, you were beginning your 18 direct examination of Mr. von Gonten. 19 MR. BROOKS: That's correct. 20 (By Mr. Brooks) Mr. von Gonten, you heard the 21 Q. 22 objection that Ms. Foster made to Exhibit 8 and the Chair's 23 ruling. Was it -- Were you one of the authors of this document? 24 25 Α. There was at least two other OCD staff that

1 reviewed it.
2 Q. Okay. Then I will again ask you to start at the
3 paragraph break and read the first two sentences of the
4 second paragraph.
5 A. Statewide, the oil and gas industry produced 60.9
6 million barrels of oil and 1591 billion cubic feet (BCF) of

million barrels of oil and 1591 billion cubic feet (BCF) of gas during 2006. The upfront costs associated with compliance with the proposed pit rule are estimated at \$30 million statewide by the Division and \$150 million by industry.

Q. Okay. The statement that they were estimated at \$30 billion [sic] -- Well, no. First of all, look at the first sentence. Where did you --

MS. FOSTER: Mr. Chairman, I would object again to the nature of questioning. If he wants to get this as a foundational document in, that would be fine. But I would like to have the opportunity to voir dire the witness as to the nature of this document and whether he truly was an author, et cetera, before substantive questions concerning what is in this document are asked.

CHAIRMAN FESMIRE: Okay. Mr. Brooks, I'm going to allow her to take the witness on voir dire --

MR. BROOKS: Okay.

CHAIRMAN FESMIRE: -- and establish the -- I quess the authorship of the --

MS. FOSTER: Yes. 1 CHAIRMAN FESMIRE: -- of the document? Okay. 2 VOIR DIRE EXAMINATION 3 BY MS. FOSTER: 4 Mr. von Gonten, you stated that you were 5 Q. Yes. one of the authors of this document? 6 7 Yes, I reviewed it for technical merit. Α. Okay, you reviewed it, but you did not write it? 8 0. I did not write it. 9 Α. Okay. So these two paragraphs that we're talking 10 Q. about here you did not personally write? 11 12 Α. I filled in the blanks as requested by the 13 Division Director. 14 All right, and which blanks was it that you 15 filled in? The 60.9 million barrels of oil and the Α. 16 production of gas. 17 And that was based on OCD information that you 18 0. had at your disposal? 19 20 Α. Yes. And in terms of the economic analysis numbers, 21 Q. 22 are you familiar with the discussion that we've had 23 concerning economic analysis numbers prior to your testimony? 24 I've heard the discussion. Economics has been 25 Α.

brought up several times in the past two days. 1 2 0. Okay. And if you were so involved with this 3 document, why was it that you didn't tell the Commission that you knew what the economics of the proposed pit rule 4 would be? 5 I did not provide any of these dollar amounts. Α. 6 7 Q. Okay. So does that mean that you're not familiar with those dollar amounts and how they were reached at? 8 That's true, I don't. 9 Α. 10 Q. Okay, so you don't know what factors were taken into with the statement that the OCD -- or the associated 11 12 costs of compliance with the proposed rule are estimated to 13 be \$30 million? Α. That's correct. 14 15 MS. FOSTER: Okay, I have no further questions 16 for this witness. 17 And I would again object to this document being entered as an exhibit. 18 19 CHAIRMAN FESMIRE: I'll sustain the objection to this document. 20 21 I think the numbers would be relatively easy to arrive at using today's prices and those production 22 23 figures, but I'm not going to allow the admission of this 24 document. 25 MR. BROOKS: Very good.

## DIRECT EXAMINATION (Resumed)

BY MR. BROOKS:

- Q. Mr. von Gonten, you may continue with your -- you may begin your next technical presentation.
- A. That would be Exhibit 13. The first few slides we'll be talking about, just a review of OCD's proposed rulemaking process and the public input on the pit rule. This is somewhat a duplication of what Mr. Price presented yesterday.

We held four public outreach meetings between December, 2006, and January, 2007. The meetings were held in Farmington, Artesia, Hobbs and Santa Fe.

And the goals were to identify possible deficiencies in the current pit rule, explain the rulemaking process to citizens, and receive public input prior to beginning the process of proposing new rules from concerned citizens, landowners, other regulatory agencies, oil and gas companies, service companies, industry groups and environmental groups.

The pit task force consisted originally of 14 members selected by the Governor's office, and a copy of the letter to task force members dated March 13th, 2007, is included as an exhibit. I believe that's included in Exhibit 14.

A copy of OCD's summary of the proposed

rulemaking process and public input dated March 29th, 2007, is also included in that same exhibit.

The task force was facilitated by the Energy,
Minerals and Natural Resources Department Deputy Secretary,
Mr. Reese Fullerton.

The task force meetings were open to the public and they held from April 16th to July 11th, 2007.

The next slide is a list -- a laundry list of issues that may be addressed by the pit task force, and there's -- I won't read through all these, but it was fairly broad in scope and everything was on the table.

The next slide, 4.

The next milestone in the task force was the pit rule task force report. Operating by consensus, the pit rule task force submitted its pit rule report to Mr. Daniel Sanchez, OCD's compliance and enforcement manager, on July 11th, 2007. OCD then drafted a new pit rule, part 17, and handed it to the task force members for review and comment on August 13th, 2007. The task force notes are included as the Exhibit 14.

Moving on to the formal rulemaking process, OCD considered the task force report and the task force members' individual comments when drafting its proposed rule for the formal rulemaking process.

OCD then developed its final draft pit rule and

filed it with the Oil Conservation Commission as part of the formal rulemaking process and posted it on the OCD website on September 21st, 2007.

We proceeded by first identifying problems with Rule 50.

Since the original pit rule, Rule 50, was issued in 2004, OCD has become aware of several major deficiencies with that rule. Although Rule 50 generally included general performance standards, it generally lacked enforceable technical standards. Our files are full of photos of pits that have been clearly compromised. General performance or narrative standards are not enough.

At this point I was going to present the statewide slide show, and at the end of that slide show I was going to transition to the condition of the pits that we actually inspected when we were conducting the OCD pit sampling program earlier this year.

- Q. Now Mr. von Gonten, the statewide slide show is the same one that was shown to the Commission yesterday morning; is that correct?
  - A. Yes, sir.

MR. BROOKS: Then I believe we should ask the Commission's pleasure if they want to see it again in this context or if they would prefer that we go on to the exhibits they have not yet seen.

CHAIRMAN FESMIRE: Commissioner Bailey? 1 COMMISSIONER BAILEY: I've seen it. 2 CHAIRMAN FESMIRE: Commissioner Olson? 3 COMMISSIONER OLSON: I quess, what's the purpose 4 of seeing it again. 5 6 CHAIRMAN FESMIRE: I think the consensus of the 7 Commission is, we don't need to do it again. MR. BROOKS: Okay. Mr. von Gonten also has 8 another slide show that is different from that and in 9 addition to that. So I'm going to then, with the 10 11 Commission's indulgence, ask him to present the one that --12 and I want to ask him some questions about that first. 13 CHAIRMAN FESMIRE: Okay. Mr. Brooks, go ahead. 14 0. (By Mr. Brooks) Okay. Mr. von Gonten, the slide 15 show that we showed to the Commission yesterday, is that Exhibit 13A? 16 17 Α. Yes, it is. Okay. Now what is Exhibit 13B? 18 Q. Α. If it's in their binders correctly, it probably 19 should have been the liner observations of the southeast, 20 but it may be incorrectly entered into the exhibit binders 21 as liner observations of the northwest. 22 23 I believe that it is in my binder, the southeast. Q. It's labeled SE. 24 CHAIRMAN FESMIRE: 25 Is that the one that says

Closed Loop Drying Area in the Southeast?

MR. BROOKS: That's what my binder says.

THE WITNESS: We can begin with that one.

- Q. (By Mr. Brooks) Well, I wanted to ask you some things about that first. What -- How were the pits that are included in this selected?
- A. OCD put together a pit sampling program. It took a little while to get it operational, but it was conducted in late May and early June of 2007. OCD, operating within a budget, decided that it would do a comprehensive, fairly broad-spectrum sampling program for as many pits as we could get done in a certain amount of time and get that information to the public, including the task force.

The pits were selected from a list provided to us by the district offices. The district inspectors did not have any direct input on the selection of it, and we had no prior knowledge of which pits were going to be there or what condition they would be in, if they would actually be ready for inspection.

We went to the field, mobilized twice, once in the northwest and once in the southeast. I'll be giving more details on the actual sampling results. But the District office, as I said, provided us a list of pits that they had pending for closure, were notified by the industry of the status of these pits, four currently active drilling

pits.

We did what I would refer to as a pseudo-random selection. We --

- Q. Why do you call it pseudo?
- A. Because it wasn't truly random, because if we were truly random we would have been going all over the county from one pit to the next.

We actually scheduled it with some sense of practicality of where these pits were located. And we also consulted with members of the industry who also went along as witnesses, and they accommodated us in finding out the status of these pits and whether they were actually already closed, in which case there was no point in going by. That happened to us several times in the northwest on the first day.

So it was not a pure random-number-generated selection of where we would go. We modified that by finding out that some pits had already been closed.

We also gave some consideration to the fact that we didn't want to double up on any one particular operator. So if their name came up a second time we might, after discussion with the district folks and the industry folks, elect to go do another site that was lower down on the list.

Q. Now are the photographs included in Exhibits 13B

and 13C photographs of the actual pits that you sampled? 1 2 Α. Yes, they are. Were they taken at or about the time that you 3 Q. sampled them? 4 Α. 5 Yes. Were you a part of the team that did this 6 Q. 7 sampling? I was a part of the team that sampled in the 8 Α. 9 northwest. Okay. Now who actually took these pictures? 10 0. Oh, they were probably taken by any -- could have 11 A. 12 been taken by any member of the Environmental Bureau. Probably the majority of them were taken by Mr. Leonard 13 14 Lowe. 15 MS. FOSTER: I'm sorry, what was that name? THE WITNESS: Leonard Lowe. 16 (By Mr. Brooks) And did I understand you to say 17 Q. 18 you were not part of the team in the southeast? 19 Α. That is correct. 20 MR. BROOKS: Mr. Chairman, because I understand 21 that we're proceeding by strict rules of evidence here, 22 unlike some OCD proceedings, I will ask if it pleases the 23 Commission if we can go ahead and show Exhibit Number 13B relating to the southeast along with 13C relating to the 24 northwest, even though this witness probably cannot provide 25

the foundation testimony for these photographs, on the 1 representation that we will have another member of the 2 staff who can do so, we'll recall to the stand later. But 3 whatever the Commission's pleasure is. 4 CHAIRMAN FESMIRE: Mr. Brooks, our rules allow us 5 6 not to proceed strictly by the rules of evidence, and I don't think we are. There was a specific reason for not 7 allowing the last exhibit in, and --8 9 MR. BROOKS: I understand. I'm not complaining 10 of the Chair's ruling, I'm merely asking for instructions. CHAIRMAN FESMIRE: Why don't you go ahead and 11 show us the slide show? 12 13 (By Mr. Brooks) Very good. Before we do, with regard to 13B, which is -- 13C, which is the one for the 14 15 northwest, Mr. von Gonten, which is the one we're going to show after 13B --16 17 Yes, sir. Α. 18 -- you were a part of the team that did those --Q. Yes. 19 A. And did you -- have you looked at those 20 Q. 21 photographs that are included in Exhibit 13C? 22 Α. Yes. Do they fairly and accurately represent the 23 Q. 24 condition of the pits that the team inspected at the time

25

of the inspection?

1 A. Yes, they do.

- Q. Okay, and I will recall another witness to ask those questions with regard to 13B. You may proceed.
- A. One point I note is that when we received our -This is the slide show, Ed. Why don't you turn off the
  slide show and just manually walk through it. That's page
  3. Go back a couple. What was my point?

These photographs were posted on OCD's web page, as I believe I mentioned in my testimony about the rulemaking process, so all of these photographs had been available for inspection by the public for several months.

The first slide -- the one before this, Ed -- as I said, this was a closed loop drying area. We only saw a couple of closed loop -- OCD only witnessed operations at perhaps a single closed loop drying area. We're not going to be showing all the slides, but they're selected from the larger number of photographs that we took during our inspection to illustrate certain points.

This is, as Mr. Price discussed, a drying pad.

You can see that this is located on a liner and that there
is a lined trench which collects runoff from the cuttings.

And the dark material in the back left foreground is drill
cuttings that have been bulldozed into that corner.

Next slide, please.

This is showing a pit in the southeast -- there's

the location, township, section and range -- that is a typical horseshoe. It's a fairly large pit. And what's noteworthy about this pit is the amount of fluids that -- or hydrocarbons that are visible on this pit, yet it's been drying for a protracted period of time. By looking at the water level, that could have indicated that they drew off a significant amount of water, it could have been evaporation.

You can see on the inner horseshoe the cuttings have partly filled the right-hand part, and there's a berm that divides the inner horseshoe from -- into segments, and that allows the settling of the cuttings.

Next, please.

This is a pit that actually shows a different configuration. This is showing that there were two separate pits rather than a horseshoe, which is more or less one contiguous pit area. These are separated by slide area. This is different liner material than we normally saw. You occasionally do see the white liner material.

What's noteworthy here, I guess, is that there's a barbed-wire that's perhaps livestock proof, but it may not keep out wildlife. We also see -- this particular slide, we're not seeing much in the way of berms around this pit. There could be a problem with run-on or runoff into or out of that pit. And on the back near midground

you see the removed stockpiled soils from the pit excavation.

Next, please.

This is depicting our sampling techniques. We have -- Mr. Price is in the pit collecting a soil or sludge sample from the bottom of the pit, and you can see the general steep nature of the sidewalls in this photograph.

Next, please.

This is a picture that was selected to show what problems can occur when there's not proper preparation of the pit location. There was some boulder or perhaps caliche on that one sidewall, and the pit liner has been compromised. And you can see that it's also been compromised beneath the fluid level.

Next, please.

We did encounter one dead bird in the pits.

And the next slide, please.

This is again showing a fairly large pit. You can see that there was a pretty large capacity. We would estimate this to be eight feet or deeper. We can see the barbed wire in the foreground.

Again, in the immediate foreground there's a little bit of a problem with the run-on/runoff, there's not much of a berm. And you can see this is a pit that has probably been around for a long period of time.

Next.

This is also showing fluids on the pit, hydrocarbon on the pit, and also showing the side slopes and lack of adequate berming, at least on one side.

Next, please.

That's probably a photograph of the same pit showing a different perspective on the hydrocarbons on the fluids.

Next, please.

MS. FOSTER: Mr. Chairman, I would object to the witness's statements, This is probably and, This is -- you know, his personal opinion of what it is there. If he wants to talk about these pictures in terms of a factual nature and in terms of an expert who works for OCD and has gone out and sampled the pits, then that's fine. But we would ask that any of his personal, you know, speculative statements pertaining to the pictures be left out.

CHAIRMAN FESMIRE: As an expert he can give his opinion, can't he?

MS. FOSTER: Yes, he can give his opinion, if that's a part of the case.

CHAIRMAN FESMIRE: Okay, Mr. von Gonten, please, if it's -- if you have an opinion, please state it as an opinion. If you know for a fact, please state it as a fact.

THE WITNESS: Yes, sir. 1 2 MS. FOSTER: Thank you. THE WITNESS: Next slide, please. 3 This photograph is showing a rather large pit. 4 5 We're showing again on the right-hand side the problem with 6 the lack of berming. 7 Next slide, please. 8 This is a photograph showing one of the common 9 problems that we saw, is when there was run-on/runoff 10 problems. On the left half of this photograph the surface 11 sediment has been washed into the pit because of the lack 12 of adequate berming, and in the middle part of the photograph the pit has been compromised and run-on is 13 14 actually occurring underneath the liner. 15 Next photograph, please. 16 This is showing sampling, a photograph of our 17 staff. 18 Next photograph. 19 Another photograph of a horseshoe pit. 20 the problems here that we noted was the lack of fencing on 21 the side to the apron. 22 Next photograph, please. 23 This is also showing problems with the runon/runoff, and if you look closely at this liner material 24 25 you can see that this is woven material, and this is one of

the types of liner that we would recommend against. I think if you look in the left foreground you can actually see where the woven material has actually failed, and you can see some gaps in it.

Next slide, please.

This is another photograph of a horseshoe pit.

Next slide, please.

This is showing a site that does have some berms around the well [sic]. Rather than using an anchor trench as we'll be recommending in the proposed rule, this operator has chosen to sandbag the liner material over the top of the berms, rather than anchoring it. And you can see on the right hand part of the photograph that that has not worked completely.

Next photograph, please.

Another photograph of a horseshoe showing the general lack of adequate berms and also some problems with the side slope stability.

Next photograph, please.

This is a photograph of a horseshoe in the southeast.

And the next slide.

This is a general overview. There's not any particular problems here. I would point out the stockpiled material on the back right -- I would point out that

there's not -- there is a berm here, however the liner doesn't cross over the top of the liner, and it's not clear from this photograph whether that liner is actually underneath the bermed material in the foreground.

Next slide, please.

This is showing a problem that we referred to during task force as wind-whip. This is due to inadequate anchor trenching and inadequate berms, and the pits have been here for a long enough period of time to be impacted by high winds, and the liner material has been blown into the pit.

Next slide, please.

This is showing inadequate anchor trenching or inadequate -- the liner is not adequately secured in this photograph, and you can see the caliche material which is going to be very problematic for installation of pits.

Next slide, please.

This is showing an unlined pit that does have netting. The netting here has sagged into the water, and any waterfowl could be negatively impacted by landing on that water.

MS. FOSTER: Objection. Is that the witness's opinion, Mr. Chairman?

CHAIRMAN FESMIRE: I think he stated it as an opinion.

I don't believe he did, sir. MS. FOSTER: 1 CHAIRMAN FESMIRE: I'll overrule the objection. 2 3 Go ahead. THE WITNESS: Next slide, please. 4 This is an unlined pit, the same one that we saw 5 in the previous slide, and you can see the discharge from 6 7 the end of the pipe into the unlined pit. 8 Next slide, please. 9 At this pit this was, as Mr. Price said on his 10 testimony, this was -- this photograph was taken from a 11 nearby residence back towards the pit location, if I remember Mr. Price's discussion correctly. 12 Next pit -- Next slide, please. 13 And this is a photograph of the house from which 14 the previous photograph was taken. 15 Shall I move on to 13C, Mr. Brooks? 16 (By Mr. Brooks) Proceed. 17 Q. 18 Α. The next set of slides are the -- some selected slides from the pits that we inspected and sampled in the 19 20 This is San Juan County, and this particular photograph you can see in the back stockpiled soil, you can 21 22 see a general lack of berming on this side, you can also 23 see a hogwire fence as opposed to a barbed-wire fence that is being used to keep out livestock. 24

I'll say generally, most of the pits we saw had a

fence of this type in the northwest.

Next slide, please.

This is a detailed photograph showing some people are still using stitched pit liners. One of our pit proposals, our pit rule proposals, will be liner material will be properly seamed. Obviously something that is stitched together has the ability to leak through that stitched seam.

Next photograph, please.

This is -- and I forget the correct name for this green vessel, but it is used during the so-called cavitation process on a coalbed methane well and there may be also flaring on the backstop.

This is an important point in the pit rule, is that -- In this particular case you can see that the pit is lined, and it's not clear from this photograph, and I just don't remember, but I think those are coalbed -- coal fines that are black and look like the same liner material. But the channel leading into that pit was actually lined with coalbed fines. You don't see any of the staining or the actual sooty material that occurs on the backstop of this liner, but that is part and parcel of the coalbed methane cavitation process.

Next slide, please.

This is a photograph showing that there are some

run-on/runoff problems and that there is some trash being put into the pit. It's either washed in or was tossed in.

Next photograph, please.

This is one of the larger pits that we saw in the northwest. The general observation from OCD was that pits were larger in the southeast. This was a fairly large pit, I would estimate it to be maybe 12 feet deep. This was in generally good shape, but there was some material that was floating on the surface of this, and you can see a kind of ring around the pit that we were not able to identify. It might have been some sort of cement or completion material.

MS. FOSTER: Objection.

THE WITNESS: That is my opinion.

MS. FOSTER: Thank you.

CHAIRMAN FESMIRE: Overruled.

THE WITNESS: Next slide, please.

This is the same site that we were seeing some run-on/runoff problems. Again, not a proper berm and not a proper anchor trench, and it led to a problem with both run-on and what also is occurring is run-under, I guess, underneath the liner material.

Next photograph.

This is showing that a fencepost or another post has been actually driven through the liner material. This could lead to liner failure.

Next photograph.

Another photograph showing liner failure, could be associated with the tear initiated by a fencepost.

Next photograph, please.

This is another location, and we'll see, I think, another slide. This on a side slope, which is fairly common in the northwest, from our observations, and we can see that there's very low freeboard on this well, and it has apparently been overflowing.

Next slide.

This is that photograph looking the other direction. The photograph was actually taken between where the people are in the foreground and the backstop. This is also a site where they have actually been flaring into a backstop. Our pit rule would state that you would not be required to line that backstop. And in this particular case they have lined the channel leading into the pit.

Next slide.

Another photograph of the same site, looking back towards where the two people were in the foreground. In this particular case you might think that that's a tear in the back part, on the higher part of the sidewall. In fact, that is a little dirt washing into it, but that is not a tear, it is not a liner failure. You have to fold the material to get it to fit into the liner.

Next slide, please.

However, there were some failures observed in this pit. There's some small tears. It's not clear where they were with this waterline at one particular time.

Next photograph, please.

This is a pit that had a lot of hydrocarbon on top of it, and this is Rio Arriba County, and we actually did use our dipper to sweep away the free hydrocarbon on the surface before we actually took our sample, but you can see the sample container has been heavily impacted by the free product or the free hydrocarbon on the surface.

Next slide, please.

This is a photograph showing the woven material on that same site, and you can see the tears in the woven material. It's got a frayed edge.

Next photograph, please.

A close-up of the 12- -- what we assume to be 12-mil -- that's my opinion -- material, and you can see the woven nature. It looks like burlap, it doesn't look like impervious liner material.

Next slide, please.

Another problem where the liner has failed right into the edge of the pit. This is almost a vertical overhead shot, looking straight -- barely in front of the photographer's feet, for reference, and you can see that

the tear has occurred, actually, just above the water line or fluid level.

Next slide, please.

This is a photograph showing some run-on.

Next photograph, please.

This is a photograph showing the stockpiled material, the nature of the hogwire fence, lack of berm between the fence and the edge of the pit, very little freeboard here, and I believe there's also hydrocarbon if I remember this site correctly.

Next photograph, please.

This is actually showing a bench. There actually was a lined bench that the two staff are actually kneeling on and taking their samples, and again there's hydrocarbon along the margin of this pit and...

Next slide, please.

Showing some tears. These are not just shadows, these are actual tears in the liner material that were on that bench that they were kneeling on.

Next photograph, please.

This again is showing a backstop. You can see the gray staining on the backstop material, the stockpiled material, and this is where flaring was occurring. This is one where the pit has risen to a level that it's actually backflowing into the unlined channel that drains into the

Hydrocarbons are visible on the surface. 1 pit. Next photograph. 2 This is again showing a site with inadequate 3 It also shows the fence staked through the 4 material, and also showing very little freeboard. 5 Next, please. 6 This is a larger pit in the northwest, just 7 basically showing the size and the amount of cuttings. 8 Next slide. 9 And this is another photograph of a fencepost 10 being staked through the liner material and inadequate 11 12 berming. Next, please. 13 At this site we have another example from inside 14 the pit of a tear that was in the -- actually in the pit. 15 16 And you can also see a trench, which indicates a run-17 on/runoff problem. Actually, surface sediment is actually 18 being washed into the pit, and under the new pit rules that's material that's going to have to be dealt with. 19 20 Next, please. 21 And again, this was one that shows hydrocarbons on the water and also trash and debris floating in the pit. 22 23 That's it for this presentation. (By Mr. Brooks) Okay, you may proceed with your 24 technical presentation, then, Mr. von Gonten, with the 25

Commission's permission.

CHAIRMAN FESMIRE: Are we at Tab 14?

MR. BROOKS: Yes.

THE WITNESS: Tab 14 should actually be part of the task force e-mails. They were rather voluminous and we did not print them all out. They're included on the CDs.

I was not planning any discussion of the exhibit, just offering it in for completeness.

My next discussion will be on Exhibit 15. I'd like to discuss in these set of slides the results of OCD's 2007 pit sampling program.

Go ahead.

And our question was, What is in that pit? And this question came about because during the outreach process in February and January many citizens or individuals asked the question about what is being managed in oil- and gas-field pits.

We also had some discussion of this issue during task force.

Next slide, please.

During the four public outreach sessions that OCD held in December and January -- Excuse me one moment. In January, 2007, to gain input on OCD's proposed pit rulemaking, OCD heard many individuals ask for information on the contents of various oil and gas pits.

From May 22nd to June 1st, 2007, OCD staff collected aqueous and non-aqueous samples to answer the questions raised during the pit rulemaking outreach meetings.

Next, please.

Following a sampling and analysis plan that specified the field sampling protocols, laboratory analysis and quality assurance/quality control (QA/QC) procedures, OCD collected 25 aqueous and non-aqueous samples from drilling, workover, reserve pits or tanks in the southeast in May, 2007, and 12 samples from the northwest in June, 2007.

And a copy of our OCD exhibit is included in Exhibit 17. 17 is also what we refer to as OCD's pit sampling compendium, and it includes hard copies of all the lab results that we received, and a CD has been provided because of the volume to the various other binders.

- Q. (By Mr. Brooks) And this pit sampling program was the sampling of the pits that you just described in your previous testimony about how they were selected?
  - A. Yes, sir.
  - Q. Continue.
- A. OCD collected samples of pit contents and drilling fluids using pre-cleaned disposable dippers and scoops in appropriately preserved sample containers, that

1	is, glass jars and bottles and plastic bottles.
2	Next slide, please.
3	Here's a photograph of OCD staff collecting a
4	sludge sample from the bottom of a pit.
5	Next slide, please.
6	During its pit sampling program, OCD surveyed the
7	pit locations using GPS, sketched a site plan, inspected
8	the site and photographed the pits and sites.
9	Next photograph.
10	Here are OCD staff actually screening a sample
11	and writing notes.
12	Next slide, please.
13	Common problems include non-anchored or breached
14	liner, lack of proper sub-base and berm construction, oil
15	on pits, rips and tears in the liner.
16	Next slide, please.
17	I'll go through these quickly, you've seen these
18	before. This is actually an inadequately anchor problem.
19	Next.
20	This is hydrocarbon on the pit.
21	Next, please.
22	This is due to inadequate construction.
23	Next, please.
24	Continuing with common problems, we saw liner
25	seam problems, both orientation and stitched seams. We saw

sediment run-on and runoff problems into and under liners, 1 we saw a lack of netting to exclude birds, and we saw 2 3 unlined pits. A few photographs to illustrate these. 4 This is an example of one of the technical 5 standards that is specified in the proposed rule that will 6 7 require that a seamed pit liner actually be oriented so 8 that the seam runs into and out of the pit rather than 9 along the side slope. Next slide, please. 10 This is showing a stitched liner that would be 11 12 prohibited. Next, please. 13 This is demonstrating the run-on/runoff problems. 14 15 Next, please. This is showing the run-on/runoff problems from a 16 17 closer perspective. This shows the run-on on the left, 18 into the pit, and it shows that the liner is being breached and sediment is actually going underneath the liner and 19 20 causing a problem with the stabilization of the slope. 21 Next, please. The dead bird that we encountered. 22 23 Next, please. This is showing an unlined pit that is netted, 24

however the netting is inadequate to keep birds off the

25

water.

Next, please.

ocd collected judgmental aqueous and non-aqueous samples which we then analyzed for volatile organic compounds, Vocs, semi-volatile compounds, SVOs, gasoline-range and diesel-range organics, GRO and DRO, polynuclear aromatic hydrocarbons, PAHs, total extractable petroleum hydrocarbons, TPH, total metals and general chemistry cations and anions, which we refer to as general chemistry.

Section 4 from out sampling analysis plan specifies that judgmental sampling is the subjective selection of sampling locations at a site based on historical information, visual inspection, and on best professional judgment of the sampling team. OCD will use judgmental sampling to identify pit sample locations that exhibit visual staining, sheen on water, and/or odor detection by using a PID monitor to screen for VOCs. Consequently, judgmental sampling has no randomization associated with the sampling strategy, precluding any statistical interpretation of the sampling results.

This language is actually borrowed from the EPA document, and the important point is that we went out and tried to take as many samples as we could with our budget, but we did not follow the same protocols that I understand that the industry committee followed when they used

randomly selected locations, both horizontally and vertically. Ours were surface grabs, we almost always took our first sample in the pit of the sludge below what was apparently the location of the shale shaker, and then moved around grabbing three other samples and compositing them.

Q. Now were you trying to select hot spots to sample?

2.2

- A. We presumed that most contamination would occur at the entry point into the pit, but actually I don't think that we really changed our locations based on a PID screening number. It was basically just trying to get a representative sample from the bottom of the pit.
- Q. Now if I understood correctly, you said one -you took one under the shale shaker, and the others -- were
  they random or --
- A. No, they were usually in the corner. Or if it was a narrow pit -- there was one pit that was fairly linear, more like a trench than a pit. In that particular case we went down the axis of the it. If there were still very -- And these pits were in various stages, so we had to modify our sampling locations by practicality. We weren't going to wade out into free fluids.
- Q. Was there an effort to get a distribution so that not all the samples would be in the same part of the pit?
  - A. Well, they were all taken from different parts of

the pit. They were separated by maybe 10s of feet. 1 Continue. 2 Q. Then to summarize, then, we had judgmental 3 Α. We collected 25 samples from the southeast and 4 12 samples from the northwest, and these samples were 5 analyzed using EPA methods for the following constituents: 6 7 We analyzed for 69 volatile compounds by method 8260B, a total of 93 semi-volatile compounds by 8270, and 8 GRO-DRO by method 8015 modified, 17 PAHs by 8270C. 9 10 I should point out that because we used the same 11 method for the semi-volatiles and the polyaromatic 12 hydrocarbons, that some constituents were reported twice in 13 our lab reports. TPH was analyzed by EPA method 418.1. 14 analyzed a total of seven RCRA metals by methods 6010B and 15 6020, and 7470A and 7471A, which is for mercury. 16 And we analyzed another 14 general chemistry 17 analytes by the method specified in 40 CFR 136.3. 18 Next slide, please. 19 As I mentioned earlier, when we got the results 20 back we put summaries of the analytical results as 21 submitted to us by our lab, along with the photographs of 22 the pits that we took, and the photographs that I showed in 23 Exhibits 13B and -C were a subset of the total number of

photographs that we took. And we provided copies to the

24

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pit rule task force members in July of 2007.

Next, please.

We generated 25 separate analytical reports for the web page. And the reason that those numbers don't quite match up is that in the southeast they actually sampled one pit maybe for solids and fluids, whereas in the northwest we went to a different site. We took only either solids or sludge or soils, depending on what you want to refer to them as, or fluids.

Each report includes photographs depicting the general pit conditions encountered in the field and a summary of the analytical results. And as I mentioned, a compendium of OCD's reports is included as Exhibit 17.

Next.

I imported the separate analytical reports into Excel spreadsheets to better summarize the data, and the data were subdivided for review by a matrix that is soil and sludge versus water and fluids, and by geography, northwest versus the southeast.

And now to present the results of the pit sampling data, Mr. Brooks, this is where I would like to provide the alternate revised copies.

(Off the record)

Q. (By Mr. Brooks) Okay, you're going to be showing those? Oh, I see, this is where in your presentation, Mr.

von Gonten? Exhibit 16? 1 That's correct. 2 Α. 3 Q. Okay --MR. PRICE: How many copies did you make? 4 5 THE WITNESS: They're all right there. MR. PRICE: These are separate copies --6 7 THE WITNESS: Yes. 8 MR. PRICE: Okay, so I need to get --9 Q. (By Mr. Brooks) Mr. von Gonten, you have some revised and corrected spreadsheets that you propose to 10 substitute in lieu of those in Exhibit 16; is that correct? 11 12 Yes, sir, that is correct. 13 Q. Now why are you proposing to substitute new versions of Exhibit 16? 14 15 Α. When reviewing my exhibits for these proceedings, I noticed that I had some errors in certain columns in the 16 17 spreadsheets. Particularly, the problem was that the lab gave us -- did not give us an Excel spreadsheet. I had to 18 prepare that myself. 19 20 We were given several -- I want to say between 150 and 200 individual reports by the lab that were called 21 comma-separated value files, and I had to manually import 22 those into an Excel spreadsheet. And in doing so, I 23 24 noticed that the order of the constituents listed by the

lab was not the same between the sludge samples and between

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the water samples. And so some numbers were actually 1 associated with the wrong compounds. 2 Mr. von Gonten, is Exhibit 17, the compendium, is 3 Q. that the actual reports --4 The -- Yes, those are the original paper copies 5 that were submitted to us. 6 7 Q. Did you prepare Exhibit 16 using the data from 8 Exhibit 17? I actually prepared it using the electronic 9 Α. copies which were submitted. As I said, there was 150 to 10 200 reports submitted to OCD by the laboratory. Each one 11 was for -- for example, there were close to 35 analyses. 12 Each analysis would include four suites or four reports. 13 14 For example, the semi-volatiles were one report, the 15 volatiles were another, the PAHs were a third, and the general chemistry and the metals were a fourth report. 16 So for each report I actually had to compile four 17 smaller reports, and the lab for some reason did not always 18 submit the data in the same order in that comma-separated 19 20 value file. And in effect, did you make some errors in 0. 21 copying the data from --22 A. Yes --23

-- the source, Exhibit 17, into Exhibit 16?

24

25

Q.

Α.

Yes, I did.

And did these errors that you made, did they 1 0. affect -- materially affect your conclusions? 2 3 Α. No, it did not. 4 Did they change anything in the tables that you Q. -- or in the summaries that you're going to submit as a 5 part of Exhibit 15, that is --6 Not that I --7 Α. 8 Q. -- on pages 26, 27 and following in Exhibit 15? 9 Not that I'm aware of. Α. When did you discover that you had made this 10 Q. mistake in preparation of Exhibit 16? 11 I believe that it was about 10 days ago. And so 12 Α. last week I began work -- I think I discovered it on a 13 Friday, and I began working on it on Monday. It took a day 14 15 and a half or so to make sure that I'd made the proper 16 revisions. When did you complete the revision? 17 Q. Well, I don't remember what day it was. 18 Α. 19 something like Wednesday of last week. MR. BROOKS: Mr. Chairman, honorable 20 Commissioners, in the interest of having a fully accurate 21 22 report, although we recognize that this exhibit was not available at the time it was submitted for attachment to 23 the prehearing statement, we would request to substitute 24

the revised Exhibit 16 for the Exhibit 16 that is included

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in the exhibit books. 1 CHAIRMAN FESMIRE: Ms. Foster, do you have any 2 3 objection? MS. FOSTER: I do. 4 CHAIRMAN FESMIRE: And it is -- ? 5 MS. FOSTER: Mr. Chairman, the objection that I 6 7 would have is that this witness, as he just stated, took 8 four days -- I think it was from Friday, Monday, Tuesday, 9 Wednesday; those are four working days -- to complete his revisions. It seems to make the implication that there was 10 quite a lot of revisions that needed to be done, and I 11 would like to have the opportunity to look at both reports 12 side by side, to --13 If it's introduced into CHAIRMAN FESMIRE: 14 evidence, would you have that opportunity and the chance to 15 cross-examine him on the differences? 16 17 MS. FOSTER: Well, I wouldn't be able to crossexamine him this afternoon. I would need to be able to 18 look at the original report that he submitted as part of 19 the exhibits and then this new report, because if it took 20 him four to days to do revisions there's quite a few 21 revisions, I'm sure. 22 CHAIRMAN FESMIRE: Okay. Mr. Hiser, do you have 23 any objections? 24

MR. HISER:

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I think that she stated it well.

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1	CHAIRMAN FESMIRE: Mr. Carr?
2	MR. CARR: And I'll support Ms. Foster in her
3	objection.
4	CHAIRMAN FESMIRE: Okay. Ms. Belin, do you have
5	an objection?
6	MS. BELIN: I have no objection.
7	CHAIRMAN FESMIRE: And Mr. Jantz?
8	MR. JANTZ: No objection.
9	MR. BROOKS: Mr. Chairman, we would have no
10	objection to making Mr. von Gonten available for further
11	cross-examination later in the week if counsel feels that
12	that is necessary.
13	CHAIRMAN FESMIRE: Okay. With that provision
14	we'll go ahead and accept the revisions.
15	MR. BROOKS: Okay. Would you pass those, then,
16	to the Commissioners and counsel?
17	CHAIRMAN FESMIRE: Ms. Foster, I'm going to put
18	it on your shoulders to request a recross-examination of
19	Mr. von Gonten at some point
20	MS. FOSTER: Okay, thank you.
21	CHAIRMAN FESMIRE: before the end of the week,
22	okay?
23	MS. FOSTER: Yes, I will do that.
24	CHAIRMAN FESMIRE: This is replacement Exhibit
25	16?

Yes, your Honor, that is the case. MR. BROOKS: 1 And if the Commission is ready, I will instruct 2 Mr. von Gonten to proceed with his technical presentation. 3 CHAIRMAN FESMIRE: Commissioner Bailey, are you 4 5 ready? COMMISSIONER BAILEY: Ready. 6 CHAIRMAN FESMIRE: Commissioner Olson? 7 COMMISSIONER OLSON: (Nods) 8 9 CHAIRMAN FESMIRE: Okay, let's go. (By Mr. Brooks) You may proceed, Mr. von Gonten. 10 Q. There are eight spreadsheets that I'll be walking 11 Α. I will give you an overall summary. 12 through. As you can see on the left-hand column, which is 13 titled constituents and analytical methods, that column 14 should be on all eight of these. 15 The locations are shown here on the column B 16 through M. This is actually from the southeast, and it's 17 18 colored blue to indicate that it was a water sample. And 19 there's four segments of each report. 20 On the left-hand column you see the 17 PAHs by 21 8270. Further down, 93 semi-volatiles by 8260C [sic]. Moving down the table a page or so, you can see 22 that there are 69 volatiles by 8260B. 23 And the last segment is on the 24 general 24 chemistry inorganics, et cetera, by various EPA methods. 25

Obviously there's a lot of information here, and I'm not going to take the Commission's time by going through each one. We're presenting the data, and then we will be summarizing the data.

But you can see that the concentrations determined are depicted in each cell, and if it is not detected -- if it's a non-detect, the detection limit is displayed in that cell, so you see a "less than". For example, on the top page, acenaphthylene in CL-6 was less than .01. And the units are given over in the far right-hand column, in milligrams per liter.

And also the column next to the -- column L depicts the maximum value detected in the southeast. And actually, a lot of my summary spreadsheets will be using that value.

Next, please. The next one is southeast, yes, table 2. This is showing those results from the southeast again. It's shown in kind of a tan color to indicate that it was a sludge or soil. Again, column A is constituents and analytical methods. The individual locations are columns B through actually N, and you can see that column O and P are the maximum value, and the units in the right-column -- units are depicted in column P.

Again, it's the same suite of materials. Again, the non-detects are actually given -- or the detection

limit is given if it's a non-detect.

Continue on to tab 3, please. I'm going to walk a little bit through this one because this is from the northwest, and this is showing the same information, the same list of constituents, the same format with the site locations depicted in columns B through G, the maximum concentration in column H, and the units are depicted in column I.

If you'll scroll down, Mr. Hansen, I want to look at the general chemistry.

I think it's particularly noteworthy, in the general chemistry column -- excuse me while I find this.

I would call your attention underneath the 24 general chemistry or the compounds, that chloride is listed about six down, and this is one of the interesting things. This is actually from the liquids in the pits, the pit fluids, and you can see the concentration of chloride in the pit was -- the first site was 1210, 7800 in the second site, 3400 in the third site, 4280 in the fourth site, 3940 in the fourth site [sic], fifth site was 2500, and the last site was 7810 -- or actually that's the maximum, I'm sorry.

CHAIRMAN FESMIRE: So chlorides were above 1200 in every -- these are liquid content pits sampled?

THE WITNESS: Yes, sir.

CHAIRMAN FESMIRE: And some as high as 7800?

THE WITNESS: From our sampling.

As you would expect, the total dissolved solids, which is also shown there on -- What line is that? Yes, thank you, on row 199, it is also elevated as you would expect, and -- from a fairly elevated chloride content.

You can see that the last three compounds there are reporting the total reported hydrocarbons, or TPH, and then we have also the other GRO and DRO concentrations, which show that the concentration in the fluids ranged up to -- for DRO to be 534, in the max.

I'd like to also move to tab 4 now and scroll down also again to the same general chemistry. Again I'd call to your attention, the chloride content here ranged from 417 to a maximum of 5290 milligrams per kilogram.

And --

- Q. (By Mr. Brooks) Now these are all northwest samples?
  - A. These are all northwest samples.

And then I'd like to move on to a summary table.

The next tab, please, 5. This is the state's summary. We have the same constituent list, we have the maximum in the sludge or solids detected in the northwest in column B.

Column C is the sludge and solids in the southeast. Column D is the units. Column E is the max detected in the northwest for fluids, and column F is the maximum detected

in the southeast.

And units have been converted here from the original parts per million and milligrams per kilogram or milligrams per liter to be micrograms per kilogram and micrograms per liter.

Again, you can review these and determine that -This was, I think, our best slide to actually determine -to answer the question, What was detected? And I'll have a
final summary slide when I return to Exhibit 15, to count
all these up.

You can see that some constituents were detected in one area of the state that were not detected at all, much less have a maximum value, in the southeast.

Difficult to say, except there's a lot of variability in what we detected.

Tab 6, please.

This is a rather busy slide, and I have two other slides that will break this up, but just for completeness this is same information, plus this time I've included for reference -- the columns now include -- as I just previously mentioned on tab 5, I've added the industry committee's solid/sludge pit contents, total fraction, the industry committee's solid/sludge pit contents analyzed by so-called soluble fraction, analyzed after TCLP.

For comparison I also included the RCRA TCLP

standards, the NMED residential soil screening levels, the New Mexico Environment Department soil screening levels for protection of groundwater with a DAF of 1, and the final column is the WQCC 3103 standards.

This is too busy to make anything out at this scale, so let's move to tab 7.

This is combining all the results from -- that we had at the time that I prepared this, of the solids or sludge. The industry committee's exhibit that deals with their results by Dr. Thomas, I believe, will be presenting that as some modifications to it, and those were not included in this exhibit.

You see some light-blue shading, and that is a flag that indicates that -- if you scroll down to the bottom, please, Mr. Hansen -- the blue shading indicates that it was a constituent that would have exceeded the ED soil screening levels for the protection of groundwater with a DAF of 1.

The constituents that are highlighted with a red outline are constituents that would have exceeded or did exceed New Mexico Environment's soil screening levels.

The constituents that are just actually -- just total lead, exceeded EPA's TCLP 20-times rule for totals.

And basically what that 20-time rule states is that if you have a total analysis of some material that you determine

to see whether it fails or passes the toxicity characteristic leaching procedure, you may use that number and multiply -- or actually -- Let me get this straight.

You divide it by 20. It's a 20-to-1 dilution factor, so that you would determine that -- The total fraction divided by 20, if that does not exceed the EPA TCLP concentration, then EPA allows you to use that information rather than running the TCLP on your waste, which is an additional cost.

You can use the total fraction information and divide that by 20 to make a determination on your waste, whether it's hazardous or not.

Then -- So one constituent -- that is, lead -exceeded the TCLP 20-times rule. Eight constituents
exceeded the soil screening levels. 25 constituents
exceeded the ED soil screening levels for the protection of
groundwater using a DAF factor of 1.

Next, please?

And this final one here, again has -- I've analyzed this and I've gone through this, and I am comparing our results with the maximum. I did not compare all of the sites and count them up individually, but just for the purposes of making an observation and summarizing this, I did use the maximum value and compared it to an appropriate standard.

Here we're looking again at the TCLP standards 1 2 and the Water Quality Control Commission 3103 groundwater 3 standards, tables A and B. I determined that six constituents exceeded the 4 5 TCLP regulatory level specified at 40 CFR 264, and 18 constituents exceeded the WQCC groundwater standard 6 7 specified at 20.6.2.3103. 8 And for these summary bullets or blocks at the 9 bottom of these spreadsheets I also analyzed the industry 10 committee's results. Here you see this is for the soluble 11 fraction. Part of the block has been truncated, but it was 12 analyzed after TCLP, which involved taking a sample and 13 diluting it 20-fold before running the analysis. 14 For my final summary slides back on Exhibit 15 I 15 used only OCD's data. 16 I'd like to return back now and resume Exhibit 17 15. 18 What page? Q. That's a good question. 19 Α. 20 Yes, we should begin on page 26. 21 Okay, we're summarizing using OCD's pit sampling 22 program results only. 23 I determined that 11 of the 17 PAHs were detected 24 in the northwest. In the southwest the ratio was four out

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of 17.

In the northwest for the semi-volatiles --1 Was this detected in one or more 2 Q. Excuse me. pits --3 4 Α. Yes. -- that were sampled? 5 0. 6 A. At least one positive detect is what this slide 7 is --8 Continue. Q. 12 out of 93 semi-volatiles were detected in the 9 northwest, seven out of 93 were detected in the southeast. 10 11 Fourteen out of 69 volatiles were detected, and 14 out of 69 were also detected in the southeast. 12 And there were 19 out of 23 general chemistry 13 inorganics, et cetera, were detected in the northwest, and 14 the southeast it was 21 out of 23. 15 Next page, please. 16 17 I'll start off with the bottom line by pointing out that now I'm reporting 24 general chemistry, and that's 18 19 because with solids there's no point in reporting or 20 analyzing for total dissolved solids, that makes no sense. 21 So there was one additional analyte for the water samples. 22 Eleven out of 17 PAHs were detected positively in 23 the northwest, nine out of 17 in the southeast. Nine out of 93 semi-volatiles were detected in 24 the northwest, 10 out of 93 in the southeast. 25

Fifteen out of 69 volatiles, and 13 out of 69 volatiles, northwest and southeast, respectively.

And as I pointed out, 20 out of 24 general chemistry parameters in the northwest, and 22 out of 24 in the southeast for the water results.

- Q. All right. Now chlorides is included in general chemistry?
  - A. Yes, sir, it is.
  - Q. And also -- does that also include metals?
- A. The metals are reported in that bottom series of rows that includes the RCRA metals.
  - Q. But is that included in the general chemistry --
- 13 A. Yes, it is.

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- Q. -- category?
- A. Yes, it is.
- 16 Q. Continue.
- 17 A. Next slide.

I used -- again, as I mentioned, I used the maximum value to characterize the constituents present in the pits, and I recalculated some results to milligrams per kilogram for the soils and sludge, and micrograms per liter -- excuse me, micrograms per kilogram for the soils and sludge, and micrograms per kilogram -- micrograms per liter for water and fluids.

Q. Now did that recalculation change the values or

just the units?

- A. It changes the units. It moves the decimal place three places.
  - Q. Continue.
  - A. Next slide, please.

As I mentioned, the tables did include the WQCC standards for groundwater, the TCLP, the -- NMED's 2006 soil screening levels, and -- both for residential and for protection of groundwater -- and some of the industry committee's data for comparison with OCD's results.

Next slide.

Approximately 77 -- Excuse me. Approximately 77 constituents were detected in at least one sludge or soil sample or liquid/water sample.

Next slide.

Five OCD samples failed the toxicity characteristic leaching procedure test. And except for the statutory RCRA exemption, these pits would have been determined to contain characteristically hazardous waste.

Next.

The TCLP test is used by EPA to determine whether a waste is characteristically hazardous.

The industry committee used the TCLP test to determine, according to their report provided to the task force, environmental mobility and bioavailability.

Next slide.

The use of TCLP is not recommended by EPA

Superfund in its Risk Assessment Guidance for Superfund,

referred to as RAGS, and the industry's use of the TCLP

test in its sampling program was not useful in determining

what constituents are actually present in the pit contents.

- Q. Now Mr. von Gonten, would you explain why that is true?
  - A. There is a 20-to-1 dilution factor that occurs.
  - Q. Okay, continue.
- A. I should have pointed out when I was walking through the exhibits on 16, on the slides -- or the tabs that actually depicted OCD's results versus the industry's results, there were a lot of blank pages, blank cells.

There were also some constituents that were detected by industry, and I believe Dr. Thomas's presentation points out that these were lab surrogates, and they were not actually part of the tests -- they were actually a laboratory part of the test, they're not actually a constituent that was detected in the sample that was being analyzed.

So there was a different list, but apparently industry used similar methods for analyzing its -- some similar methods for analyzing its samples. And they only analyzed for sludge, they did not analyze for pit fluids.

Next, please. 1 Based on our data, five constituents that would 2 have exceeded the TCL- -- five constituents would have 3 exceeded the TCLP test for liquids, using no dilution. And 4 5 you just use the straight fluid itself, you don't do an extract as you do with solids. 6 And again, is this in one or more pits? 7 0. This is at least one pit. 8 Α. Continue. 9 0. They include arsenic, lead, mercury, 2,4-10 Α. Dinitrotoluene, 2-Methylnaphthalene. 11 Next, please. 12 Based on OCD's data, lead would have exceeded the 13 TCLP test for solids, using the 20-times dilution of totals 14 15 test or procedure, and would be considered 16 characteristically hazardous except for the RCRA exemption. 17 Continue. Although pit fluids are certainly not 18 groundwater, 17 constituents were present in OCD pit fluid 19 samples at concentrations that exceed the WQCC Groundwater 20 3103 standards. These constituents include --21 Next slide. 22 -- naphthalene, benzo(a)pyrene, phenol, benzene, 23

toluene, meta- and para-xylene combined, chloride,

fluoride, sulfate, pH, total dissolved solids, total

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arsenic, total barium, total cadmium, total chromium, total mercury and total lead.

Next slide, please.

Despite industry's attempts to characterize pit contents as being "benign" and avoid any reference to "waste" during the task force meetings, OCD's analytical data clearly demonstrate that drilling, workover and production pits contain several dozens of constituents.

Next, please.

All constituents are toxic to some degree. This is the first law of toxicology. The dose makes the poison, which was attributed to Paracelsus, and I don't remember when he lived, but it was perhaps 2000 years ago. This has been known for many centuries.

Except for the RCRA exemption, some constituents were present at concentrations that would be characteristically hazardous at other sites.

Next slide, please.

Drilling, workover and production pits all handle large volumes of liquids and solids. The liquids and solids are oilfield waste, as defined, and must be handled appropriately so that human health and the environment are protected. Sensible and appropriate waste management is required.

Next, please.

To summarize our pit sampling program, we sampled for a relatively large suite of constituents. We did not attempt to conduct a science project, because it is not relevant to proper oilfield waste management.

- Q. Now what exactly do you mean when you say you did not attempt to conduct a science project?
- A. We took a fair number of samples, but you could have made it far more complicated. You could have considered the geology, the depth of the well, the formations that were penetrated and the cuttings managed in the pits. We could have also subdivided it according to the mud program that the operators were using.
- Q. Is that statement that you did not attempt to conduct a science project mean that the sampling program was, in your opinion, not scientific?
- A. Oh, no, it does not. It was a scientific project, but it was not an academic science project.

I guess my point is that it could have been far more comprehensive. If we took and analyzed for 200-something constituents, you could analyze for twice that or three times that.

And I should point out that industry did analyze for other suites of constituents that we did not. They did, and we wanted to after the fact but we just didn't think about it. For example, NORM, naturally occurring

radioactive material, would have been another excellent suite for us to have analyzed for. They also, I believe, analyzed for polychlorinated biphenyls, PCBs, that we did not.

So there are other suites of constituents that could have been analyzed for. We drew the line where we did. We thought we got a comprehensive, broad look at what is in the pits.

- Q. Is there anything about the analysis that you did not do which undermines your confidence in the results as far as the analysis that you did?
- A. No. I think we could have always done more, but what we did was adequate to characterize the pit contents.
  - O. Continue.

- A. The point is that neither the number of constituents nor the concentration of the constituents changes the RCRA exemption. Oilfield wastes are exempt from RCRA hazardous waste management regulations. However, oilfield wastes must still be managed appropriately.
- Q. Now I believe we've gone over this, but I want to be sure that everybody's clear on it. I believe we went over it with Mr. Price, but I want to be sure everybody's clear.

What does the RCRA exemption exempt oilfield wastes from?

1	A. It excludes it from the requirement to be managed
2	as hazardous waste.
3	Q. And what subdivision of the RCRA Act is that
4	A. That is RCRA Subtitle C and its implementing
5	regulations.
6	Q. Now does it exclude oilfield wastes from other
7	provisions of RCRA, other than those included in Subtitle
8	C?
9	A. No, it does not.
10	Q. And where in RCRA does the provision prohibiting
11	open dumps appear?
12	A. Well, it does occur in the definition of open
13	dump as contained in the RCRA, the act itself and
14	statute, federal statute.
15	Q. But is it in Subtitle C?
16	A. I should know the answer to this. I don't know
17	that the Certainly I think there's a distinction between
18	the statutory definition of open dump and the regulations.
19	I don't
20	Q. I think that's not an important point, because I
21	believe we can cite law to the court without a sponsoring
22	witness, so we will go into that matter at a later time.
23	Thank you.
24	CHAIRMAN FESMIRE: You're objecting to your own
25	question?

(Laughter) 1 MR. BROOKS: I did not attempt to answer it, but 2 3 I believe we can cite this matter to the Commission, and will do so. And I will not attempt to answer it, but I 4 will attempt to present the materials from which the 5 Commission can derive an answer. 6 7 You may continue, Mr. von Gonten. CHAIRMAN FESMIRE: Mr. Brooks, would this be a 8 9 good time to take a break? MR. BROOKS: It would be -- Well, how much longer 10 do you have, Mr. von Gonten? 11 12 CHAIRMAN FESMIRE: About eight pages, nine, 10 13 pages? THE WITNESS: For this section, yes, about eight 14 15 pages. MR. BROOKS: Let's see, but -- and you also have 16 17 the oilfield waste management program? THE WITNESS: Yes, sir. 18 19 MR. BROOKS: We can go ahead and take a break 20 now. CHAIRMAN FESMIRE: Okay, we'll take a break and 21 22 reconvene at three o'clock by that clock, please. 23 (Thereupon, a recess was taken at 2:47 p.m.) (The following proceedings had at 3:00 p.m.) 24 CHAIRMAN FESMIRE: Okay, let's go back on the 25

Let the record reflect that we're back after the 1 record. It's three o'clock p.m. on Tuesday, November 6th, 2 break. 2007. Again, let the record reflect that Commissioner 3 Bailey, Commissioner Olson and Commissioner Fesmire are all 4 I believe we were in the middle of the direct 5 examination of Mr. von Gonten. 6 7 Mr. Brooks, would you proceed, please? (By Mr. Brooks) Thank you. Mr. von Gonten, you 8 Q. may continue with your technical presentation. 9 Slide 43, please. Thank you. 10 Α. Part 17 specifies both the general and technical 11 standards that -- it should be general performance 12 standards and technical standards, that will ensure that 13 oilfield waste that is generated in pits and below-grade 14 tanks is managed and disposed of properly. 15 16 Next slide. 17 The industry committee sampled six New Mexico sites for soils and sludges only and submitted a data 18 19 summary report to the pit rule task force. Industry committee report provided average and 20 21 concentration range data -- that is, minimum and maximum values -- but did not provide at that time the actual 22 laboratory summary reports. 23 No sampling analysis plan was provided. 24

Next slide.

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No photos documenting the condition of pits was provided. VOCs were collected after the samples were composited in the field, which means that the samples were biased low for volatiles. Laboratory reports with QA/QC were not provided. Industry did use EPA methods similar to those used by OCD except for the "soluble" fraction in the use of TCLP.

Next slide, please.

Industry task force representatives accompanied OCD on both of our sampling programs, both the one in the southeast and the northwest. Industry task force "split" soil and sludge samples with OCD.

Next sample [sic], please.

I'd like to discuss other investigations of oilfield waste, primarily by EPA. In EPA's 1987 report to Congress, which was entitled Management of Wastes from the Exploration, Development and Production of Crude Oil, Natural Gas and Geothermal Energy --

Next slide.

-- EPA conducted some sampling, and they were focused on produced water and drilling muds, and they sampled -- EPA sampled a total of 42 sludge samples, 59 liquid samples at 19 drill sites, 23 production sites, four centralized pits and three centralized treatment facilities for the following constituents:

Next slide, please.

There was a total here of 534 total analytes.

They analyzed for volatiles, semi-volatiles, dioxins and furans, pesticides, herbicides, as well as metals. And then they also analyzed for conventional analytes by wet chemistry, and that was equivalent to our general chemistry, and they also determined the waste characteristics, whether they were corrosive, ignitable or reactive.

And they had a total of 534 analytes, we had -- in OCD's sampling program we had a little bit over 200 samples.

EPA --

Next slide.

-- detected 134 constituents out of the 534 analytes. That's about a 1-out-of-3 ratio of positive detects, and that's about what OCD observed.

Next sample [sic].

Other studies of crude oil, produced water and hydrocarbon constituents, excluding oilfield services waste, were analyzed by EPA in a report of 2000 entitled the Associated Waste Report. They detected 72 positively detected constituents in completion and workover wastes.

Also in 2000 EPA reported, in its Sector Notebook

Project - Oil and Gas Extraction Industry, a single table,

table 5, for produced water effluent concentrations. They detected 47 constituents.

Okay, so what's in that pit? What did OCD determine?

In our final summary I would point out that we sampled -- we note that temporary and permanent pits, below-grade tanks and sumps are used to manage large volumes of fluids and solids. The fluids and solids contain several dozen, if not hundreds or even thousands, of compounds and isomers. EPA has determined that these fluids and solids do not need to be handled as hazardous waste.

Next.

The fluids and solids managed in pits during the active life of the pit are "product" when being used for the intended purposes and are not "wastes".

Next, please.

During the active life of a pit -- or the pit -fluids may be released into the environment as a result of
leaks and spills. The same fluid that was a "product" is
classified now as a "waste" when it is released into the
environment, and it must be handled appropriately.

Next.

After active life of the pit, all fluids and solids become "waste" at some point and must be handled

appropriately at closure. However, when recycled or re-1 2 used, pit contents are not "waste". 3 I should point out that Mr. Chavez, among his 4 other presentations, will be addressing what's called P2 or 5 pollution prevention, and he will be talking about 6 recycling and re-using. 7 Finally, part 17, the new proposed pit rule, 8 specifies both the general performance standards and the enforceable technical standards that are necessary to 9 10 ensure that the oil and gas industry manages and disposes of oilfield wastes appropriately. 11 That's all of 15 and 16. 12 Thank you. And with the indulgence of the 13 Q. 14 Commission, you may continue with your technical presentation, Exhibit Number 18, regarding exploration and 15 16 production waste management. 17 Yes, I would refer to Exhibit 17, which again was a voluminous OCD pit sampling compendium, and all the 18 19 results have placed in there on CD. 20 Exhibit 18 is entitled Exploration and Production 21 and Waste Management. 22 Next slide, please. 23 This is repetitious, I apologize, but what is 24 part 17?

OCD determined that "sensible waste management"

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for exploration and production wastes, just as with part 36, originally known as Rule 53, could best be achieved by requiring industry to follow specified best management plans using the best demonstrated available technology, or BDAT, while still allowing the opportunity for exceptions under appropriate circumstances.

And what I mean by this is, the best management plan is basically what we're proposing in our pit rule 17. The best demonstrated available technology is the closed loop system, combined with appropriately lined pits or appropriately lined deep-trench -- deep-burial trenches.

Next, please.

Part 17 is also designed to strike a balance between the operator's need for practicability and the OCD's need for enforceability by specifying both general performance standards and technical standards.

Q. While you're mentioning that, there were some questions raised this morning about the existence of these prescriptive standards.

If you have prescriptive standards, is an operator in violation just because what they do does not conform to that prescriptive standard?

A. Yes, if it's specified in regulation, they would be in violation. If it says 20-mil and they haven't gotten the exception, then they would be in violation of the

requirement that specifies 20-mil.

- Q. Now if you were going to enforce a performance standard, on the other hand, what would you have to do, if you felt the operator's -- what the operator was doing did not meet that performance standard?
- A. A general performance standard says something along the lines of protect human health and the environment, make sure that the contents are managed appropriately. That can be interpreted even by people who -- respectively disagreeing among themselves with what that means. Companies could disagree with what is meant by that, the OCD could have another interpretation.

It's a good over-arching goal that we should all strive for, is to protect human health and the environment, but it may not tell a prudent operator exactly what we mean by that. And they may determine that 12-mil is fine, or even 6-mil is fine, with their experience. Our experience would dictate, and what we're recommending to the Commission in the proposed rules, is that 20-mil be the standard, for example.

- Q. And if you were to undertake to enforce a performance standard, would you have to potentially present evidence to a decision-maker to show that what you were requiring was actually necessary?
  - A. I think so. I think that there could be two

scenarios.

One is, an inspector goes out to a site, and perhaps they go out to a site before the pit liner, for example, is actually installed, and has a discussion with them saying, That's not an adequate anchor trench. They can have that discussion before any sort of potential violation would occur, and they could work things out.

inspector goes out to a site and sees that, well, the winds have whipped up and blown the liner into the pit because there wasn't an adequate anchor trench, you could make the argument that it was never appropriate in the first place. But I think that some operators would take exception to that and argue that in their experience they didn't have to have a berm, they didn't have to have an anchor trench, and that they were using something that they were comfortable with. And so it would lead to an argument that might need to be resolved by setting a hearing before a Hearing Examiner or before the Commission.

- Q. Can a performance standard -- I'm sorry, can a prescriptive rule, then, be enforced with considerably less expenditure of enforcement time, in your opinion, than a general performance standard?
  - A. I think clearly it could.
  - Q. Continue.

A. Next slide, please.

The next few slides are all taken from this EPA publication entitled Exemption of Oil and Gas Exploration and Production Wastes from Federal Hazardous Waste Regulations. This is the most recent in a series of brochures issued by EPA to help industry with the understanding where the RCRA guidance helps them or could hurt them.

Next, please.

It starts off by saying, Sensible waste management begins with "good housekeeping." Prudent operators design exploration and production facilities and processes to minimize potential environmental threats and legal liabilities. EPA promotes sensible waste management practices through a number of joint efforts with organizations such as API -- which is the American Petroleum Institute -- individual states, and the Interstate Oil and Gas Compact Commission, IOGCC. The following waste management suggestions have been compiled from publications produced by these organizations as well as from literature available from industry trade associations, trade journals, and EPA.

Next.

These are some of the suggested waste management practices that EPA published in this document, and the ones

in red are particularly relevant to the pit rule that we're 1 talking about today. 2 EPA recommends that you use closed loop mud 3 systems when practical, particularly with oil-based muds. 4 Operators should review material safety data 5 sheets, MSDSs, of materials used, and select less toxic 6 7 alternatives when possible. Operators should minimize waste generation, such 8 as by designing systems with the smallest volumes possible, 9 e.g. -- for example, drilling mud systems. 10 Operators should reduce the amount of excess 11 fluids entering reserve and production pits. 12 These are general performance standards that I 13 14 think it's very hard to argue with. 15 Continue. EPA suggests that operators keep all non-exempt 16 wastes out of reserve or production pits. 17 Operators should design the drilling pad to 18 contain storm water and rigwash. 19 Operators should recycle and re-use oil-based 20 muds and high density brines when practical. 21 Operators should perform routine equipment 22 inspections and maintenance to prevent leaks and emissions. 23 24 Obviously, an ounce of prevention is worth a pound of cure. 25 Next, please.

EPA suggests that operators reclaim oil debris and tankbottoms when practical.

They should minimize the volume of materials

They should construct adequate berms around materials and waste storage areas to contain spills. And these are berms around product storage areas rather than the drilling pits, I should point out.

Operators should perform routine inspections of materials and waste storage areas to locate damaged or leaking containers.

And finally, operators should train their personnel to use sensible waste management practices.

Next.

stored at facilities.

I'd like now to talk about OCD's position on the 100-mile-radius provision. We've required it and put it into the proposed rule because we do not want to encourage industry to dispose of pit contents on-site, because onsite disposal is the least desirable type of waste management.

OCD --

MR. HISER: Objection to that, Mr. Chairman. Is the witness purporting to state that as a matter of fact or as a matter of his personal or professional opinion?

CHAIRMAN FESMIRE: Mr. Brooks?

MR. BROOKS: May I ask the witness that question? 1 CHAIRMAN FESMIRE: Sounds like a real good one. 2 Might have to ask it, since it's been raised. 3 MR. BROOKS: I think I would have to ask the 4 5 witness that question. CHAIRMAN FESMIRE: Okav. 6 (By Mr. Brooks) Mr. von Gonten, you are -- you 7 Q. have spent a lot of your professional career working with 8 waste management, have you not? 9 Yes, I have. 10 Α. And is it your opinion as a professional in that 0. 11 field -- when you say on this slide that on-site disposal 12 is the least desirable type of waste management, is that 13 your opinion based on your expertise and experience in that 14 15 field? It is, and also based on training. It is also 16 part of pollution prevention that will be discussed by a 17 later testimony by OCD staff. 18 Is it also based on your review of the Q. 19 literature, professional literature on the subject of --20 It is. 21 Α. -- waste management? 2.2 Q. I'll continue? 23 Α. CHAIRMAN FESMIRE: Just a second. 24 Does that --25 Mr. Hiser, does that satisfy your objection?

I believe you clarified it's his 1 MR. HISER: 2 opinion, thank you. 3 CHAIRMAN FESMIRE: Thank you. Continue, Mr. Brooks. 4 5 (By Mr. Brooks) You may continue. Q. 6 I'd also point out that this is more than my 7 opinion; I'm speaking for the Environmental Bureau. we sat down and went through the various drafts line by 8 9 line, we actually discussed what was needed and why. MR. HISER: Mr. Chairman, I then have to rise to 10 make my objection one more time. Previously we were told 11 12 that it was his professional opinion as a witness, now I'm 13 told that it's his speaking on behalf of the Environmental 14 Bureau. So is this an advocacy position by the Bureau, or 15 is this his professional opinion as an expert witness? 16 It's not clear to me which he's speaking as. CHAIRMAN FESMIRE: Well, Mr. Hiser, I think he's 17 been clear in that it is both, and I'll overrule your 18 objection. 19 20 MR. HISER: Thank you. To continue, on-site disposal in 21 THE WITNESS: 22 New Mexico has led to an unknown and unknowable number of 23 unmarked pits, probably several hundred thousand open 24 dumps. 25 Next, please.

The 100-mile-radius provision, continu- --1 further discussion on that. The cumulative effect of these 2 3 sites is of concern to OCD because it cannot be calculated with certainty. But it certainly must have a strongly 4 5 negative impact on the environment, because the unstabilized waste contents have the potential to migrate 6 7 vertically downward and contaminate well water and migrate 8 horizontally to contaminate the surface water. 9 MS. FOSTER: Objection. The nature of my objection, Mr. Chairman, is that this statement is 10 11 completely and wholly speculative. And again, if this is his personal opinion as an expert, I think he should state 12 13 as such, that it's his personal opinion. 14 CHAIRMAN FESMIRE: I'm going to overrule the 15 objection. I think he's been qualified as an expert and is testifying as an expert and has indicated, where it needs 16 to be, what is his personal opinion and what's his 17 professional opinion. I would sustain an objection to his 18 personal opinion, but where it's based on his professional 19 20 knowledge and expertise, I would overrule the objection. MS. FOSTER: Okay, but again, as to the nature of 21 the speculation in this statement that is made --22 23 CHAIRMAN FESMIRE: Ms. Foster, would you like a

I would --

running objection, then?

MS. FOSTER:

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1 CHAIRMAN FESMIRE: Okay.

MS. FOSTER: -- to any speculative statements that this witness would make, yes, thank you.

CHAIRMAN FESMIRE: Okay, I'm going to overrule the objection, but we will note that there is a running objection to his personal opinion -- or to his opinion as stated in his testimony.

MS. FOSTER: Thank you.

THE WITNESS: Continue, please?

- Q. (By Mr. Brooks) Continue.
- A. On-site disposal of pit contents in disposal trenches or where a pit has been abandoned after being -- after bulldozing fill on top of unstabilized oilfield wastes means that there will always be the risk that individuals would dig or trench into the dump and cause additional new releases.

This has actually happened in the State of New Mexico. This is a site which is referred to as the Westgate case. This is a site where a house was constructed on an old pit location and had to be razed to the ground.

Next slide.

The contamination at the old site was so great that they actually had to put up a -- I would refer to this as a containment building over the location while they were

conducting remediation.

Next, please.

The only reason, really, to allow on-site disposal in the future is when there is a clear economic burden that results as a consequence of new operations outside the existing infrastructure of the oil and gas waste management industry.

If there are new discoveries made in New Mexico which lead to a new trend located in an area not serviced by the oil and gas waste management industry, then market forces will step in to fill that gap, in my opinion.

Continue?

- Q. Continue.
- A. Industry should not be allowed to dispose of oilfield waste on-site except in certain limited circumstances, that is, only with landowner or surface owner approval and only in properly engineered deep trenches.

And I should point out that they should also have to meet the siting criteria.

Next, move to the TPH closure standard for a deep-trench burial.

We have proposed a 2500-milligram-per-kilogram

TPH standard for on-site disposal in a deep-trench burial.

We did so because it encourages the operators to promptly

remove the free oil and condensate from pits, and we don't believe that operators should be allowed to leave hydrocarbon soil in place because that is not proper waste management. And the 2500 standard is also consistent with part 36 and has already been reviewed and approved by the Oil Conservation Commission.

Next, please.

If a trench has been compromised, then it is a conservative -- the 2500 number is a conservative and protective concentration.

Volatile fractions -- for example, BTEX, benzene, toluene, ethylbenzene and xylenes -- usually will have almost been completely volatilized in our experience.

It is consistent with, but not identical to, the ED 1000-milligram-per-kilogram standard which is used for the solid waste landfills.

- Q. Now when you say "it", are you talking about the 2500-milligrams-per-kilogram TDH standard for deep-trench burial?
  - A. Yes.
  - Q. Continue, page 18.

OCD's data shows that the 2500-milligrams-perkilogram standard is achievable, even in landfarm with degraded heavy hydrocarbons. And this was an issue that was discussed at some length in the surface waste management facility rulemaking.

It ensures that --

- Q. Now I'll interrupt you on that. In that proceeding did OCD do some sampling and analysis of landfarm --
  - A. We did.

Q. -- wastes?

And is your opinion based in part on the results of those -- that sampling?

- A. Yes, that is the OCD data that I am referring to.
- Q. Continue.
- A. The standard ensures that oily waste will not aerobically degrade after initially being buried, followed by a long-term anaerobic degradation resulting in the formation of organic acids or other undesirable degradation by-products such as gases.

Next page, please.

Sampling data have documented, OCD sampling data
-- and I'm referring now to the pit sampling program of
2007 -- have documented that organic compounds are
routinely managed by industry in pits and that testing and
treatment for these organics should logically be part of
the closure and disposal process pursuant to subsection A
of 19.15.17.11 NMAC. And that's the proposed rule
citation.

```
1
          Q.
                (By Mr. Brooks) Okay. Mr. von Gonten, I'm going
     to ask you about Exhibits 13, 15, 16 and 18. Were those
 2
 3
     exhibits prepared by you -- were those exhibits, with the
 4
     exception -- There's some photographs in some of those
 5
     exhibits, but with the exception of those photographs in
     those exhibits, were those exhibits prepared by you or
 6
 7
     compiled by you from published data sources?
               Yes, they were.
 8
          Α.
               MS. FOSTER: I'm sorry, Mr. Chairman, could I
 9
     have that list again? And does that include Exhibit 13B
10
     and 13C?
11
               MR. BROOKS: Does not.
12
               MS. FOSTER: It's just 13, and then the rest of
13
14
     the list again?
15
               MR. BROOKS: 13, 15, 16 and 18.
16
               MS. FOSTER:
                            Thank you.
                            I'm sorry, I should exclude 16
17
               MR. BROOKS:
18
     because there's special considerations with regard to 16.
     Let's say 13, 15 and 18.
19
20
               THE WITNESS: The answer is, I prepared them.
                                Okay. Now, looking at the
          Q.
               (By Mr. Brooks)
21
     exhibit -- at the photographs that are included in 15, are
22
     these photographs copies of photographs that are also
23
24
     included in 13B or 13C?
25
          Α.
               I'm sorry, repeat the question.
```

1	Q. The photographs that are included in Exhibit 15,
2	are they copies of photographs that are also included in
3	Exhibit 13B or 13C?
4	A. Some of them are. Some of them are only found in
5	Exhibit 15.
6	Q. Okay, can you tell me which ones are only found
7	in Exhibit 15?
8	A. Exhibit 15, slide 5, I don't believe, was shown
9	previously, and it was used to illustrate OCD staff
10	actually collecting samples.
11	Q. Now slide 5, was that a part of the southeast
12	investigation or the northwest?
13	A. That was actually the southeast.
14	Q. Okay, continue.
15	A. Slide 7 was not included, as far as I can
16	recollect, in 13B and -C.
17	CHAIRMAN FESMIRE: Boy, they've got some homely
18	employees, don't they?
19	(Laughter)
20	Q. (By Mr. Brooks) And was slide 7 of Exhibit 15 a
21	part of the southeast or the northwest investigation?
22	A. It was from the northwest.
23	Q. Okay. Does slide 7 fairly and accurately
24	represent what occurred there and
25	A. Yes, it does

1 Q. Okay. Continue then --2 Α. -- it was to illustrate a point of OCD staff collecting information about the pit. 3 4 Q. And is it a fair and accurate representation of 5 what was done? 6 Α. Yes, it was. 7 Okay, continue. Q. 8 I think in Exhibit 15 we did see slide 10, so 9 that's a repeat. Slide --What about slide 9? 10 Q. 11 I think that is also a repeat. That is from the 12 southeast. Okay, and slide 11? 13 Q. 14 Α. Slide 11, I would say that these photographs were 15 -- may have been zoomed into, to make a point in my presentation on Exhibit 15, so they may not be the exact 16 same slide, but --17 18 Q. They're copies of the same --19 A. -- they are a copy of a part of each slide. 20 Q. Okay. 21 Slide 11 is a duplicate of either Exhibit 13B or Slide 13 is new. 22 23 Q. Okay --24 Α. I believe this is a slide of the southeast.

Okay, slide 14?

25

Q.

1 14 is a slide that was taken from the northwest, 2 I believe, and is a closeup of a stitched seam. And I seem to recall that the not so close up was 3 0. 4 in Exhibit 13B; is that correct? That's correct. 5 Α. Okay, slide 15? 6 0. 7 Slide 15 is a duplicate slide, and that was Α. 8 taken, I believe, in the southeast. Slide 16? 9 0. That is also a duplicate. 10 A. And I know that 17 was, but -- That's the dead 11 0. bird, correct? 12 Α. Correct. 1.3 14 Q. And slide 18, that's -- we've got several copies of that in --15 Yes, it has been prominently displayed in several 16 Α. 17 exhibits. 18 Q. Okay. Now with regard to OCD Exhibit 16, was 19 that prepared by you from the data that is included in the 20 compendium -- what you call the compendium that is OCD 21 Exhibit 17? MS. FOSTER: Objection. Exhibit 16 is the one 22 that you were going to give us some time to compare the 23 original exhibit that was given to us and the changes that 24 25 Mr. van Gonten made over that four-day period. So then

again I would ask for some time, if you gave me to the end of the week, Mr. Chairman, to review the two documents, and then I would ask at that time, if necessary, to have Mr. van Gonten come back on the stand for cross-examination as it pertained to that exhibit.

MR. BROOKS: I believe we've already agreed to that, Ms. Foster.

CHAIRMAN FESMIRE: Ms. Foster, I guess I don't understand. Are you objecting to admission on that basis, or --

MS. FOSTER: Yes, I am, I'm objecting to the admission or discussion of Exhibit 16 at this time. I believe just a minute ago Mr. Brooks stated that there was a question, considerations with Exhibit 16, so he wasn't going to move it into evidence at this time.

CHAIRMAN FESMIRE: Mr. Brooks?

MR. BROOKS: I don't recall what I stated, Mr. Chairman. I did state that we would agree to have Mr. von Gonten available for cross-examination with regard to the revised Exhibit 16 after counsel has had an opportunity to review.

CHAIRMAN FESMIRE: Okay. Ms. Foster, I think your question is to accuracy, and the question here is to admissibility, and I think we'll go ahead. And if Mr. Brooks is going to move in that direction, I will consider

1	it when he moves that.
2	MR. BROOKS: Thank you, Mr. Chairman.
3	Q. (By Mr. Brooks) Now Exhibit 17, is it the actual
4	data report that is that the actual data report that was
5	made to you by the laboratories that did the analysis for
6	the Oil Conservation Division's sampling program?
7	A. It includes all the paper copies that were
8	submitted to the OCD by the laboratory.
9	Q. Okay
10	THE WITNESS: Mr. Brooks, may I discuss something
11	with you?
12	MR. BROOKS: Pardon me?
13	THE WITNESS: May I discuss something with you
14	before we continue?
15	MR. BROOKS: Mr. Chairman, may I have a moment to
16	discuss a matter with the witness?
17	CHAIRMAN FESMIRE: Is there an objection to that?
18	MR. CARR: (Shakes head)
19	MR. HISER: (Shakes head)
20	CHAIRMAN FESMIRE: Since there's no objection,
21	we'll allow a conference. I'm not sure we want to get into
22	this habit.
23	MR. BROOKS: I agree with that, Mr. Chairman.
24	(Off the record)
25	MR. BROOKS: Mr. Chairman, Mr. von Gonten has

1 pointed out to me that he has not had an opportunity to make one of his presentations and would like to do so at 2 3 this time. It was my mistake that I did not ask him to do 4 so. 5 CHAIRMAN FESMIRE: Okay, what are we going to do 6 with the foundational work you've done on the --7 MR. BROOKS: I think it would be probably 8 efficient, since that is fresh in the court's mind, if I go ahead and tender the exhibits that I've already laid a 9 foundation for. 10 CHAIRMAN FESMIRE: Okay, let's do this. 11 12 haven't passed the witness, so --13 MR. BROOKS: I have not passed the witness, Mr. Chairman. 14 15 CHAIRMAN FESMIRE: Okay. 16 MR. BROOKS: Thank you, Mr. Chairman. 17 Now the exhibit that -- I think I may have an incomplete copy, I apologize. 18 19 At this time we would tender into evidence 20 Exhibits 13, 13C -- I'm sorry, 13B, that's -- no. No, no, I was right the first time. 13C, that's the 21 no, no. 22 northwest pictorial presentation, 15, 16, 17 and 18. 23 CHAIRMAN FESMIRE: Any objections? 24 MR. HISER: Mr. Chairman, we would object to 25 Exhibit 13 insofar as it contains page 3. My objection can

be redressed by stipulation if Mr. Brooks would be amenable 1 2 to it, and that stipulation would be to the fact that 3 although these may be addressed by the pit task force, it does not mean that they actually were addressed by the pit 4 task force, or necessarily by this Commission either. 5 simply wish to make sure that there's not a presumption 6 7 that these topics have been addressed and that's not yet in 8 the record. 9 MR. BROOKS: Now I'm sorry, what is it you're objecting -- which --10 MR. HISER: It's Exhibit 13, page 3. 11 MR. BROOKS: Exhibit 13, page 3. 12 May I ask the witness a question about this at 13 this point? 14 CHAIRMAN FESMIRE: I'll tell you what. Why don't 15 you just ask the witness which of these proposed issues 16 were addressed at the meeting, and we can address Mr. 17 Hiser's objection if he asks that question. 18 MR. BROOKS: Well, of course the concern I would 19 have is that Mr. von Gonten did not participate in all of 20 the task force meetings, so he would not be in a position 21 22 to testify comprehensively to what was discussed. 23 CHAIRMAN FESMIRE: Okay, but he would know -- he would have personal knowledge of some of these? 24 He would have personal knowledge of 25 MR. BROOKS:

1 some of these. CHAIRMAN FESMIRE: And I suggest, and I think Mr. 2 Hiser will agree with me, that if you were to address that 3 question to him and you were to identify which issues were 4 covered, that -- and we could stipulate that the other 5 issues haven't been testified to yet. 6 7 Thank you, Mr. Chairman. MR. BROOKS: Okay. 8 CHAIRMAN FESMIRE: Mr. Hiser, would that satisfy 9 your objection? 10 MR. HISER: Yes, it would, Mr. Chairman. (By Mr. Brooks) Okay. Mr. von Gonten, can you 11 0. testify from this list as to which of these issues were 12 discussed in the task force meetings that you were a party 13 14 to? Yes, I can. I should point out that I believe 15 Α. that this was included in Secretary Prukop's letter to the 16 members of the task force, and I believe that was also 17 included in Exhibit 14, which is on CD. 18 19 But to answer the question, my recollection of task force -- Perhaps I could point out the ones that I 20 21 don't think were, rather than the ones that were, if that 22 would be acceptable? 23 CHAIRMAN FESMIRE: Anything that you can do

On the left-hand column, about

24

25

quickly.

THE WITNESS:

fourth from the bottom, I'm not certain what was meant by 1 general water quality issues. We certainly did talk about 2 groundwater a great deal and just peripherally, if I 3 remember correctly, about surface water. 4 I don't remember any discussions about air 5 6 quality issues. I don't remember any discussion on task force 7 8 about regional economics, although that was brought up at 9 the public outreach meetings as an issue. 10 I don't remember being involved with any discussions about public notice, and I don't remember deed 11 notices. 12 Although it was probably always an issue that was 13 there, I don't remember a specific discussion about 14 cumulative impacts --15 MS. FOSTER: Objection as to -- Objection as to 16 his statement, there probably was a statement. If he was 17 not there for the whole hearing, he cannot speculate as to 18 19 what was discussed when he was not there. CHAIRMAN FESMIRE: I think that's pretty clear in 20 the context, but Mr. von Gonten, would you simply state, 21 22 you know, what you remember, and not speculate? 23 THE WITNESS: I'm addressing what I remember happened when I was on task force. 24 25 CHAIRMAN FESMIRE: Okay.

To continue, I don't remember a THE WITNESS: 1 2 detailed discussion about cumulative impacts, I don't remember a detailed discussion about environmental justice 3 4 issues, I don't remember discussing in any detail about the 5 inconsistency issues with OCD in Rule 202. I think those are the ones that I don't recall 6 actually being addressed, but they were on the agenda. 7 8 CHAIRMAN FESMIRE: Okay. Does that satisfy your objection, Mr. Hiser? 9 MR. HISER: Thank you, Mr. Chairman. 10 MR. BROOKS: Mr. Chairman, the -- Mr. Jones who 11 has not yet testified -- for reasons that you may relate 12 to, I call him Mr. Jones the lesser -- will be able to 13 14 testify to what went on in the meetings of the task force committee that Mr. von Gonten was not present at. 15 CHAIRMAN FESMIRE: Okay. 16 MR. BROOKS: Also, I don't recall if I tendered 17 18 Exhibit 14. I didn't mean to, because I have to ask one other question of the witness before I tender Exhibit 14. 19 20 CHAIRMAN FESMIRE: Exhibit 14 hasn't been tendered yet. 21 MR. BROOKS: Okay, very good. I believe I have 22 23 tendered the ones I intended to, but if you need me to reiterate them I will do so. 24 25 CHAIRMAN FESMIRE: Let me read them to you: 13,

1 13C, 15, 16, 17 and 18. MR. BROOKS: I believe that is correct, Mr. 2 Chairman. 3 CHAIRMAN FESMIRE: Are there any further 4 5 objections to those exhibits? 6 MS. FOSTER: Yes, Mr. Chairman, I've got quite a 7 few objections. 8 On page 6 of Exhibit 13, I would ask that the 9 bottom line on that slide be stricken, because there's some 10 inconsistencies in that statement. 11 CHAIRMAN FESMIRE: The bottom line on page 6? 12 MS. FOSTER: Yes, the sentence saying, OCD files are full of photos of pits that have been clearly 13 compromised. I would either like a clarification that 14 15 those pits are temporary or permanent pits, drilling pits or otherwise --16 17 CHAIRMAN FESMIRE: Denied, I don't think there's -- I think there's sufficient evidence to support that 18 statement. 19 MS. FOSTER: Okay, well then I believe that the 20 21 statement is much too general to be included in the 22 statement -- in that exhibit. And in that instance, that statement, I believe, is extremely inflammatory. 23 24 MR. BROOKS: Mr. Chairman, it's subject to cross-25 examination.

1	CHAIRMAN FESMIRE: That is correct. Deny that
2	objection.
3	MS. FOSTER: Okay. As to Exhibit 13C, I would
4	like to go through the slides, because again the same
5	objection would be it is unclear in the testimony that's
6	occurred whether those are permanent pits or temporary
7	pits.
8	CHAIRMAN FESMIRE: Again, that is subject to
9	cross-examination. You can cover those during your cross-
10	examination of this witness.
11	MS. FOSTER: Okay, I will do so.
12	CHAIRMAN FESMIRE: So that objection is denied.
13	MS. FOSTER: And 18 I don't believe I have
14	any specific objections to 16, 17 or 18 that I can't handle
15	on cross-examination. Thank you.
16	CHAIRMAN FESMIRE: Okay. So are there any
17	residual objections to the introduction of these exhibits?
18	MR. HISER: No objection.
19	CHAIRMAN FESMIRE: Ms. Belin?
20	MS. BELIN: No objection.
21	CHAIRMAN FESMIRE: Mr. Jantz?
22	MR. JANTZ: No objection.
23	CHAIRMAN FESMIRE: Mr. Carr, get you to
24	MR. CARR: No objection.
25	CHAIRMAN FESMIRE: Okay. With that, State's

Exhibits 13, 13C as amended, 15, 16, 17 and 18 are admitted 1 2 into evidence. (By Mr. Brooks) Very good. Mr. von Gonten, with 3 Q. 4 respect to Exhibit 14 would you state again for the record what Exhibit 14 consists of? 5 It consists of all the e-mail that was circulated 6 Α. 7 to the members of the task force, and also various summary 8 documents that were generated by the task force and 9 submitted via e-mail to the members of the task force. Normally the way it works is, the task force 10 facilitator, Mr. Reese Fullerton, would be responsible for 11 getting the summary notes written up, and those would be 12 distributed to the task force members, and there's routine 13 e-mail correspondence between the various task force 14 15 members. MR. BROOKS: Okay. Mr. Chairman, we will tender 16 17 Exhibit Number 14 for the limited purpose of showing what 18 was discussed or what was considered by the task force. do not offer it for the truth of the matters stated in the 19 20 communications included. 21 CHAIRMAN FESMIRE: Any objection? 22 MS. FOSTER: Yes, your Honor. 23 CHAIRMAN FESMIRE: We're going to get a duet here, okay. 24 25 MS. FOSTER: Go ahead, after you.

MR. HISER: Mr. Chairman, I guess I'm a little bit troubled by this being inconsistent with the rules that were set forth by the Secretary of EMNRD, which was that the task force would meet and that the task force would then deliver an opinion in the form of a report that would be sort of the results of what the task force was doing. I don't know that the task force members contemplated that all their e-mail and other stuff is suddenly going to be entered into the record here.

And so it seems to me that the sense of that whole thing was that there would be a final report of the task force which would be entered into the record of this proceeding, to which we as industry don't have an objection.

But I guess I'm caught a little bit askance at the idea of having the whole proceeding itself entered into the record of this proceeding, since we didn't participate in that in the sense of being the industry committee as the industry committee, per se.

CHAIRMAN FESMIRE: Mr. Brooks, do you have a response to that?

MR. BROOKS: As I say, I am offering it only for the purpose of showing what the task force -- what exchanges occurred between the task force. I'm not sure if Mr. Hiser is making a relevancy objection or if he's making

a privilege -- some kind of privilege objection.

MR. HISER: I guess that Mr. Hiser's objection basically is that the rules of the task force was that there would be a final consensus report, things were either in consensus or not in consensus. And by introducing this, which includes other discussions, essentially the Division is seeking to go around the agreement of the ground rules of the task force by now seeking to identify positions that members may have been taking, which is inconsistent with the concept of a consensus or nonconsensus binder for the task force. If that makes sense.

CHAIRMAN FESMIRE: I'm not getting your point.

MR. HISER: My point is that the agreement was that things would come from the task force by consensus or not at all. By introducing the background discussions between the task force members, one is now taking up issues where there was not a consensus finding, and we're now getting the positions of task force members, which seems to me inconsistent with the ground rules of the game that were established by the Secretary of the Department of Energy, Minerals and Natural Resources, the Secretary.

CHAIRMAN FESMIRE: Do you have access to the document that sets those ground rules?

MR. HISER: I may, but not instantaneously. I'm sure that since there are task force members sitting behind

me, they may have access to that. 1 CHAIRMAN FESMIRE: Okay. Since it's getting late 2 in the day what I'm going to do is defer a decision on that 3 4 objection and tomorrow morning let you bring me the --5 MR. HISER: I would appreciate that, Mr. Chairman, because then I can check with the task force 6 7 members, since they may have an opinion on that matter too, and I may have more to share with the --8 9 CHAIRMAN FESMIRE: Okay. 10 MR. HISER: -- Commission. Thank you. 11 CHAIRMAN FESMIRE: Thank you. 12 MR. BROOKS: Very good. CHAIRMAN FESMIRE: Mr. Brooks, so we will not at 13 14 this time admit 14 --15 MR. BROOKS: Very good. CHAIRMAN FESMIRE: -- pending an investigation of 16 17 the facts surrounding the objection. 18 MS. FOSTER: Mr. Chairman, IPANM would also have 19 an objection to that motion, and we would also intend to have a discussion with the Commission about that same 20 exhibit tomorrow. The objection is actually on a little 21 22 bit different grounds than what were stated by Mr. Hiser. 23 CHAIRMAN FESMIRE: Okay, and what would those grounds be? 24 25 Well, those grounds are that I don't MS. FOSTER:

believe that the task force members themselves had an understanding that their communications, which they believed were person-to-person conversations with members of the OCD, would become part of this official record.

and in fact, if these are going to be taken -- I understand that they're not taken for the truth of the matter asserted, but that these communications are just going to be reported for the fact that these communications did occur and what the nature was of those conversations, or the topic matter of those conversations were, then we would have to add every single task force member onto our witness list and have them discuss and respond to the allegations that are in these e-mails concerning the discussions that occurred, and what was the consensus and what was not.

CHAIRMAN FESMIRE: Don't you think --

MS. FOSTER: Again, you know, we would agree with Mr. Hiser's statement that we believe that putting these into evidence without the consensus -- basically, it does an end run around the consensus nature and facilitative nature of what that task force was supposed to be.

CHAIRMAN FESMIRE: But these meetings were open to the public, they were public meetings, these documents were sent, and this is not disclosing the contents of the documents but simply the fact that they were sent and that

these discussions were had.

2.4

Q. If -- in order -- I would respectfully request the Chairman, then, in terms of -- in terms of -- I have a four- or five-page document here that outlines Exhibit Number 14, and it does have the name of the sender, and it does have, I believe, the name or the topic number -- topic of the e-mail that was sent.

Again, if the task force members were not aware that this was going to become part of the public record, these were e-mail communications between two parties, this is not a conversation that occurred during a public meeting -- then, you know, I would respectfully request the ability to have task force members respond to any e-mails that are attributed to them in this document.

CHAIRMAN FESMIRE: Now you can present those witnesses as rebuttal witnesses, can you not?

MS. FOSTER: Would you like me to do that, Mr. Chairman?

CHAIRMAN FESMIRE: Yes, if you feel the need when the time comes to rebut statements that have been made in these e-mails, perhaps we need to handle it that way.

This is an open process, this was a public process, public meetings, open to the public. The contents of these e-mails were discussed at these meetings.

I'll consider it overnight, and this will be the

1 first issue that we take up in the morning. 2 MS. FOSTER: Thank you. 3 CHAIRMAN FESMIRE: Okay? Mr. Brooks, were you --4 5 (By Mr. Brooks) Mr. von Gonten, I am a little Q. bit confused about what the presentation was that you did 6 7 not make. Can you clarify that for us? Yes, sir. I got through Exhibit 13 as far as 8 Α. At that point I presented the slide shows, which 9 page 6. are Exhibits 13B and -C. We should have resumed on page 7 10 of Exhibit 13, rather than moving on to Exhibit 15. 11 Okay, you may then, with the indulgence of the 12 Commission, resume your presentation beginning with page 7 13 of Exhibit 13. 14 MS. FOSTER: Mr. Chairman, then, since this is 15 16 technically offered into evidence and is accepted as 17 evidence, could I respectfully request that that be withdrawn from evidence at this time until we have the 18 19 end -- to the end of the presentation, and we can have 20 another discussion if necessary at that time? 21 CHAIRMAN FESMIRE: I'll grant that, yes. 22 MS. FOSTER: Thank you. (By Mr. Brooks) Okay, you may continue. 23 Q. It became clear -- The problems with Rule 50 24 25 continued. It became clear to OCD that major problems

existed with the way that industry was designing, installing and operating its pits, particularly temporary pits such as drilling and workover pits.

Next, please.

I'd like to now -- That was, in fact, a summary of the slide shows.

And the next topic is regulatory overview. I'm going to begin by discussing some provisions of the Solid Waste Disposal Act, commonly known as RCRA, which is codified at 42 United States Code 6901 et seq. Section 1004 says, As used in this Act -- and it's definition (14) -- the term "open dump" means any facility or site where solid waste is disposed of, which is not a sanitary landfill, which meets the criteria promulgated under Section 4004 and which is not a facility for disposal of hazardous waste.

Next slide, please.

Section 1003, backing up one section, states the objectives. The objectives of this Act -- that is, RCRA -- are to promote the protection of health and environment and to conserve valuable material and energy resources by -- part of that -- if I were a lawyer I would use the term inter alia -- it states in section 1003, subsection (3), prohibiting future open dumping on the land and requiring the conversion of existing open dumps to facilities which

do not pose a danger to the environment or to health.

Next slide, please.

Section 1004, again back to definitions, subsection (3), The term "disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof my enter the environment or be emitted into the air or discharged into any waters, including ground waters.

I'd like to next move to EPA's discussion of 2002, the exemption of oil and gas exploration and production wastes from federal hazardous waste regulations.

Next.

In December of 1978 -- Excuse me.

In December of 1978, EPA proposed hazardous waste management standards that included reduced requirements for several types of large volume wastes. Generally, EPA believed these large volume "special wastes" are lower in toxicity than other wastes being regulated as hazardous waste under RCRA.

Next, please.

Subsequently, Congress exempted these wastes from the RCRA Subtitle C hazardous waste regulations pending a study and regulatory determination by EPA. In 1988, EPA

issued a regulatory determination stating that control of exploration and production wastes under RCRA Subtitle C regulations is not warranted.

Continuing, next slide.

Hence, exploration and production wastes have remained exempt from Subtitle C regulations. The RCRA Subtitle C exemption, however, did not preclude these wastes from control under state regulations, under the less stringent RCRA Subtitle D solid waste regulations, or under other federal regulations.

Continuing.

In addition, although they are relieved from regulation as hazardous wastes, the exemption does not mean that these wastes could not present a hazard to human health and the environment if improperly managed.

Next.

In general, the exempt status of an exploration and production waste depends on how the material was used or generated as waste, not necessarily whether the material is hazardous or toxic. For example, some exempt exploration and production waste might be harmful to human health and the environment, and many non-exempt wastes might not be as harmful.

It is important to remember that all exploration and production wastes require proper management to ensure

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Continuing, next slide.

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It is important to remember that all exploration and production wastes require proper management to ensure

protection of human health and the environment.

Continue.

2.4

EPA goes on to have a plain-language discussion of some common misunderstandings, misconceptions.

One common misunderstanding is that all exempt wastes are harmless to human and the environment, where in fact EPA has determined that certain exempt wastes, while excluded from RCRA Subtitle C hazardous waste control, might still be harmful to human health and the environment if not properly managed. The exemption relieves wastes that are uniquely associated with the exploration and production of oil and gas from regulation as hazardous wastes under RCRA Subtitle C but does not indicate the hazard potential of the exempt waste.

Continues, Additionally, some of these wastes might still be subject to state hazardous or nonhazardous waste regulations or other federal regulations, such as the hazardous materials transportation regulations and the National Pollutants Discharge Elimination System or state discharge regulations unless specifically exempted from regulation under those laws.

Another common misunderstanding is, A waste exempt from RCRA Subtitle C regulation is also exempt from state and other federal waste management regulations, when in fact the EPA states, The exemption applies only to the

federal requirements of RCRA Subtitle C. A waste that is exempt from RCRA Subtitle C regulation might be subject to more stringent or broader state hazardous or non-hazardous waste regulations and other state and federal program regulations. For example, oil and gas exploration and production wastes are subject to regulation under the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, and the Oil Pollution Act of 1990.

## Continue -- Sir?

- Q. Mr. von Gonten, the next two slides are quotations from the New Mexico Oil and Gas Act, and I believe that the Commission is probably extremely familiar with the provisions of the New Mexico Oil and Gas Act, so I would ask that you -- in the interest of time, that you just describe what provisions it is -- in general terms, what provisions these are and do not read them.
- A. Yes, sir. The Oil and Gas Act authorizes the Division to regulate the disposition of produced water and to regulate the disposition of nondomestic waste associated with exploration, development and production and to regulate the disposition of nondomestic waste from the oilfield service industry, transportation of hydrocarbons and the treatment of natural gas or refinement of crude oil.
  - Q. Thank you.

1 Α. I would like to continue. The next, please. 2 Please continue. 0. The definition of oilfield waste is as follows: 3 A. 4 Oilfield waste shall mean waste generated in conjunction with the exploration for, drilling for, production of, 5 6 refining of, processing of, gathering of or transportation 7 of crude oil, natural gas or carbon dioxide; waste 8 generated from oilfield service company operations; and waste generated from oilfield remediation or abatement 9 activity, regardless of the date of release. Oilfield 10 11 waste does not include waste not generally associated with oil and gas industry operations such as tires, appliances 12 or ordinary garbage or refuse unless generated at a 13 Division-regulated facility and does not include sewage, 14 regardless of the source. 15 16 Mr. von Gonten, was this the definition that was adopted by the Commission in the proceeding about one year 17 ago? 18 19 Α. I'm not sure when it was adopted. It is a part 20 of the present OCD Rules. 21 Q. Very good, the record will reflect on that. Continue. 22 23 Α. Next slide. 24 Summarize the regulatory overview. 25 Large volumes of RCRA-exempt oilfield waste are

generated during exploration and production operations and 1 2 by service companies. Continue. 3 4 Q. Continue. OCD has a statutory mandate to regulate the 5 6 disposal of oilfield waste, which is the "disposition of 7 nondomestic wastes" and the disposition of produced water. 8 The use of "open dumps" has been prohibited by federal statute. Therefore, the use of unlined pits, which 9 meets the definition of "open dumps", should generally be 10 11 prohibited. Now Mr. von Gonten, is it not also possible that 12 a lined pit could be an open dump? 13 Α. If it doesn't meet the criteria specified in the 14 statute. 15 16 Q. And the criteria specified in the statute -there is a section reference, I believe, in the statute 17 that you read where those criteria are specified. 18 19 Α. Well, it refers to sanitary land- -- or, excuse 20 me --21 Q. Right. -- yes, sanitary landfills --22 Α. 23 Q. Okay ---- and hazardous waste. 24 Α.

-- my point -- the point I'm simply asking you is

25

Q.

1 -- You've already answered it. Go ahead. Continue. 2 Α. 3 Oilfield waste should be disposed of in OCDapproved surface waste management facilities or, in limited 4 5 circumstances, in properly designed on-site "deep-trench burials." 6 7 Continue. Q. Continue. 8 The next two slides are taken from the so-called 9 STRONGER report, the State Review of Oil and Natural Gas 10 Environmental Regulations. This report is dated 2001. 11 Finding I.9: OCD R-3221-C, the "no-pit" order 12 13 for southeastern New Mexico, exempts pits which receive up 14 to one barrel of produced water a day from each 40-acre 15 spacing unit, not to exceed a total of 16 barrels of produced water a day. 16 17 Recommendation I.9: OCD should review and evaluate the technical basis for the "low-volume" exemption 18 in Order R-3221-C to ensure that fresh groundwater in 19 20 southeastern New Mexico is adequately protected. It parenthetically refers to IOGCC Guidelines, 21 sections 5.1.A and 5.1.C. 22 Q. To conclude, the next page. 23 OCD's response at that time was, Data obtained 24

from OCD studies and recent pit closures have shown that

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very small volume discharges have resulted in groundwater

contamination. Rules are being drafted that will prohibit

the use of pits that can adversely impact groundwater.

Follow-up review comments: This recommendation

has been met. OCD is commended for completing review of

the low volume exemption and is adopting rules for the

And that concludes Exhibit 13.

- Q. Thank you. And so I won't make the same mistake a second time, does that include all of the presentations you are making here?
  - A. Yes, sir, I believe it does.
- Q. Mr. von Gonten, I asked you this once before, but since this exhibit has been withdrawn from evidence I will ask you again. Is OCD Exhibit Number 13, which I believe does not contain any photographs -- is OCD Exhibit Number 13 -- was that prepared by you or compiled by you from published sources?
  - A. It was.

protection of groundwater.

MR. BROOKS: Mr. Chairman, we'll tender in evidence OCD Exhibit Number 13.

CHAIRMAN FESMIRE: Any objection?

MR. HISER: Just the objection from before in terms of the one page -- No, sorry, that's a different -- CHAIRMAN FESMIRE: That's 14.

	Arrest .
1	MR. HISER: That's taken care of. No objection,
2	your Honor.
3	CHAIRMAN FESMIRE: Okay. Any objection, Mr.
4	Carr?
5	MR. CARR: No objection.
6	CHAIRMAN FESMIRE: Ms. Foster?
7	MS. FOSTER: No objection.
8	CHAIRMAN FESMIRE: Okay. Ms. Belin?
9	MS. BELIN: No objection.
10	CHAIRMAN FESMIRE: Mr. Jantz?
11	MR. JANTZ: No objection.
12	CHAIRMAN FESMIRE: Okay, Exhibit Number 13 will
13	be admitted.
14	MR. BROOKS: Thank you, your Honor. We'll tender
15	the we'll pass the witness.
16	CHAIRMAN FESMIRE: Okay. Ms. Fo Oh, Mr.
17	Carr?
18	MR. CARR: I have just a few questions.
19	CROSS-EXAMINATION
20	BY MR. CARR:
21	Q. Mr. von Gonten, when you were testifying about
22	the OCD sampling, you referred to judgmental sampling; is
23	that correct?
24	A. Yes, sir.
25	Q. When you do judgmental sampling, is it fair to

say what you're actually doing is going out and looking for 1 2 problems? Α. Yes. 3 And when you went out on this sampling program, 4 Q. you were able to find and share with us problems concerning 5 everything from tears in liners, to wind problems, to 6 anchoring problems, things of that nature; is that right? 7 I'm a bit confused. At first you were referring Α. 8 to sampling program versus the inspection? 9 You went out and you sampled evidence. When you 10 Q. go out to the site, as part of your inspection you were 11 able to find and share with us tears in linings? 12 13 Α. Yes. And you were able to show us anchoring problems? 14 Q. 15 Α. Yes, sir. 16 Q. And wind problems? Yes, sir. 17 Α. Is there anything under Rule 50, or any authority 18 Q. that you have under Rule 50, that would permit you to 19 require correction of those situations? 20 It's a general performance standard, and that 21 would be something that the district inspector, at their 22 discretion, would have the opportunity to take up with the 23 operator. 24 And they could require that those situations be 25 Q.

corrected? 1 They could. 2 Α. You talked about a 100-mile rule. The 100 miles 3 Q. is arbitrary; isn't that fair to say? 4 5 It was not derived from an analytical equation, 6 so yes, sir, it is. It's no more accurate, necessarily, than 98 or 7 8 102. It's just a number that the Division selected; isn't 9 that fair to say? 10 Α. That is correct. And the intent of having a 100-mile rule is to, 11 Q. if I understood you, discourage on-site disposal? 12 13 Α. Yes. The rule you're proposing doesn't prohibit on-14 Q. site disposal? 15 It does if it's -- generally speaking, there can 16 17 be an exception, but yes, it does if they're less than 100 18 miles from an OCD-approved facility. If we're more than 100 miles and we meet other 19 ο. conditions, then we could close on-site? 20 As long as they had landowner approval. 21 Α. And when they are allowed in these circumstances 22 Q. to close on-site, there are standards they have to meet? 23 Α. Yes. 24

There are siting requirements they have to meet?

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Q.

- A. That is correct.
- Q. But when they're closing on-site, the goal, is it not fair to say, is to assure that what they're doing, even when they're outside this 100-mile limit, is protective of groundwater, the environment and human health?
  - A. Yes.

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- Q. Now if I'm within 100 miles of an approved facility and I meet all the standards and the siting requirements and I have no landowner objection, I still have to dig and haul; isn't that correct?
  - A. That is what we are proposing to the Commission.
- Q. And the only reason, really, you have these requirements in the rule that allow you to close on site is that you anticipate there could be development in new areas outside this 100-mile area?
- A. Yes, we gave some consideration. We always talked about -- generally, we feel a good rule should be reasonably understandable but also have a -- the opportunity to have exceptions. We thought that this would be one that it would probably be good to have an alternative standard.
- Q. The alternative standard -- Dig-and-haul is the standard within 100 miles, so the alternative standard would be something that we could come in and show you through the exception process; isn't that right?

- 531 You always have the opportunity to go through the 1 exception process, but I think that the deep-trench burial, 2 on-site disposal, if you meet the other criteria and you're 3 more than 100 miles, I think that you can do that without 4 going through the exception. I think that's -- there are 5 6 probably other people more versed in the requirements of 7 the rule than I am --8 ο. But that's because it's protective of human health and the environment; isn't that right? 9 Yes, if they meet all their standards. 10 Α. 11 0. And if it's more than 100 miles and protective of human health and the environment it's all right, but if 12 it's less than 100 miles it is not; is that -- is that what 13 you're saying? 14 We're saying that sensible waste management 15 A. 16 dictates that you should use an OCD-approved landfill for long-term or permanent disposal. 17 Even if it could be more economically done on-18 Q. 19 site and protective of human health and the environment?
  - A. Yes, we don't think it would be as protective of human health and the environment.
    - Q. So that will be as protective as dig-and-haul?
    - A. That is correct.

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Q. Now, if I'm -- I think you testified that the rules were designed to allow an opportunity for exception.

1 A. Yes, sir.

- Q. And the standard for getting an exception is that you have to show that you have equivalent or better protection than what's otherwise provided in the closure provisions in the rule?
- A. That's my understanding, but I should point out that was not my direct testimony, and Mr. Jones will be going through those provisions in detail.
- Q. All right. You did testify, though, the goal of the rules was to provide -- allow operators opportunities for exceptions?
  - A. Yes.
- Q. And the standard for those exceptions is equivalent or better protection, is it not?
  - A. I believe it is.
- Q. And that even if we were to come in and seek an exception that was protective of human health and the environment, that's not going to be considered unless it's equivalent to dig-and-haul within 100 miles?
- A. I think they would be considered. You always have the opportunity to bring an exception to the Division.
- Q. But we would have to show you, to get the exception, that what we're proposing does more than be protective of human health and the environment; isn't that right?

1	A. Well, it would meet that general performance
2	standard, but you might have to look at a different
3	technical standard.
4	Q. But if dig-and-haul is more protective than your
5	standards, and we have to show that it's more protective or
6	more protective than dig-and-haul, then we to get an
7	exception have to do more than prove we're protective of
8	human health and the environment; isn't that right?
9	A. No, you just have to show that it is more
10	protective than the dig-and-haul scenario.
11	Q. But that is more protective, you said, than your
12	standards that would be protective of human health and the
13	environment; isn't that your testimony?
1.4	A. My testimony is that dig-and-haul and disposal in
15	an OCD-permitted landfill, which is permitted and has
16	monitoring and so on, is more protective than on-site
17	disposal in a deep-trench deep-burial trench.
18	Q. And to get an exception we have to show that at
19	least with this dig-and-haul?
20	A. That's right, my understanding.
21	MR. CARR: Thank you.
22	CHAIRMAN FESMIRE: Mr. Hiser?
23	Ms. Foster?
24	MS. FOSTER: Thank you, Mr. Chairman.
25	CHAIRMAN FESMIRE: How long are you going to

take, Ms. Foster, do you think?

MS. FOSTER: Probably about two hours. I intend to go through everything --

(Laughter)

CHAIRMAN FESMIRE: Okay, we're going to continue this in the morning. I've got some general announcements to make, and we're going to take comments, and then we'll proceed with this in the morning.

Is there anyone who wishes to make a comment, either a sworn statement of -- I mean a statement of position on the record or sworn testimony at this time?

Okay, let the record reflect that no one wished to make a statement at this time.

This morning at the lunch break, the attorneys broke and met to discuss the schedule. And the way the schedule is going to work:

We're going to meet tomorrow at 9:30 a.m. in this room, and we're going to go to six o'clock. And on

Thursday the 8th we're going to meet -- I mean -- excuse

me, I said -- on Wednesday we'll meet at nine o'clock.

On Thursday we'll meet at 9:30. The regular OCC meeting will occur at nine o'clock. We have some business we have to take care of. Anybody who's interested is welcome to come, but I don't anticipate starting this hearing until 9:30 on Thursday the 8th.

On Friday the 9th we'll meet at nine o'clock and go to six o'clock in this room.

And then I've been told that the electricity will be fixed in Porter Hall. We're going to meet Saturday the 10th at nine o'clock in Porter Hall and go until six o'clock. And in order to facilitate some of the expert witnesses and to minimize the costs of this hearing, we're going to dedicate Friday the 9th, from the beginning until he's complete, to Dr. Stephens -- I'm sorry, in the afternoon? Okay, he'll be here in the afternoon for sure. Okay. Dr. Stephens will be the witness from one o'clock until he finishes.

And we will continue until six o'clock on the 10th, Saturday, nine o'clock to six o'clock.

We're going to take the 11th, Sunday, off.

The 12th, Monday, which is a state holiday, will not be for those of you who wish to attend, because we will be meeting in Porter Hall. We're meeting in Porter Hall on Saturday the 10th, and from then on. We meet here this week, but starting Saturday we meet in Porter Hall. On Monday the 12th we will go from 9:00 to 6:00.

On Tuesday the 13th we will go from 9:00 to 6:00, again in Porter Hall. The first witness that day will be the OGAP witnesses, and that's the only day they can be there.

We will meet Wednesday the 14th from 9:00 to 6:00 1 in Porter Hall. 2 3 Thursday the 15th from 9:00 to 6:00 in Porter Hall. 4 And Friday the 16th we're going to take off. 5 Thursday we'll re-evaluate where we are, how much time 6 we've got. But that's the schedule for the next two weeks. 7 I'm going to go over it again in a little more 8 9 organized fashion. 10 Wednesday the 7th, 9:00 to 6:00 in this room. Thursday the 8th, 9:30 to 6:00 in this room, with 11 the regular OCC Commission at nine o'clock, from 9:00 to 12 9:30, Commission meeting. 13 14 On Friday the 9th, in this room from 9:00 to 15 6:00. That day, at least the afternoon portion of that day will be dedicated to Dr. Stephens' testimony. 16 On Saturday the 10th in Porter Hall, over in the 17 other building, from 9:00 to 6:00. 18 Sunday the 11th is off. 19 20 Monday the 12th from 9:00 to 6:00 in Porter Hall. Tuesday the 13th from 9:00 to 6:00 in Porter 21 Hall, but that date will be dedicated to the OGAP 22 witnesses. 23 24 On Wednesday the 14th, 9:00 to 6:00 in Porter 25 Hall.

Thursday the 15th, 9:00 to 6:00 in Porter Hall, and we will re-evaluate the schedule then. Does everybody understand that? Any questions? Okay. And we're going to get off early today, because I don't want to -- don't think we need to start a two-hour cross-examination and break it 15 minutes into it. MS. FOSTER: Thank you, Mr. Chairman. CHAIRMAN FESMIRE: So we'll reconvene tomorrow morning at nine o'clock in this room. Thank you all very much. (Thereupon, evening recess was taken at 4:15 p.m.) 

## CERTIFICATE OF REPORTER

STATE OF NEW MEXICO )
) ss.
COUNTY OF SANTA FE )

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Commission was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL November 21st, 2007.

STEVEN T. BRENNER

CCR No. 7

My commission expires: October 16th, 2010