

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:)

) CASE NO. 12,969

APPLICATION OF APPLICATION OF THE)
NEW MEXICO OIL CONSERVATION DIVISION,)
THROUGH THE ENVIRONMENTAL BUREAU CHIEF,)
FOR ADOPTION OF A NEW RULE REGULATING)
PITS AND BELOW-GRADE TANKS; AMENDMENT OF)
19.15.1.7 NMAC AND 19.15.5.313 NMAC;)
RESCISSION OF 19.15.1.18 NMAC,)
19.5.3.105 NMAC AND 19.15.2.1 THROUGH)
19.15.2.15 NMAC; AND RESCISSION OF)
ORDERS R-3221, R-3221-A, R-3221-B,)
R-3221-B-1, R-3221-C, R-3221-D, R-7940,)
R-7940-A, R-7940-B, R-7940-B(1) AND)
R-7940-C)

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Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

REPORTER'S TRANSCRIPT OF PROCEEDINGS
COMMISSION HEARING

BEFORE: LORI WROTENBERY, CHAIRMAN
JAMI BAILEY, COMMISSIONER
ROBERT LEE, COMMISSIONER

Volume I, November 13th, 2003
Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission, LORI WROTENBERY, Chairman, on Thursday and Friday, November 13th and 14th, 2003, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

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

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A P P E A R A N C E S

FOR THE COMMISSION:

DAVID K. BROOKS, JR.
Assistant General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

FOR THE DIVISION:

GAIL MacQUESTEN
Deputy General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

CHERYL BADA
Assistant General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

FOR CONTROLLED RECOVERY, INC. and
INDEPENDENT PETROLEUM ASSOCIATION OF NEW MEXICO:

HOLLAND & HART, L.L.P., and CAMPBELL & CARR
110 N. Guadalupe, Suite 1
P.O. Box 2208
Santa Fe, New Mexico 87504-2208
By: MICHAEL H. FELDEWERT

* * *

ALSO PRESENT:

Irvin Boyd
Rancher
Eunice, NM

B.J. Brock
New Mexico Cattle Growers' Association
Albuquerque, NM

John Byrom
IPANM/D.J. Simmons
Farmington, NM

Greg Duggar
Citizen
Otero County, NM

Richard Ezeanyim
NMOCD
Santa Fe, NM

Jack Ford
NMOCD
Santa Fe, NM

Denny Foust
NMOCD
Aztec, NM

Dan Girand
Mack Energy
Artesia, NM

Jennifer Goldman
Associate Director
Oil and Gas Accountability Project
El Prado, NM

Tim W. Gum
District Supervisor
Artesia District Office (District 2), NMOCD
Artesia, NM

Rachel Jankowitz
New Mexico Game and Fish
Santa Fe, NM

(Continued...)

ALSO PRESENT (Continued):

Carl L. Johnson
Rancher
Tatum, New Mexico

Martyne Kieling
NMOCD
Santa Fe, NM

Clifford K. Larsen
Sierra Club
Santa Fe, NM

Ken Marsh
Controlled Recovery, Inc.
Hobbs, NM

Ed Martin
NMOCD
Santa Fe, NM

Cody Morrow
State Land Office
Santa Fe, NM

Tom Nance
IPANM
Santa Fe, NM

Donald A. Neeper
Private citizen
Los Alamos, NM

Michael Newell
Attorney at Law
Heidel Law Firm
P.O. Drawer 1559
Lovington, New Mexico 88260

Wayne Price
NMOCD
Santa Fe, NM

Janet Rees
Citizen
Bloomfield, NM

(Continued...)

ALSO PRESENT (Continued):

David Sandoval
Attorney at Law
Heard, Robins, Cloud, Lubel & Greenwood, L.L.P.
300 Paseo de Peralta, Suite 200
Santa Fe, New Mexico 87501

Dixon Sandoval
Jicarilla Apache
Dulce, NM

Deborah D. Seligman
NMOGA
Santa Fe, NM

Oscar Simpson
New Mexico Wildlife Federation/ConservAmerica
Albuquerque, NM

Mike Starrett
OXY, USA
Houston, TX

Steven Wells
BLM
Santa Fe, NM

* * *

1 WHEREUPON, the following proceedings were had at
2 10:04 a.m.:

3 CHAIRMAN WROTENBERY: Okay, we'll get started.
4 It looks like everybody has had time to get here. We've
5 gotten a little bit of a late start because of the
6 inclement weather and the road closures this morning, but
7 it appears that everybody we were expecting is now here, so
8 we'll get this hearing underway.

9 This is the November hearing of the Oil
10 Conservation Commission. It's a little after 10:00 a.m. on
11 Thursday, November 13th. We're in Porter Hall in Santa Fe,
12 New Mexico, for this hearing.

13 I'm Lori Wrotenbery, I'm Director of the Oil
14 Conservation Division and serve as Chairman of the Oil
15 Conservation Commission.

16 To my right is Jami Bailey, Commissioner, who
17 represents Land Commissioner Patrick Lyons on the Oil
18 Conservation Commission.

19 To my left is Robert Lee, the third Commissioner.
20 He is Director of the Petroleum Recovery Research Center at
21 New Mexico Tech and is the appointee of the Secretary of
22 the Energy, Minerals and Natural Resources Department on
23 the Oil Conservation Commission.

24 To Dr. Lee's left is Florene Davidson, the
25 Commission Secretary.

1 To Commissioner Bailey's right is David Brooks,
2 Commission Counsel.

3 And Steve Brenner will be recording the
4 proceedings here today for us.

5 We've got several items on the agenda, but we
6 plan to take up the last item first, and that's the one
7 that I believe most of you are here for this morning. But
8 let me ask, is there anybody here that needed to address
9 the Commission concerning any of the other items on the
10 Commission's agenda?

11 I don't see anybody, so we'll call Case 12,969.
12 This is a rulemaking proceeding on the Application of the
13 New Mexico Oil Conservation Division, through the
14 Environmental Bureau Chief, for adoption of a new Rule
15 regulating pits and below-grade tanks; amendment of several
16 rules and rescission of several rules and orders relating
17 to pits and below-grade tanks. These proposed amendments
18 to the Division's Rule will have statewide application.

19 We have provided notice of this rulemaking
20 proceeding in accordance with the Division Rules, and I
21 believe, Florene, you're prepared to give us a little bit
22 of a summary of what notice was given of this proceeding?

23 MS. DAVIDSON: Yes, the Division published notice
24 of the proposed Rule on the Commission docket more than 20
25 days before the hearing date, as required by 19.15.14.1201

1 (B).

2 The Division published notice of the proposed
3 Rule in newspapers of general circulation in the counties
4 in New Mexico affected by the proposed Rule, as follows.

5 Do you want those newspapers listed?

6 CHAIRMAN WROTENBERY: Yes, please.

7 MS. DAVIDSON: *Alamogordo News, Artesia Daily*
8 *Press, Farmington Daily Times, Gallup Independent,*
9 *Lovington Daily Leader, The Observer, Portales News*
10 *Tribune, Rio Grande Sun, Roswell Daily Record, Raton Range,*
11 *and the Union County Leader.*

12 The Commission file contains affidavits of
13 publication from all of those newspapers, showing
14 publication of the notice no less than 20 days prior to the
15 hearing date, as required by 19.15.14.1201(B) NMAC.

16 The Division also published notice of the
17 proposed rulemaking in the *New Mexico Register* on October
18 15, 2003. The Commission file contains a copy of that
19 notice.

20 In addition, the Application, the text of the
21 proposed Rule and the text of the amendments to existing
22 rules were posted on the Division website with a copy of
23 the Commission's pre-hearing order.

24 CHAIRMAN WROTENBERY: Thank you. At this point
25 we ordinarily call for appearances, but what we've got

1 right now, I believe, is a form from every person who
2 intends to make a comment or present testimony today, and
3 so I think I'll just accept these forms in lieu of asking
4 everybody to stand and make an appearance. I will note
5 that the Division staff is represented and did not complete
6 a form. Ms. MacQuesten, would you like to make a
7 statement?

8 MS. MacQUESTEN: Yes, my name is Gail MacQuesten,
9 and with me is Cheryl Bada. Together we will be
10 representing the Oil Conservation Division. We have two
11 witnesses, Roger Anderson and William Olson.

12 CHAIRMAN WROTENBERY: Thank you. And our plan
13 today is to go ahead and start with the Division's
14 presentation of the proposed new Rule and amendments to and
15 rescission of existing Rules. Ms. MacQuesten has informed
16 me that the presentation of the Division will take
17 approximately three hours, that's her best estimate at this
18 point.

19 Let me ask, is there anybody else here that's
20 working under any time constraints and would need to
21 address the Commission on this proposed Rule before the
22 completion of the Division's presentation?

23 Looks like everybody's willing to stick with us
24 for a while then. In that case, unless there are any other
25 preliminary matters -- David, can you think of any? -- we

1 will go ahead and ask the Division to come forward and make
2 its presentation.

3 MS. MacQUESTEN: If I may make a very brief
4 introduction, the Division is proposing a new Rule
5 regarding pits and below-grade tanks and amending the
6 definition section to add definitions needed for the new
7 Rule. This new Rule is intended to replace existing rules
8 on pits and below-grade tanks. For that reason, the
9 Division is also asking the Commission to amend Rule 313 to
10 delete that portion of the Rule related to below-grade
11 tanks.

12 We are also asking the Commission to rescind
13 rules that are currently in place regarding pits and below-
14 grade tanks, Rules 18, Rules 105 and Rules 19.15.2.1
15 through 19.15.2.15. That last collection of rules is a
16 compilation of a number of orders. We are also asking that
17 the Commission rescind those orders. Those are the orders
18 in the R-7940 series regarding the northwest and the orders
19 in the R-3221 series regarding the southeast.

20 Roger Anderson, the Chief of the Division's
21 Environmental Bureau, will give you a brief overview of the
22 issues involved in this Rule and give a brief history of
23 the Rule's development. He will then go through the
24 proposed definition and the proposed new Rule.

25 I'd like to call Roger Anderson.

1 CHAIRMAN WROTENBERY: Mr. Anderson, would you
2 stand and be sworn?

3 (Thereupon, the witness was sworn.)

4 ROGER C. ANDERSON,
5 the witness herein, after having been first duly sworn upon
6 his oath, was examined and testified as follows:

7 DIRECT EXAMINATION

8 BY MS. MacQUESTEN:

9 Q. Would you please state your name for the record?

10 A. Roger Anderson.

11 Q. And where are you employed?

12 A. Environmental Bureau Chief for the Oil
13 Conservation Division; Energy, Minerals and Natural
14 Resources Department.

15 Q. What are the duties of the Bureau?

16 A. To enforce environmental regulations in the oil
17 and gas industry.

18 Q. Is there a staff working for you?

19 A. There is.

20 Q. And how many staff members do you have?

21 A. There are six engineers working for me.

22 Q. How long have you been with the OCD?

23 A. I've been with the OCD for 17 years, five as an
24 environmental engineer and 12 as Environmental Bureau
25 Chief.

1 Q. Could you briefly give us your educational
2 background?

3 A. I have a bachelor of science in chemical
4 engineering from New Mexico State University.

5 Q. Have you testified before the Commission before?

6 A. Yes, I have.

7 Q. Were you accepted by the Commission as an expert
8 witness in the field of environmental engineering?

9 A. Yes, I was.

10 MS. MacQUESTEN: I would tender Mr. Anderson as
11 an expert in environmental engineering.

12 CHAIRMAN WROTENBERY: And we accept his
13 qualifications.

14 Q. (By Ms. MacQuesten) In front of Mr. Anderson and
15 in front of the Commission there should be a white three-
16 ring binder. It contains the 10 exhibits that Mr. Anderson
17 will be introducing today. The first exhibit, marked as
18 Exhibit Number 1, is a hard copy of the PowerPoint
19 presentation that Mr. Anderson will be using during his
20 introductory remarks.

21 Mr. Anderson, if you would please start us what
22 authority the Division has to promulgate rules regarding
23 pits and below-grade tanks?

24 A. There are three main statutes that direct the
25 Division in protection of fresh waters and public health.

1 The first one is 70-2-12.B.(15). Those are under the
2 responsibilities, the duties of the Division, and it's to
3 regulate the disposition of produced water in connection
4 with drilling and producing of oil and natural gas, and
5 that is for protection against contamination of freshwater
6 supplies.

7 The second is 70-2-12.B.(21) which regulates the
8 disposition of nondomestic waste and exploration,
9 development, production or storage of crude oil and natural
10 gas to protect public health and the environment.

11 And the third one is 70-2-12.B.(22), which
12 regulates the disposition of nondomestic waste in the
13 downstream facilities, so-called downstream facilities such
14 as service, refineries, transportation facilities and gas
15 plants. And that also is to protect public health and the
16 environment, and which also gives us the authority to
17 administer the Water Quality Act.

18 Q. Are all of these statutes from the Oil and Gas
19 Act?

20 A. Yes, they are.

21 Q. How do you characterize OCD's mission under these
22 statutes?

23 A. Every one of the three statutes that I listed
24 directs us to protect public health, protect groundwater
25 and protect the environment. So it's all protection.

1 Q. How does cleanup fit into protection?

2 A. The Environmental Bureau has -- the Division has
3 regulatory programs that include the remediation --
4 contamination investigation and remediation, and we do that
5 through hydrologic studies and soil studies. We
6 investigate the contamination and require cleanup by
7 responsible parties.

8 Q. Is cleanup your primary focus for the --

9 A. Our primary focus is prevention, unless there's
10 already contamination. Then it would be cleanup, and
11 prevention in the future.

12 Q. I'd like you to move on to review what the Rule
13 that we're proposing today is designed to protect us from.

14 A. Okay, in 19- -- I believe it was 1977, a
15 memorandum requesting registration of all pits went out
16 under the Division Director's signature, and from that memo
17 requesting the registration we were returned in the realm
18 of 13,000 pits that were in existence at the time. It was
19 not a mandatory memo, so we do not know if this is the
20 exact number of pits that there are or not.

21 But from this registration, the pits -- for the
22 people who responded -- it came out that there are 7639
23 unlined pits. And we went through on those, and this slide
24 is a breakdown of where those pits are:

25 Location, which are oil and gas drilling and

1 production sites; facilities, which are the downstream
2 facilities or the facilities permitted under other Rules in
3 the Division; transportation, which are pipeline drip pits,
4 things such as that; emergency pits, which could be
5 anywhere; and then miscellaneous and unknown. They just --
6 the miscellaneous didn't fit in a category, and unknown
7 were just undescribed.

8 Q. Excuse me, if we could go back to the last slide,
9 are all of the categories listed there relevant to the Rule
10 we're discussing today?

11 A. No, they are not. The facility pits are not
12 relevant to this rulemaking. All the rest of them either
13 are or could be. The unknown is unknown.

14 Q. Did the request that was sent out for
15 registration of pits include drilling pits?

16 A. It did not specifically state drilling pits.
17 There were some drilling pits that were submitted.

18 CHAIRMAN WROTENBERY: Just for the record, I
19 thought I heard you say the survey went out in 1977?

20 THE WITNESS: 1997, I'm sorry.

21 Q. (By Ms. MacQuesten) If we could move to the next
22 slide, could you tell us what this slide shows?

23 A. This is a compilation of the Division-documented
24 contamination cases that we have in our files at this time
25 -- and this is over the history of the Bureau -- and what

1 we have determined as the cause of the contamination. All
2 these are caused by pits, the majority of them by pits on
3 location, and then a breakdown of drilling/reserve. There
4 were two documented cases that we have determined were
5 caused by drilling pits, and we have one that we're still
6 investigating, a workover pit that we don't know whether
7 it's caused groundwater contamination or not yet.

8 The rest of them, the ones at "facility" are not
9 part of this Rule.

10 The transportation, emergency, and then again
11 unknown.

12 So we've had a total of 557 groundwater
13 contamination cases that we have determined have been
14 caused by pits.

15 Q. Do these numbers include reports from the
16 District Offices?

17 A. Yes, if they're -- The groundwater contamination
18 cases would include anything from the District Offices.
19 The total number is the sum of the soils and the
20 groundwater contamination. The additional 6200 or so may
21 or may not include anything from the District. Those are
22 cases that are in our files, that are handled out of Santa
23 Fe.

24 Q. Again, do all the categories listed on the slide
25 pertain to the Rule we're discussing today?

1 A. No, they don't. All but the facilities do.

2 Q. What goes into pits that can cause contamination?

3 A. The contaminants generally in pits -- and it's a
4 wide range -- are hydrocarbons and primarily salts, major
5 cations and anions.

6 Q. What dangers are posed by saltwater
7 contamination?

8 A. Saltwater contamination, there are some of the
9 cations and anions that are listed as standards, health-
10 based standards, in the Water Quality Control Commission
11 regulations that are health-based standards, so they are
12 health risks, and -- the same as hydrocarbons.

13 Q. When you say health risks, are you speaking of
14 the health of human beings?

15 A. Is there any danger to the environment?

16 A. Well, yeah, if -- Yes, if there's a danger to
17 human health, if it's in the environment, then it becomes a
18 danger to human health.

19 Q. Are we talking about groundwater contamination or
20 surface contamination when you are speaking of your
21 concerns about salts?

22 A. We're concerned with both, groundwater, and the
23 statutes give us primary responsibility for protection of
24 groundwater, but it also gives us responsibility for the
25 protection of human health and the environment, and it has

1 an impact to the surface use of grounds, both hydrocarbons
2 and salts, all the contamination available in the oilfield
3 operations and beneficial use of that ground, and we are
4 concerned with the surface also.

5 Q. What are the dangers of hydrocarbon
6 contamination?

7 A. They're health dangers also, both for groundwater
8 and through the atmosphere.

9 Q. In looking at the numbers you have listed for
10 drilling and reserve pits, I see 13 cases of contamination.
11 Two of those are groundwater contamination; is that right?

12 A. That's correct, that's correct.

13 Q. Why are the numbers so low for drilling and
14 reserve pits?

15 A. Because generally we don't know where all the --
16 We've never known where all the drilling pits are, and we
17 haven't investigated to see if they have -- any further
18 than what's been reported to us as groundwater or from
19 somebody local that their soil is sterile or something like
20 that. We have not gone out to investigate drilling pits.

21 Q. So these numbers represent cases that were
22 referred to the Bureau?

23 A. That's correct.

24 Q. Do drilling and reserve pits contain the same
25 substances you were talking about when you spoke of other

1 pits?

2 A. They can, yes.

3 Q. Let's take a look at the next series of slides,
4 and these should be photos of the pits.

5 A. These are -- The next series of photos are
6 typical pits that we just -- that the field inspectors have
7 taken pictures of as they've been driving through the
8 field. This one is an injection pit which may or may not
9 be covered under this rule, depending on where it is in
10 relation to a well. This one has already been closed. As
11 a matter of fact, this is one that was a subject of our
12 environmental merit award one year where an unrelated
13 entity cleaned it up for us.

14 The next one is a drilling pit that, if you look
15 at sign you can see that it has been converted to a
16 produced water pit without authorization, although no
17 authorization was needed at the time. So it's a drilling
18 pit that just kept on being used as a produced water pit.

19 Q. Do you know what kind of contamination was
20 involved with this pit?

21 A. No, I don't, not of the top of my head, I don't
22 know. You have to hold on a minute here. I apologize,
23 somehow a slide got out of order. Okay, that's the
24 drilling pit.

25 Okay, and that's another drilling pit that is

1 just in the process of being closed, I believe. The well
2 had just recently been drilled.

3 That's a separator pit at a well, and there's
4 hydrocarbons. This one has netting.

5 And this is a playa pit that has not been
6 addressed. This is a dispos- -- basically we call it a
7 playa pit. It's a playa in southeast that has just been
8 used for disposal of produced water, where the produced
9 water just runs in.

10 An emergency -- so-called emergency pit, and
11 that's a major focus of this Rule.

12 Q. Why do you say "so-called emergency pit"?

13 A. Well, an emergency pit is primarily designed --
14 and this Rule defines that further -- to be used in an
15 emergency, and it's obvious and known that this pit has
16 been used for a long term for disposal.

17 Another emergency pit, and then still another
18 emergency pit that's actually in the process of drying.

19 Now, all these pits have been addressed except
20 for the playa.

21 Q. Are these photographs taken from the
22 investigation files --

23 A. Yes, they are.

24 Q. -- regarding these pits?

25 A. Yes, they are.

1 Q. What does it cost to remediate sites like the
2 ones we're seeing in these pictures?

3 A. From what -- In the last two to three years we
4 have been trying to ascertain remediation costs. Now,
5 these costs that are up here are costs that have been
6 reported to us by operators that have remediated sites,
7 they are not what the Division has spent on any sites that
8 they've remediated through the reclamation fund.

9 The soil remediation, the costs are from \$3000 to
10 \$100,000 range, and they include the excavation costs, the
11 disposal costs and trucking costs.

12 For groundwater it's a lot more. Smaller sites,
13 minor contamination, are from \$10,000 to \$20,000, and the
14 major sites are anywhere from \$100,000 into the millions of
15 dollars, and we have a couple of sites that are in the
16 millions of dollars. And those costs can include, but do
17 not necessarily include, monitoring and recovery wells,
18 water sampling and monitoring of the groundwater, and
19 installation, operation and maintenance of remediation
20 equipment and systems.

21 Q. How do these costs that have been reported to us
22 by operators compare to the costs that OCD has incurred in
23 doing cleanup through the reclamation fund?

24 A. Basically, they're an order of magnitude more.
25 The costs that we have been reporting are from \$2000 to

1 \$5000 for double-bottom tanks, \$2500 to \$3500 for lined
2 containment, and those are the same reports from the
3 operators.

4 Q. Now, these are costs of prevention that you've
5 incurred --

6 A. Those are costs of prevention, yes.

7 Q. How did the remediation costs compare, operators'
8 reported remediation costs versus our remediation costs?

9 A. Our remediation -- back a slide -- we have closed
10 one major pit with the reclamation fund, and that was in
11 the realm of \$550,000. That was a commercial pit, a
12 facility that would not be covered under this Rule.

13 We have closed a -- just soil remediation of a
14 facility which would not be covered under this Rule, which
15 has cost us over \$650,000, which was a joint venture
16 between us and the Land Office.

17 Q. Now if we could go to the next slide regarding
18 the cost of prevention, could you discuss how much it would
19 cost to prevent some of the things that we saw in those
20 slides?

21 A. The -- just -- as I said before, the double -- we
22 have been -- it has been reported to us that a double-
23 bottom tank is in the range of \$2000 to \$5000, depending on
24 the size.

25 And a lined containment, which is synthetically

1 lined, is in the range of \$2500 to \$3500.

2 Secondary containment, we have been told, adds an
3 additional 10 percent to the cost of it.

4 Concrete containment, which is seldom used, is in
5 the range of \$5000 to \$10,000.

6 Q. And these are numbers that have been reported to
7 you by whom?

8 A. Yes, they have, by industry, companies that have
9 done installation of these type of facilities.

10 Q. Let's move on to discussing the existing Rules we
11 have regarding pits. Could you very briefly summarize what
12 rules are currently in place regarding pits and below-grade
13 tanks? It should be on slide 19.

14 A. That one slide keeps jumping in there, I don't
15 know why it keeps moving.

16 Rule 105 is -- Well, let me start with Rule 313.
17 That is the rule we are proposing to amend, and that's the
18 emulsion basin sediments and tank bottoms, and it basically
19 just states that -- what to do with the contents of the
20 tanks. It doesn't have -- It has no regulations in it as
21 to where, how or what kind of construction to use in that
22 pit.

23 The next one would be Rule 105 that we are
24 proposing to rescind, and that's pits for clay, shale,
25 drill fluid and drill cuttings, and that has just --

1 basically states that it has to have the proper amount of
2 fluid to confine oil and gas, and the cuttings must be
3 disposed of at the well site in a manner to prevent
4 contamination of surface or subsurface waters, and it also
5 has the netting requirement in it.

6 And then Rule 18 -- Did we include 18? 18 is the
7 lined pits and below-grade tank rule, which requires the
8 approval of all lined pits and below-grade tanks that were
9 constructed after -- I believe it was 1986.

10 And then 19.15.2.1 through 19.15.2.15 are the
11 Record Center's attempt at codification of the -- our pit
12 -- new pit orders in R-7940 series and the R-3221 series.

13 Q. Have the existing OCD Rules regarding pits and
14 below-grade tanks been reviewed by the Interstate Oil and
15 Gas Compact Commission?

16 A. They have. In 1994 the Interstate Oil and Gas
17 Compact Commission State Review Committee came to the state
18 and reviewed all of our environmental rules and
19 environmental statutes. And at that time they made the
20 recommendation that the Division develop requirements for
21 siting, construction, operation and closure of reserve
22 pits. They recommended we put technical criteria to
23 implement the requirements to allow for the flexibility to
24 accommodate design and that -- which prevents contamination
25 of fresh waters and the health and safety of the public.

1 The technical guidelines did not limit it to
2 reserve pits, but it included all pits, even though they
3 just put reserve pits in the recommendation.

4 And then again in August of 2001 the IOGCC State
5 Review Committee, which had been renamed to STRONGER and
6 became an independent nonprofit organization from IOGCC --
7 and STRONGER means State Review of Oil and Natural Gas
8 Environmental Regulation -- they sent a follow-up review
9 team to review our state programs again and our statutes to
10 see what progress we'd made from their initial review and
11 had come up with the recommendation that -- the
12 recommendation had been met with regard to lined and below-
13 grade pits, and that was primarily because we had let them
14 know that it had already been that, that the rule for lined
15 pits and below-grade tanks was in effect at the time of the
16 review but they missed it.

17 But they also said it had not been specifically
18 met with regard to reserve pits and that we should adopt
19 the rules that we were in the process of looking at -- and
20 that's basically the pit rule -- that are consistent with
21 the 2000 guidelines, and they said Section 5.5, but --

22 Q. Let me ask you a question. When the IOGCC and
23 STRONGER are referring to reserve pits, what kind of pits
24 are they talking about?

25 A. Those are drilling pits.

1 Q. Were the recommendations that IOGCC and STRONGER
2 giving specific to New Mexico?

3 A. These recommendations are specific to New Mexico.
4 The guidelines that they would like to see states adopt
5 their regulations pursuant to are based on -- are
6 nationwide, they're adaptable to all states.

7 Q. Okay, let's take a look at those guidelines.

8 A. Okay. And as I said, they had mentioned 5.5 in
9 the guidelines, which I believe -- and which I've been told
10 is a misprint; it's actually 5.2.2, which is the
11 permitting, and it says -- the guideline, the STRONGER
12 guidelines, state, "A permitting or review process should
13 be in place for all pits. Pits may be authorized by rule,
14 general permit, individual permit or as part of an
15 operational permit or program."

16 Q. Do our current Rules have a process for
17 permitting or review of pits?

18 A. No, they do not, not for -- Let me clarify that.
19 Not for the pits that we're talking about today. They have
20 a process for pits at facilities, but not location pits.

21 Q. Let's move on to the next slide regarding the
22 process for developing the proposed Rule. And Mr.
23 Anderson, if I could ask you to speak up a little bit, I'm
24 having some trouble hearing you, and I have a feeling that
25 the folks in the back of the room aren't going to be able

1 to hear you.

2 A. Okay, I'll try.

3 Q. All right, thank you. What was the process used
4 for developing the proposed Rule?

5 A. After STRONGER review, I was directed by the
6 Director to form a work group to develop a method for
7 addressing the recommendations of the review team. At that
8 time we created a work group that included these members,
9 three members from industry, three members from the
10 environmental community, and then along with the State Land
11 Office, the BLM and one member of an Indian tribe within
12 New Mexico.

13 Q. How were the individual representatives from
14 these organizations chosen to be on the work group?

15 A. We chose the organizations, and the organizations
16 chose the members.

17 Q. Was a facilitator used in the work group?

18 A. There was -- For the first six work group
19 members, we hired a facilitator to conduct the meetings.

20 Q. Was the facilitator affiliated with any of the
21 entities involved in the work group?

22 A. No, she was not. She was an independent
23 contractor.

24 Q. When the process started, did OCD present a draft
25 rule to the work group?

1 A. Not in the first meeting. We -- After the first
2 meeting -- and it's been so long since we've done meetings,
3 it's been about a year and a half -- we drafted bits and
4 pieces of what would eventually go into the Rule, based on
5 the subject that was discussed at that meeting and
6 presented those to the work group at the next meeting.

7 Q. But you didn't go to the work group and begin the
8 process by presenting a rule?

9 A. No, we did not.

10 Q. How did the work group come up a draft rule then?
11 What was the process?

12 A. It was a process of discussion within the work
13 group, and we tried as best as we could to reach consensus,
14 and when we get into the Rule, when I indicate that it's my
15 opinion that we reach consensus, that's -- all of the
16 members of the work group present at that time agreed with
17 the language that was in there. Consensus was not at that
18 time, at any of the meetings, just a majority. If everyone
19 didn't agree, then we put it down as a nonconsensus item.

20 Q. What if everyone agreed at one meeting and the
21 next meeting someone had a disagreement?

22 A. Then it would revert back to a nonconsensus item,
23 and that happened frequently.

24 Q. Were your meetings open to the public?

25 A. They were.

1 Q. If I could draw the Commission's attention to
2 what has been marked as Exhibit Number 2, Mr. Anderson,
3 could you describe what that exhibit is?

4 A. Exhibit Number 2 -- and I have to apologize for
5 the date, but I left the date on when I submitted this, I
6 did not change the date -- this is the draft of the final
7 work group meeting, the seventh one that was non-
8 facilitated, that was circulated among the work group.

9 This would have -- The last work group meeting
10 was August, so this would have been an August-something
11 date afterwards that I finally got it done and out to the
12 work group, probably about a week later. It was circulated
13 to the work group members and the one that we were going to
14 advertise without the editorial comments in it for hearing.

15 Q. What was the focus of that seventh work group
16 meeting?

17 A. The focus -- well, let me go -- The reason for
18 the seventh work group meeting was, we were scheduled to go
19 to hearing, and there was a tremendous amount of difference
20 of opinions as to what was consensus and what was not
21 consensus from the previous work group meeting.

22 So after consultation with the Bureau and the
23 Director, we decided that rather than go to hearing with
24 that much talk, that we'd go back to another work group
25 meeting and see if we could straighten some of the problems

1 out. So we did, and it was a non-facilitated meeting.

2 Q. All right. In Exhibit Number 2 there are some
3 passages that are marked in italics. What does that mean?

4 A. These are the ones that I had thought at that
5 time, after that seventh work group meeting, that were
6 nonconsensus items.

7 Q. And you have comments in red. What do they mean?

8 A. Those are either that they were consensus or the
9 reason for them being in italics.

10 Q. Looking through this document, I notice that
11 there are a number of items that are marked consensus
12 items. Do you still think there is consensus as reflected
13 in this document?

14 A. You mean at this time?

15 Q. Yeah, today.

16 A. Probably not.

17 Q. So you had consensus as of the date that you --

18 A. Yes.

19 Q. -- sent out this draft, but it may not be true
20 today?

21 A. That's correct.

22 Q. Are you proposing that the Commission adopt the
23 work group's final product as the pit rule?

24 A. No, I am not.

25 Q. Why not?

1 A. Because of the nonconsensus, we did after we got
2 comments back -- after I submitted this, we went through
3 the Rule, and the Division on its own changed a few things
4 in the Rule. There really wasn't very much substantive
5 that was changed, however there was some style and
6 formatting and things like that, that were changed.

7 Q. How did you handle nonconsensus items?

8 A. We tried to look at a middle-of-the-road-type
9 decision, and if we could think of one we tried to put that
10 in there. If we couldn't, we made the decision what we
11 felt was best for the State.

12 Q. If we could move to slide number 24, I'd like you
13 to summarize -- before we get into detail of the Rule
14 itself, I'd like to ask you to summarize what the
15 highlights of this new Rule are.

16 A. The new -- the proposed Rule would consolidate
17 and strengthen the existing pit and the below-grade tank
18 rules in that we're bringing over what we thought were the
19 good parts of the ones that we were rescinding and
20 rescinding the ones that do very little or are not that
21 good.

22 They do establish a permitting and review process
23 for all pits, including the drilling/reserve, emergency and
24 all those pits that had never gone through a review
25 process.

1 It eliminates a low-volume exemption from our
2 Order R-3221 in the southeast, as we have already done in
3 the northwest in R-7940.

4 It establishes siting, construction, operating
5 and closure standards for pits.

6 It provides for a mechanism for the Division to
7 evaluate what these standards are and if the standards are
8 effective or not.

9 And the way the proposed Rule is written, it
10 affords the Division flexibility to consider other issues,
11 innovative technologies, things like that.

12 And it increases public notification of pits.

13 MS. MacQUESTEN: I'd like to now go through the
14 Definitions section of the Rule and then the Rule itself,
15 but before I do so I'd like to ask the Commission if there
16 are any questions for Mr. Anderson up to this point?

17 CHAIRMAN WROTENBERY: Not right now, thanks.

18 Q. (By Ms. MacQuesten) If not, if we could turn to
19 Exhibit Number 3, and Mr. Anderson, could you tell us what
20 this document is?

21 A. Exhibit Number 3 is 19.15.1.7, the Definitions
22 section of the Oil Conservation Division Rules and
23 Regulations.

24 Q. And this contains in blue or in highlighted form
25 the definitions that are new or changed under our proposal?

1 A. That is correct.

2 Q. I'd like to just go through the additional
3 definitions by name and ask you if had the concurrence of
4 the work group regarding the definition that is proposed.

5 The first definition is "Alluvium".

6 A. And I believe we had concurrence on that item.

7 Q. The second is "Below-grade Tank".

8 A. I don't -- I believe there was some question as
9 to whether we had concurrence on that item.

10 Q. The third is "Berm".

11 A. I believe we had concurrence.

12 Q. "Groundwater Sensitive Area".

13 A. I don't believe we had concurrence on that item.

14 Q. "Operator"?

15 A. "Operator" was not a definition that was
16 discussed in the work group. It's a definition, however,
17 that legal staff has recommended we change since we are
18 requiring the term "Operator" to do things in this Rule and
19 we haven't defined what the operator is.

20 Q. The operator of pits?

21 A. The operator of pits, that's correct. But that
22 was not discussed with the work group.

23 Q. How about the definition of "Pit" itself?

24 A. I believe we had consensus on that definition.

25 Q. "Playa lake"?

1 A. I believe we had consensus on that one also.

2 Q. "Sump"?

3 A. No, we did not have consensus on that.

4 Q. "Wellhead Protection Area"

5 A. I think -- I believe we had consensus on that
6 one.

7 Q. "Wetlands"?

8 A. No, we did not have consensus on that one.

9 Q. I'd like you to turn to Exhibit Number 4, and
10 this is the proposed Rule itself. For the proposed Rule,
11 Mr. Anderson, I'd like to have you summarize parts of that
12 Rule and tell us how it differs from our existing Rules
13 regarding pits and below-grade tanks and how it differs
14 from the work group product.

15 A. Okay --

16 Q. But before you get into the specifics, though,
17 were there general changes that you made to the work group
18 product in coming up with this proposed Rule?

19 A. There were general changes. Throughout the whole
20 Rule, the work group product was in active voice, and
21 everything was changed to passive voice.

22 Q. Now, are you sure about that?

23 A. I'm sorry, it's the other way around. Everything
24 was passive, and it's now active.

25 Q. We had such a big fight about that, I'm surprised

1 that you would forget it.

2 A. So everything is now in active voice, instead of
3 the passive that we had written the work group copy of it.

4 Q. Were there other general changes?

5 A. Yes, there were specific statutory or regulatory
6 sites added in rather than pursuant to this subsection or
7 this section or something. Because of Record Center
8 requirements, we added the specific cites down to, I
9 believe, sub-sub-sub paragraph.

10 Q. As we go through the Rule, then, I'd like to try
11 to address the substantive changes rather than those style
12 changes --

13 A. Correct.

14 Q. -- we've just mentioned. And if we could start
15 with subsection A, permitting, if you could just give us a
16 very general summary of what permitting requirements we are
17 asking for in this Rule.

18 A. This section, the permit required -- basically
19 requires a permit for all pits or below-grade tanks before
20 they can construct it or -- before it can be constructed or
21 used. It does, however, exempt pits that are already
22 permitted under the OCD Rule 711 or under WQCC discharge
23 permit regulations.

24 Previously, the only pits that were required to
25 have -- permitted or approval were lined pits and below-

1 grade tanks.

2 Q. So unlined pits did not require a permitting
3 process?

4 A. That's correct, only lined pits required a
5 permitting process.

6 Q. All right.

7 A. Or an approval process.

8 Q. Was there consensus on this item with the work
9 group?

10 A. Yes, there was.

11 Q. If we could go to subsection B.1 regarding
12 applications and where they are filed, could you summarize
13 that requirement?

14 A. The B.1 -- that subsection just describes where
15 and how an application for a permit is submitted. The
16 requirements are in existing -- are in addition to existing
17 requirements. In other words, (a), Downstream Facilities,
18 is unchanged from the work group consensus version except
19 this voice change in specific sites.

20 Downstream facilities are permitted either on a
21 C-144 or a C-101, APD or a C-103 supplemental to the local
22 District Office that they're going to construct the permits
23 in.

24 I'm sorry, I apologize. Downstream Facilities,
25 (a) is the Downstream Facilities, and those are submitted

1 with the discharge permit application or on a C-144 if
2 they're already exempt from the discharge permit
3 applications. And those are submitted, depending on what
4 type of facility it is, either the District -- if it's a
5 downstream it's covered under Rule 711, or WQCC it's
6 submitted to Santa Fe. The drilling or production permits
7 are the -- and there was consensus on that item.

8 The Drilling or Production, there was not
9 consensus on this one, and it is -- requires the operator
10 for drilling pits, workover pits, production pits, well-
11 site pits to either apply on a C-144 if it's not
12 appropriate for a C-103 or a C-101, Application to Drill.
13 It also says that they can do -- they can apply for a
14 general permit for a group of pits, for wells that are
15 going to be drilled in a program.

16 Q. Is that subsection B.2?

17 A. That's subsection B.2, that's correct.

18 Q. What was the source of the disagreement on the
19 permitting process?

20 A. It was -- The way I read the problem was that we
21 -- they didn't -- that it was duplicative paperwork to
22 submit both a C-144 and an APD. So that's why we added on
23 there that the permit application is the APD, the C-101,
24 the application to drill, for a permit to drill, that
25 becomes the application for the pit. It simply means that

1 the location and the construction, the design construction,
2 is added to the APD.

3 Q. If you could summarize for us subsection B.3
4 regarding when filing takes place.

5 A. Okay, B.3 -- well, we missed B.2.

6 Q. Okay, we can go back to B.2, but that is the
7 general pits --

8 A. Yes.

9 Q. -- general permits versus individual permit?

10 A. Right, and we think that solved a lot of the
11 problems with the work group, that it allows a general
12 permit for a group of pits. If they're in the same
13 location, they're all committed to be constructed the same
14 way and operate and close the same way.

15 Q. And you will accept general permits?

16 A. Yes.

17 Q. Now going on to when the permits are filed,
18 subsection B.3.

19 A. Okay, for new pits and below-grade tanks it's
20 after the effective date of the Rule the operator shall
21 obtain a permit before constructing or operating a pit.
22 And that was at the time of our last meeting a consensus
23 item.

24 The 3(b) for existing pits or below-grade tanks,
25 we had placed -- and now these deadline are still the same

1 as we had in August, and since it's already November these
2 time frames will probably be changed, I would imagine.

3 Q. The time lines were set when the hearing was
4 supposed to take place earlier in the fall?

5 A. That's correct. And rather than -- We did not
6 change them prior to this hearing, as they were published
7 this late.

8 Q. But you don't have any opposition to changing
9 those dates?

10 A. No. No, I do not.

11 Now for existing pits and below-grade tanks, that
12 had not received an exemption under the present R-3221
13 through 3221-D hearing to get an exemption in that -- in
14 the area in the southwest. If they have not already
15 received an exemption through hearing, the operator would
16 be required to submit a notice at this time by January
17 15th, 2004, as to whether they are going to continue using
18 that pit or that they are going to close the pit.

19 That notice -- once that notice is in -- If the
20 pit is to be discontinued, then they'll stop using the pit
21 by June 30th, 2005. I don't know that that date should
22 change. That's over a year and a half away to continue
23 using the pit that's been indicated that they're going to
24 close it.

25 I would probably recommend a 90-day extension on

1 the January 15th time frame for notification of use or
2 discontinue -- for the pit.

3 If a below-grade pit was going to continue to be
4 used, the operator was going to be required to submit a
5 permit application by June 30th, 2004. And if a time -- if
6 the application is administratively complete and filed on
7 that date, they could continue using that pit until the
8 Division acts on the application.

9 Because of the delay in the hearing, I would
10 recommend that that June 30th, 2004, be -- probably be
11 extended by another 90 days.

12 Q. Let's turn to subsection C, the Design,
13 Construction and Operational Standards.

14 A. Okay.

15 Q. First the general discussion of the standards.

16 A. C.1 sets basic general construction standards.
17 The work group consensus version contained reference to
18 Division guidelines, the references. We removed the
19 guidelines in preference to just general protection
20 standards, and those standards will -- all references to
21 Division guidelines except for one in here have been
22 changed to operated to contain liquids and solids to
23 prevent contamination of fresh waters, public health and
24 the environment -- and to protect public health and the
25 environment.

1 Q. Why did you take that course rather than
2 referring to the guidelines?

3 A. This sets -- Rather than guidelines that are for
4 the most part administratively prepared with input from
5 industry and the public, this sets a bottom-line standard
6 that must be obtained.

7 Q. The next section of the Rule sets out special
8 requirements for pits, and I'd like to take those one at a
9 time. The first one is location. Could you please
10 summarize what the special requirements are regarding
11 location?

12 A. Basically the location one is a prohibition of
13 locating a pit in certain areas within the state, and they
14 said that in any watercourse, lakebed, sinkbed or playa
15 lake except where the pit is to be used in a transitory
16 operation -- transient operation, drilling or workover.
17 Short-term duration pits, very short-term duration pits.

18 Now, the thing that was changed from the work
19 group item was that I put -- we added the word "ordinary"
20 before "high-water mark", and that mirrors the Corps of
21 Engineers definition.

22 Q. Do our current Rules have restrictions on
23 location for pits?

24 A. No, they do not. Our current Rules do not, our
25 orders -- the Order R-7940 and 3221 do.

1 Q. Are those limited, those orders, limited to
2 specific areas?

3 A. They are.

4 Q. And this location Rule would have general
5 applicability?

6 A. General statewide applicability.

7 Q. If we could look at the next section on liners,
8 could you summarize the requirements on liners?

9 A. This section specifies requirements for the
10 liners and leak detection, and it basically puts general
11 overall standards in them.

12 Drilling pits, single liner appropriate for
13 conditions at the site and design, and here again the
14 guidelines were taken out.

15 Disposal and storage pits require minimum double
16 lining with leak detection. Again, reference to guidelines
17 were taken out for a more general standard.

18 And then it gives an opportunity for an
19 alternative liner to be approved, if proposed.

20 Q. Did you have work group consensus on the liner
21 standards?

22 A. Yes --

23 Q. Do the liner standards --

24 A. -- I indicate that we had consensus on them.

25 Q. You did have consensus?

1 A. Yes.

2 Q. Do our current Rules contain liner standards?

3 A. The Rules themselves do not contain liner
4 standards, other than one Rule requires just lining but
5 does not have standards. Those standards have been put in
6 the guidelines before.

7 Q. Does this Rule reflect our current guidelines?

8 A. In a general sense they do, yes.

9 Q. But there are some changes?

10 A. No, there -- in a general sense they do. The
11 guidelines are more specific, 2 mil thickness and what they
12 have to be resistant to and things like that.

13 Q. Did you discuss leak detection, subsection (c)?

14 A. Leak detection, anytime there is a requirement
15 for double lining, primary and secondary liner, leak
16 detection is to be installed. And again, the guidelines
17 have the installation standards for leak detection, but we
18 removed the guidelines from this and put the general
19 standards in it.

20 Q. Did you have consensus on the leak-detection
21 issue?

22 A. Yeah, I indicate we did have consensus.

23 Q. Let's move on to the standards for drilling and
24 workover pits. Could you summarize those?

25 A. This, (d), specifies requirements for drilling

1 and workover pits. It is unchanged from the work group
2 consensus item, and it is bringing over those portions of
3 one of the rules we're going to amend. I believe it's 105.
4 Or we're going to rescind 105. But it has enough mud-laden
5 fluid to contain oil or natural gas.

6 And this adds from what is not in our Rules, that
7 hydrocarbon-based drilling fluids cannot be in lined pits,
8 they must be in tanks made of steel or other Division-
9 approved materials.

10 Q. Why did you make that change?

11 A. Well, the hydrocarbon-based drilling fluids need
12 to be -- and this is a consensus item also -- need to be in
13 a closed container.

14 Q. Let's move on to disposal or storage pits. What
15 are the standards for those?

16 A. Basically standards on these are -- Let me find
17 it. Okay, it's unchanged from the work group version,
18 although there was not consensus on this, that no liquids
19 with greater than two-tenths of one percent free
20 hydrocarbons shall be discharged into the pit, and then
21 spray evaporations -- just put spray evaporation
22 requirements in it, will contain the spray-borne solids
23 within the perimeter of the lined portion of the pond.

24 Q. And this was a nonconsensus item?

25 A. Yes, it was, and the primary nonconsensus item

1 was the two-tenths of one percent free hydrocarbon.

2 Q. Why did you put that requirement in?

3 A. That is a memo that defined miscellaneous
4 hydrocarbon from the District Supervisor in District 1 in
5 the mid-1970s, and that was the definition for
6 miscellaneous hydrocarbons and has been used ever since as
7 that.

8 Q. Let's move on to the fencing and netting
9 requirements, and if I could ask you again to speak up a
10 little bit, I'm --

11 A. Okay.

12 Q. -- having some trouble following you.

13 A. Okay, fencing and netting requirements, is a
14 nonconsensus item. This requirement is -- The requirement
15 for fencing and netting is required in a number of our
16 Rules already. It was the subject of an order in the mid-
17 1980s in consultation with the Fish and Wildlife Service,
18 the Game and Fish and a number of other agencies and
19 industry.

20 It allows for certain exemptions to netting if
21 the pit is maintained to be nonhazardous for migratory
22 birds. It has in here the term "wildlife" that for
23 fencing, has to be fenced to prevent access by livestock or
24 wildlife.

25 A nonconsensus item was wildlife, and we kept

1 that in there primarily because we don't have a -- well, we
2 don't have a definition for "wildlife", and the concern was
3 that an ant could be considered wildlife and you can't
4 fence an ant out. And I think there's a -- some amount of
5 reasonableness and logic that has to go into this, so...
6 But we kept that in there. But this whole thing was a
7 nonconsensus item.

8 Q. Does it reflect a change from our current Rules
9 on fencing and netting?

10 A. No, it doesn't. We did put an exception clause
11 in there, and we did put an exception for drilling
12 operations and workover operations that were in progress,
13 so that is a change to what's currently required.

14 Q. Is that a change that imposes more requirements
15 or less?

16 A. No, it's less stringent. It allows an operator
17 not to net a pit while people are present, which in itself
18 is a deterrent to wildlife or migratory waterfowl getting
19 on the pit, and it also allows a certain amount not to be
20 fenced during drilling operations also.

21 Q. Let's move on to subsection (g), Unlined Pits.
22 Can you summarize the requirements regarding unlined pits?

23 A. The basic requirement is that unlined pits are
24 prohibited, period, unless an exemption is granted, or
25 unless an exemption is contained within this Rule. The

1 exemptions can be for good cause, and that's if the
2 operator demonstrates that the unlined pit will not
3 contaminate fresh water and public health and the
4 environment are protected.

5 Q. Would that proof be in the form of an
6 adjudicatory proceeding?

7 A. It could be. There's notice requirements for --
8 if there's application for an unlined pit, to the landowner
9 that the pit is going to be located on, and if anyone
10 protests or would request a hearing, it would go to
11 hearing. It can be administrative, though, there are no --

12 Q. So it could be decided administratively, but if
13 there are concerns it would become an adjudicatory --

14 A. That's correct.

15 Q. -- adjudicatory proceeding?

16 A. That's correct. There's a built-in exemption in
17 the Rule for unlined pits that have been exempted by
18 previous order, which is through R-3221, that series of
19 orders. They do not need to reapply for the exemption,
20 provided the operator notifies the Division and that --
21 Again, this date, January 15th, I would recommend we change
22 that, add 30 days -- or 90 days to that, of the existence
23 of each pit it believes is permitted by order, and the
24 amount of discharge -- the nature and amount of discharge
25 into the pit. The order is considered to constitute the

1 permit for the purpose of this Rule.

2 Q. Why did you choose to grandfather in those
3 orders?

4 A. Because they've already gone through the hearing
5 process and demonstrated that the unlined pit is not going
6 to cause groundwater to be examined. That was the
7 requirements of R-3221 to begin with.

8 Section (iv), unlined pits allowed in specific
9 areas, these are the areas in the northwest, and they
10 mirror the R-7940-exempted areas from the no-pit rule. We
11 just duplicated that in this Rule.

12 Q. Now, those operators who have unlined pits in
13 that area would still be subject to the permitting
14 requirement, though, wouldn't they?

15 A. Yes, they would. They're exempt from the
16 prohibition of having unlined pits, but they would still
17 have to notify and permit those pits.

18 And then the narrative below that listing is
19 simply -- is the same narrative that is in R-7940, and it's
20 the valleys and the tributaries leading to the Animas, La
21 Plata and San Juan Rivers.

22 Q. Did you have work-group consensus on the unlined-
23 pit issue?

24 A. All -- I have indicated that all items in the
25 unlined-pit issue had consensus.

1 Q. Now, our current Rules allow a low-volume
2 exemption, do they not, for unlined pits?

3 A. In R-3221 area they allow a low-volume exemption,
4 yes.

5 Q. Is there such an exemption in the proposed Rule?

6 A. No, there is not.

7 Q. If you could move to the next item, and now we
8 are turning to below-grade tanks, what are the special
9 requirements for those?

10 A. The requirements -- and this is the same
11 requirements that I believe are already in our Rules. All
12 below-grade tanks be constructed with secondary containment
13 and leak detection.

14 Q. Is this a consensus item?

15 A. I indicate it was a consensus item.

16 Q. The next item is special requirements for sumps.
17 Could you tell us about that?

18 A. It's just a requirement that all sumps shall --
19 the operator shall demonstrate the integrity of all sumps
20 annually.

21 Q. Was this a consensus item?

22 A. No, it was not.

23 Q. What was the dispute?

24 A. The -- I believe one proposal was to -- that it
25 be required to visually inspect all sumps annually, and I

1 believe that's the reason it became a nonconsensus item.

2 Q. So the issue was how the inspection would take
3 place?

4 A. That's correct, and we felt -- the Division felt
5 that by stating that the integrity of all sumps shall be
6 demonstrated annually, that demonstration can include
7 visual inspection if that's --

8 Q. But it could include other means?

9 A. It can -- any means that's proposed, that will
10 demonstrate the integrity of that sump.

11 Q. Let's move to the next subsection, which is
12 regarding emergency actions.

13 A. Okay.

14 Q. Can you summarize those requirements?

15 A. This one created some confusion and continues to
16 create some confusion. It's broken down into two different
17 types of pits. The first four, D.1, 2, 3 and 4, are --
18 pertain to pits that are constructed in an emergency.

19 It allows -- In other words, if an emergency
20 happens, such as a waterflow occurs, and they dig a pit
21 right then to contain this fluid. This is what these D.1
22 through 4 primarily concerns.

23 Those pits do not have to be permitted, the
24 Division has to be notified within 24 hours of use, and
25 they -- if -- they have to be -- can only be used for 48

1 hours unless the emergency lasts more than 48 hours, and
2 then they seek approval from the District -- from the
3 Division, it says, which would be delegated by the Division
4 Director as to who approves that.

5 And it can continue for the emergency, it's
6 intended to be able to continue for the emergency.
7 However, when the emergency stops then it has to be emptied
8 within 24 hours.

9 That's a pit constructed in an emergency.

10 Q. Was there a consensus on the provisions regarding
11 pits constructed in an emergency?

12 A. There was consensus on D.2, 3 and 4. There was
13 not consensus on D.1.

14 Q. D.1 is regarding the permitting?

15 A. Yes.

16 Q. What was the dispute there?

17 A. That says Permit Not Required. It was
18 recommended that they put in language concerning verbal
19 approval of pits, which we felt -- the Division felt that
20 this would include verbal approval. It says can be
21 constructed without a permit to contain fluids. That would
22 be verbal approval.

23 And it says the operator must -- in D.4. the
24 operator must seek approval from the Division for continued
25 use of the pit. It doesn't state what type approval. That

1 can be -- I would surmise that that could be verbal
2 approval also.

3 Q. Now, you made a distinction between different
4 types of so-called emergency pits. What is the other type
5 of emergency pit?

6 A. D.4 is the emergency pit. That is, an emergency
7 pit is different than a pit constructed in an emergency
8 pit, in that an emergency pit is constructed prior, as a
9 precautionary matter, in the event there is an emergency
10 that takes place.

11 Q. This is D.5?

12 A. This is D.5. And they are constructed to contain
13 a spill or a release or something like that, they're
14 constructed in the anticipation that an emergency may
15 happen, and we're going to have a pit here to take care of
16 it.

17 Those are the ones that showed up on the
18 presentation as those emergency pits that are constructed
19 and used as disposal pits. A lot of them end up being used
20 as disposal pits.

21 Q. What are the provisions in the proposed Rule
22 regarding this type of pit?

23 A. That they are required to be permitted.

24 Q. So they're treated as any other pit would be?

25 A. Yes.

1 Q. Was this a consensus item?

2 A. No -- This has been changed from what we had a
3 partial consensus on. Other than one member said that he
4 couldn't personally speak for any others, this was changed
5 from the work group version. Where the work group version
6 said no permit is required, this one says a permit is
7 required.

8 Q. Why did you take the opposite approach than the
9 one suggested by the work group?

10 A. We took that in the fact that the work group
11 version had all fluids are removed from the pit within 24
12 hours of use. We felt because there are so many emergency
13 pits, and we -- based on the contamination cases, those
14 that are caused by emergency pits, that it's so easy to
15 turn them into production pits that we felt it -- that the
16 Division felt it better to go ahead and require permitting
17 of those.

18 Q. Let's move to subsection E, Drilling Fluids and
19 Cuttings. What are the requirements there?

20 A. That drilling fluids and cuttings in a pit or a
21 below-grade tank primarily be recycled or dried and
22 disposed of in a manner -- we primarily like them recycled,
23 but that's not always economically feasible -- disposed --
24 this states it's disposed of in a manner approved by the
25 Division to prevent the contamination of fresh water or a

1 danger to the public or the environment, and it requires
2 the proposed disposal method to be placed on the
3 application for permit to drill for a drilling well.

4 Q. Now, this differs from our current Rules, does it
5 not?

6 A. Yes, it does. The current Rule requires the
7 contents of a pit to be buried onsite unless specifically
8 authorized to move it offsite by the District Supervisor.
9 This requires it to be disposed of in a manner approved by
10 the Division.

11 Q. Which may or may not include site burial?

12 A. Which may or may not include site burial.

13 Q. Let's move to subsection F, Closure and
14 Restoration. What are the requirements there?

15 A. Can we go back to E first?

16 Q. Sure.

17 A. I want to make sure they know, this was
18 definitely a nonconsensus item, that certain members of the
19 group were adamantly against burying anything onsite.

20 Q. But now our current Rules require burial onsite?

21 A. That's correct.

22 Q. So the folks who were in opposition to this
23 wanted to make sure that the new Rule simply did not allow
24 burial onsite?

25 A. It prohibited burial onsite, that's correct. And

1 the Division felt that this gives an opportunity to
2 evaluate if there would be any harm in burying it onsite
3 and, if there would, to require it to be moved offsite.

4 Q. Do you want to move on to Closure and
5 Restoration?

6 A. This requires that wells be closed in a manner as
7 approved by the Division within six months after the pit
8 has stopped being used, and with an ability for the
9 Division to grant an extension for an additional six
10 months.

11 It may require a detailed closure plan, depending
12 on the type and extent of the pit, extent -- duration of
13 use, whether it's lined or unlined. But for the most part
14 it just requires closure of that pit within six months
15 after use and submittal of a closure form for closing that
16 pit.

17 Q. What requirements do we have for surface
18 restoration?

19 A. It required -- That's in F.2. It requires within
20 one year after completion of the closure of the pit, the
21 operator contours the surface to prevent erosion and
22 ponding of rainwater, and that was a nonconsensus item
23 also.

24 Q. Do we have any requirements for closure and
25 restoration of pits in our current Rules?

1 A. We have a -- Yes, we do, we have a closure
2 requirement -- and I can't remember the day. I believe
3 it's one year -- or six -- it is six months, and six months
4 extension after, isn't it? I believe it's six months for
5 drilling pits, in the drilling -- in the Rules.

6 Q. So does this represent a change from our current
7 Rules?

8 A. Not for drilling pits, I don't believe it does.

9 Q. Does it for other types of pits?

10 A. Yes, because there are no closure requirements,
11 other -- well, the closure requirements are the closure at
12 the termination of operations on the lease, I believe.

13 Q. If you could move to subsection G, Exemptions and
14 Additional Conditions, could you tell us about those?

15 A. It's just a general, overall statement that the
16 Division can impose additional conditions to any permit if
17 there's a finding that such conditions are necessary to
18 protect fresh waters, public health and the environment.
19 And all these additional conditions are appealable.

20 Q. And exemptions, can you tell us about those?

21 A. It basically states the Division can grant
22 exceptions -- exemptions from the requirements, if the
23 exemption will not endanger fresh water, public health and
24 the environment, and may revoke any exemption after notice
25 and opportunity for a hearing.

1 The exemptions can be granted administratively,
2 provided the operator gives notice to the surface owner of
3 record and to such other persons as the Division may
4 direct, if there are additional notices that are warranted
5 and written waivers are obtained and no objection is
6 received. If written waiver is not obtained or an
7 objection is received, then it has the ability to go to
8 hearing.

9 Q. These notice requirements that you've just
10 described, those are the ones that appear in subsection
11 G.3?

12 A. That's correct.

13 Q. Going back to the exemptions and additional
14 conditions, was that a consensus item?

15 A. G.1 and 2 were consensus items, according to my
16 notes.

17 Q. Was there consensus on the notice provision?

18 A. 3 was not a consensus item.

19 Q. What was the concern there?

20 A. I don't believe that it was -- that some members
21 felt it was necessary to notify the landowner and did not
22 like the idea that the Division could add additional
23 persons to the notice requirements on an individual case-
24 by-case basis.

25 Q. Why did you take the decision you did on notice?

1 A. That the surface owner of record, if he's going
2 to have an unlined -- if there's going to be an unlined pit
3 -- and that's primarily what the exemptions are for, is to
4 allow an unlined pit -- that's -- we felt that the owner,
5 the surface owner, should be notified of that.

6 If there is a pit being drilled in a town or
7 something like that, you know, that may be cause for
8 notifying the city council or county managers.

9 Q. So in that situation you may want additional --

10 A. Additional notice, that's correct.

11 MS. MacQUESTEN: Before we move into a very brief
12 discussion of what we're replacing with this Rule, are
13 there any questions from the Commission about the Rule
14 itself?

15 EXAMINATION

16 BY COMMISSIONER BAILEY:

17 Q. Mr. Anderson, let's go back to the definitions
18 under Exhibit 3. The definition for playa lake, does that
19 mirror the State Engineer's Office definition for playa
20 lake?

21 A. Yes, I believe it does.

22 Q. Okay, I just want to --

23 A. Yes.

24 Q. -- verify and clarify several items.

25 The definition for "sump" gives a capacity less

1 than 110 gallons. How did that volume be arrived at?

2 A. That volume -- that's the -- I believe that that
3 is the contentious issue. That volume started out as half
4 a barrel and -- at 21 gallons, then increased to a barrel,
5 then increased to two barrels, to two drums, because that's
6 -- you know, somebody might have two drums buried in the
7 ground as a sump, and then was proposed to be 250 gallons.

8 And the justification for the 110 gallons,
9 because it's a small quantity and designed to be
10 predominantly empty and just serve as a drain for spills
11 and leaks -- it will be emptied periodically -- seemed
12 reasonable to us.

13 We get into 250 gallons, we're getting into
14 buried -- possibly buried tanks. There are 250-gallon
15 rolling-stock tanks that could be buried and things like
16 that.

17 So that's where the nonconsensus came from, is
18 the actual volume for the sump.

19 Q. So there's no real basis for choosing 110, other
20 than the fact it's two barrels?

21 A. No, it's --

22 Q. Thirty gallons --

23 A. -- no.

24 Q. -- may be just as valid a volume?

25 A. Could be.

1 Q. Go to the proposed order itself. My reading of
2 it in B.3.(b), the sentence that begins, "If use of a pit
3 or below-grade tank will continue, the operator shall file
4 a permit application by June 30, 2004." For clarification,
5 would you mind putting the date in there to indicate
6 whether you're talking about the 2005 date or the 2004
7 date?

8 A. Okay, the -- Certainly. There are two distinct
9 things that are to be done after the notification as to
10 whether they're going to be discontinued or continued to be
11 used.

12 The June 30th, 2005, was for the closure of those
13 pits that are to be discontinued. The June 30th of 2004
14 was for the permit application to be -- the deadline for
15 applying to continue to use that pit and permit that pit,
16 and that is the one that I had recommended that we add 90
17 days to, September 30th, 2004.

18 Q. But I'll admit, every time I read it, I was never
19 real sure which of the two dates you were talking about --

20 A. Okay --

21 Q. -- at that point.

22 A. -- my reasoning for leaving the 2005 date is,
23 that's still 20 months away from now. If we're going to
24 require the notification as to whether they're going to
25 continue or discontinue it by -- which would now be -- add

1 90 days to January, April 15th -- good date -- April 15th,
2 then I figure June of 2005 should be sufficient time to
3 close that, to get the funding available and close the pit
4 if they determine -- decide to close it.

5 Where if they decide to continue using it,
6 September 30th of 2004 I don't think would be
7 inappropriate, because that's just paperwork that has to be
8 submitted; there's no necessity for budgeting for closure.

9 Q. No, I'm just asking for clarification --

10 A. Yes.

11 Q. -- written in so that nobody can --

12 A. Okay.

13 Q. -- misconstrue which one it is.

14 Section C.1 looks for prevention of contamination
15 of fresh water, public health and the environment, and 2
16 allows pits for drilling and workover within watercourses,
17 lakebed, sinkholes or playa lakes. I notice your slide 7
18 indicated that there was contamination from --

19 A. That's correct.

20 Q. -- drilling pits and workover pits. I find an
21 inconsistency between number 1 and number 2 in allowing the
22 transient use of drilling or workover pits within those
23 areas. Is that an area that the Division would have a
24 problem?

25 A. The reason we accepted the pits for a temporary

1 use in transient operations such as drilling and workover
2 is because of a prohibition against unlined pits. These
3 would be required to be lined in these areas, and therefore
4 protective of the groundwater.

5 The only caution that would have to be taken
6 would be for, you know, in a riverbed or something for any
7 major storm events, of which we have seen. And you know,
8 that's a hazard we recognize.

9 But because the prohibition is on unlined pits
10 that would require these to be lined, we feel the short
11 duration and the removal of all the fluids and liner once
12 they're done would have minimal impact.

13 Q. Which brings up another point later in the Rule
14 about closure of pits in this type of area, but I'll hold
15 that for a little bit.

16 I notice that no pit shall be located in any
17 wetland, but there's no mention of wellhead-protection
18 areas or groundwater-sensitive areas.

19 A. No, there is not.

20 Q. Was that for a purpose?

21 A. No, there is not. The wellhead-protection area
22 -- Well, groundwater-sensitive area, that was removed
23 because we have not defined groundwater-sensitive area and
24 have no method to define groundwater-sensitive area.

25 CHAIRMAN WROTENBERY: You might want to look at

1 the next sentence -- the last sentence of 2.(a).

2 THE WITNESS: Well, we do have a definition for
3 groundwater sensitive areas, we're putting that in.

4 CHAIRMAN WROTENBERY: Right.

5 THE WITNESS: And we didn't have -- we don't have
6 a prohibition in groundwater-sensitive areas. We had the
7 requirement for -- there could be additional protective
8 measures placed on it when they apply for the permit.

9 Now, wellhead-protection areas --

10 Q. (By Commissioner Bailey) Because that is an area
11 that is discussed in R-7940.

12 A. That's correct, it is, and we have not -- we have
13 decided -- we have determined not to put wellhead-
14 protection areas in there, because any pits that would be
15 in those areas would be lined pits.

16 Q. Let's go on over to (b) -- (f)? -- right at the
17 end, where it talks about "Drilling and workover pits are
18 exempt from the netting requirement...if the pits are kept
19 reasonably free of oil." Is that "reasonably" going to be
20 defined by the two-tenths of one percent?

21 A. It reasonably could be. That was not discussed,
22 but it very well could be. "Reasonably" was an addition at
23 the last work group meeting to obtain consensus, and under
24 the advice of -- under legal advice, it was determined that
25 reasonable men could define "reasonably". Now that

1 confused me, but -- So we went ahead and put that in there.

2 MR. BROOKS: I believe we should now say
3 "reasonable persons".

4 THE WITNESS: Reasonable persons, excuse me.
5 Excuse me, excuse me.

6 Q. (By Commissioner Bailey) Well, let's go on over
7 to G.

8 A. G?

9 Q. Oh, no, let's go to F first, for closing. The
10 second sentence says, "In appropriate cases, the division
11 may require the operator to file a detailed closure
12 plan..." How is an operator going to know what the
13 appropriate cases are, before they close it?

14 A. That will be part of the permit --

15 Q. Okay.

16 A. -- that will be approved -- that will be required
17 on the approval of the permit.

18 Q. And will there be standards that discuss not
19 puncturing liners and adequate burial of liners?

20 A. I'm sorry, could you --

21 Q. Will there be standards that discuss not
22 puncturing the liner for drying out the pit and for
23 adequate burial of the pit liner?

24 A. I don't know if I could call them standards.
25 They are -- We call them tier-one-type guidance, and that

1 will be discussed in the closure guidelines when they're
2 revised --

3 Q. Because --

4 A. -- and the closure guidelines will be revised in
5 consultation with industry and the public when -- if a
6 final Rule is promulgated.

7 Q. Good, thank you.

8 And the last one, G.2.

9 A. G.2?

10 Q. Uh-huh. "The division may grant exemptions...
11 upon a finding that the granting of such exemption will not
12 endanger fresh waters..." Would you have a problem with
13 replacing "endanger" with "contaminate"?

14 A. No, I would not.

15 COMMISSIONER BAILEY: That's all I have.

16 CHAIRMAN WROTENBERY: Commissioner Lee?

17 COMMISSIONER LEE: (Shakes head)

18 CHAIRMAN WROTENBERY: I have a few as well.

19 I'd like to back up to the definitions too, and
20 there were a couple of definitions of terms I didn't see in
21 Rule 53, and I just wanted to make sure --

22 THE WITNESS: I'm sorry, I'm sorry, I'm confused
23 now.

24 CHAIRMAN WROTENBERY: Okay.

25 THE WITNESS: Could we go back to Commissioner

1 Bailey? Where was that? G --

2 COMMISSIONER BAILEY: G.2.

3 THE WITNESS: In Exhibit 4?

4 COMMISSIONER BAILEY: Under --

5 CHAIRMAN WROTENBERY: Page 5.

6 COMMISSIONER BAILEY: -- Exhibit 4, page 5.

7 THE WITNESS: Oh.

8 CHAIRMAN WROTENBERY: Big G.2.

9 THE WITNESS: Ah, because it is "contaminate" in
10 little (g).(ii).

11 Q. (By Commissioner Bailey) I'm talking big G.2 --

12 A. Okay.

13 Q. -- at the very end of the Rule, page 5.

14 A. Okay. Okay, yeah, because it is -- that's where
15 I got confused. Okay, I'm sorry.

16 EXAMINATION

17 BY CHAIRMAN WROTENBERY:

18 Q. That's okay. I was taking you back to the
19 definitions --

20 A. Okay.

21 Q. -- in Exhibit 3. The term "alluvium" is defined
22 here. How is that term used in Rule 53, or where is it
23 used elsewhere in the Division Rules?

24 A. It is used in the exemptions that were brought
25 over from R-7940, that listing of exemptions.

1 MS. MacQUESTEN: Top of page 4.

2 Q. (By Chairman Wrotenbery) Water-bearing alluvium?

3 A. Yes.

4 Q. Okay.

5 A. And that definition is directly out of the
6 geological dictionary.

7 Q. Okay, thanks. And then "berm", where is that
8 used in Rule 53 or elsewhere --

9 A. That --

10 Q. -- in the Division's Rules?

11 MR. BROOKS: It's used in the definition of
12 "pit".

13 THE WITNESS: That's true, it's not used in this
14 Rule, which -- As clarification, the rule we have -- is not
15 identified as Rule 53, the proposed Rule.

16 Q. (By Chairman Wrotenbery) I'm sorry --

17 A. That's -- well, no, I just -- for the record,
18 that we were told by Records Center we couldn't number it;
19 they have to.

20 MS. MacQUESTEN: If I could add to that, we took
21 out the 53 in the main title of the Rule, but you'll see 53
22 throughout. We didn't have time to remove it there --

23 THE WITNESS: Yeah.

24 CHAIRMAN WROTENBERY: Okay.

25 MS. MacQUESTEN: -- but if the Rule is approved,

1 we'll need to accommodate Records and Archives' requirement
2 on the titling.

3 Q. (By Chairman Wrotenbery) Okay, so --

4 A. And it is --

5 Q. -- proposed new pit rule?

6 A. Yes. The term "berm" is not used in the Rule,
7 it's used in another definition.

8 Q. It's used in the definition of "pit"?

9 A. That's correct.

10 Q. And do I understand correctly that berms
11 constructed around tanks for SPCC purposes --

12 A. That's correct.

13 Q. -- would not create a pit --

14 A. That's correct.

15 Q. -- as defined --

16 A. That's correct.

17 Q. -- in this proposal?

18 A. That is correct.

19 Q. And then the term "wellhead protection area",
20 that is used again with reference to the unlined pits that
21 are allowed in certain areas under little (g).(iv) --

22 A. That's correct.

23 Q. -- is that right?

24 A. That's correct.

25 Q. Okay. And if you'll go to the new Rule and look

1 at big C.2.(a) --

2 A. Big G?

3 Q. C, as in cat.

4 A. Big C. C.2.(a), okay.

5 Q. The special requirements for pits --

6 A. Right.

7 Q. -- and the location requirements specifically.

8 In the second sentence the phrase "watercourse or
9 depression" appears twice. In that context does the term
10 "depression" refer to lakebed, sinkhole or playa lake? Is
11 that just shorthand for lakebed, sinkhole or playa lake, or
12 does that mean something broader?

13 A. That was a definition taken directly from -- I
14 believe it was 79- -- or 3221. And I assumed from that
15 Order -- and we have been interpreting it as a shortened
16 version of the rest of them.

17 Q. Okay, that's the way I read it too, but I just --

18 A. Yeah.

19 Q. -- wanted to make sure --

20 A. Yeah, that's --

21 Q. -- that we're all clear on --

22 A. -- that was an interpretation that we made.

23 Q. Okay. And then under C.2.(e) where you're
24 talking about spray evaporation systems, the proposed Rule
25 specifies that they shall be operated such that all spray-

1 borne solids remain within the perimeter of the pond's
2 lined portion. Does the term "spray-borne solids" cover
3 everything you want to keep within the confines of the
4 pond's lined area?

5 A. This is one of the things that kept this item
6 nonconsensus for a long period of time, is that the salts
7 that are in the spray -- where the water is designed to be
8 evaporated and will drift off and evaporate outside the
9 boundaries of the pond, it's the salt itself that can
10 precipitate out, that we want to remain within the confines
11 of the lined portion of the pond.

12 Q. Uh-huh.

13 A. And this is a language that I think everybody in
14 the work group could live with, and I believe it describes
15 what we want to keep within the pond. The only thing it
16 won't keep is the water and any dissolved constituents.

17 Q. Well, wouldn't you be concerned if water with
18 dissolved constituents --

19 A. We would prefer to keep all spray within the
20 confines of the term. In our opinion, if we look at a tree
21 beside a pond and there's salt on it, then the spray-borne
22 solids have not been kept within the pond, because there
23 are solids on that tree.

24 Q. And so I believe you're telling me that this
25 provision would require the operator to ensure that water

1 with dissolved solids --

2 A. -- stays within the pond.

3 Q. -- stays within --

4 A. That's correct.

5 Q. -- the lined portion of --

6 A. What we were trying to do is keep it in the lined
7 portion of the pond but allow it to go up, and that's hard
8 to say.

9 Q. Okay, thank you. And then if we could go to C.3
10 on page 4 of the proposed new Rule. I'm not sure I
11 understand the implications of the second sentence. It
12 says, The operator of any below-grade tank constructed
13 prior to the effective date of this Rule shall demonstrate
14 its integrity annually and shall remove it or equip it with
15 leak detection at the time of any major repairs.

16 When I read that sentence with the first
17 sentence, I think I understand the intent to be that new
18 below-grade tanks have to be constructed with secondary
19 containment and leak detection.

20 A. That's correct.

21 Q. So the first sentence just applies to below-grade
22 tanks constructed after the effective date of this Rule?

23 A. That's correct.

24 Q. And then the second sentence deals with below-
25 grade tanks that existed before the effective date of the

1 Rule?

2 A. That's correct.

3 Q. And in that case they may continue to be operated
4 without secondary containment and leak detection, at least
5 until any major repairs are performed, at which time the
6 operator will have to install secondary containment with
7 leak detection?

8 A. That's correct, or remove the tank completely.

9 Q. Or remove the tank completely. And then in the
10 meantime the operator will have to demonstrate the
11 integrity each year?

12 A. That's correct. And the reason for doing that
13 was, in one of the Rules that we are proposing to rescind
14 required that below-grade tanks made in accordance with
15 special rules or in accordance with the guidelines -- and
16 the guidelines did require secondary containment and leak
17 detection -- required that after January 1st, 1986, all of
18 those tanks had to have secondary containment.

19 And this is moving that January, 1986, deadline
20 up to the effective date of this Rule for putting leak
21 detection and allowing those that were constructed not in
22 compliance with the Rules in the first place to go ahead
23 and continue and still demonstrate annual integrity.

24 Q. Okay. And then in big G.2 I was looking at the
25 second sentence, and it provides that the Division may

1 revoke an exemption after notice and an opportunity for a
2 hearing. What would be the basis for the Division revoking
3 an exemption?

4 A. If the Division had, through investigation or
5 through knowledge that, say, groundwater has been
6 contaminated, that they have determined that the exemption
7 is not protective of public health or the environment or
8 groundwater, that we could ask for the exemption to be
9 revoked and present our evidence at a hearing.

10 CHAIRMAN WROTENBERY: Okay, I think those were
11 all of my questions. Thank you.

12 It looks like it's about time to take a break for
13 lunch.

14 What else did you wish to cover?

15 MS. MacQUESTEN: Only two things. I have one
16 follow-up question to the question asked by, I believe,
17 Commissioner Bailey, and the remainder of the presentation
18 of Mr. Anderson was simply to point out to the Commission
19 that those provisions that we're seeking to rescind are in
20 your notebook as Exhibits 5 through 10. We don't need to
21 go through those in any detail, but I did want to provide
22 them to the Commission so you can see what we are asking to
23 rescind.

24 CHAIRMAN WROTENBERY: Okay. And with that,
25 you're concluding Mr. Anderson's presentation?

1 MS. MacQUESTEN: Yes, I just wanted to make one
2 follow-up question, and I did want to introduce into
3 evidence the exhibits that we've gone through this morning.

4 CHAIRMAN WROTENBERY: Okay, go ahead, then, with
5 the follow-up question.

6 DIRECT EXAMINATION (Resumed)

7 BY MS. MacQUESTEN:

8 Q. Mr. Anderson, if you could look at big G.2, there
9 was a question about exemptions. It provides that such
10 exemption will not endanger fresh waters, public health or
11 the environment, and the question that was asked was
12 whether you would be agreeable to substitute the word
13 "contaminate". Would "endanger" offer more protection than
14 the word "contaminate"?

15 A. Yes, it would, and at the time I was looking at
16 the wrong G.2 when I answered that. I was looking at the
17 one that already had "contaminate", and I couldn't figure
18 out why we were wanting to change it.

19 But yes, "endanger" does offer more protection to
20 the fresh waters. "Contaminate" is the end result of
21 "endangerment".

22 Q. So the use of the word "endanger" was intended to
23 afford more protection --

24 A. More protection, that's correct.

25 Q. -- not less?

1 COMMISSIONER BAILEY: All right, thank you.

2 MS. MacQUESTEN: Unless the Commission would like
3 to go through those provisions that we are asking to
4 rescind, I would simply like to point out that we do have
5 copies of them in your notebook.

6 CHAIRMAN WROTENBERY: That's not necessary.

7 MS. MacQUESTEN: We've talked about them all
8 during the course of the presentation this morning, but I
9 did want to point out that they're there so you can take a
10 look at them for yourselves and see what it is we are
11 proposing to rescind.

12 CHAIRMAN WROTENBERY: Okay.

13 MS. MacQUESTEN: And we could finish up with Mr.
14 Anderson's testimony, direct testimony, right now by
15 allowing me to ask him:

16 Q. (By Ms. MacQuesten) Have you prepared the
17 exhibit book that you have in front of you --

18 A. Yes.

19 Q. -- Exhibits 1 through 10?

20 And in particular, did you prepare the PowerPoint
21 presentation you used at the beginning of your
22 presentation?

23 A. Yes, I did.

24 Q. And was that PowerPoint presentation using
25 pictures and information gathered by you or your staff from

1 the information available to the Division?

2 A. Yes, it was.

3 Q. I would like to offer Exhibits 1 through 10 into
4 evidence.

5 CHAIRMAN WROTENBERY: Exhibits 1 through 10 are
6 admitted into evidence.

7 MS. MacQUESTEN: This concludes our direct
8 presentation of Mr. Anderson's testimony.

9 CHAIRMAN WROTENBERY: Okay, thank you. The
10 Commissioners have had a chance to ask Mr. Anderson
11 questions, but let me ask if there's anybody in the
12 audience that would like to pose a question of Mr.
13 Anderson?

14 MR. SANDOVAL: I have a very quick question.

15 CHAIRMAN WROTENBERY: Certainly. Could you
16 identify yourself?

17 MR. SANDOVAL: Yes, ma'am. My name is David
18 Sandoval, I'm an attorney here in town.

19 EXAMINATION

20 BY MR. SANDOVAL:

21 Q. I had a question on Exhibit 4, Mr. Anderson. The
22 small (g) section that deals with unlined pits on page
23 number 3, the subsection (ii), I believe you testified that
24 such an exemption would be granted only after notice was
25 given to the landowner, but I don't see any specific

1 language in that section.

2 Later on in your testimony, though, under capital
3 G, number 3, again, exemptions are referenced there and
4 there is specific language there that provides notice to
5 the landowner.

6 Would it be proper to add that specific language
7 onto that section in the unlined pits portion of the Rule
8 as well? It expressly specifies right there that notice
9 shall be given to the landowner.

10 A. I don't know if I would say it's proper. I'd say
11 -- It wouldn't be improper, but I don't know that it would
12 be necessary, since the requirements are under the
13 exemptions, on how to grant exemptions, and any exemption,
14 whether it's for an unlined pit or for anything else in
15 this Rule --

16 Q. Okay.

17 A. -- would have to go through this procedure.

18 Q. So then the intent would be for the exemption
19 that is described in capital G to also apply to the
20 exemption under small (g)?

21 A. Certainly.

22 Q. Okay.

23 COMMISSIONER LEE: Are you representing anybody,
24 or are you representing yourself?

25 MR. SANDOVAL: I am an attorney here in town. We

1 represent several landowners and ranchers and surface
2 owners in Lea County, and I have a few comments to make a
3 little bit later today, sir.

4 COMMISSIONER LEE: Okay.

5 MR. SANDOVAL: Thank you, madame Chair.

6 CHAIRMAN WROTENBERY: Thank you.

7 Yes, Dr. Neeper?

8 DR. NEEPER I'm Don Neeper, speaking as a private
9 citizen.

10 DIRECT EXAMINATION

11 BY DR. NEEPER

12 Q. Mr. Anderson, could you tell us, if you have the
13 numbers, what fraction of the State's production falls
14 under the exemption for unlined pits?

15 A. I couldn't tell you that number. I don't know.
16 Of oil and --

17 Q. Would say that substantially all of the
18 production in the San Juan Basin is exempt?

19 A. Is exempt from -- ?

20 Q. The requirement for a liner?

21 A. You mean all of the oil and gas production in the
22 San Juan Basin would be exempt for the requirements of a
23 liner?

24 Q. Would that be your estimate?

25 A. I wouldn't think so, no. We've never done a

1 study on what could be granted an exemption or what is
2 granted under the exemption clauses. We just -- We haven't
3 looked at that.

4 COMMISSIONER LEE: Okay, and who do you
5 represent?

6 DR. NEEPER Private citizen.

7 COMMISSIONER LEE: Thank you.

8 CHAIRMAN WROTENBERY: Okay, anybody else? Yes?

9 EXAMINATION

10 BY MR. NEWELL:

11 Q. Yes, my name is Mike Newell and I also
12 represent -- our firm also represents certain landowners in
13 Lea County, and when you were identifying the areas that
14 would be exempt did you look at things such as
15 environmentally sensitive areas?

16 And I'll just give you one example we believe
17 that falls outside of the area where lined pits would be
18 required, and that would be the Medranos raptor site, as
19 identified by the federal government. Apparently it is a
20 very highly sensitive site for raptor mating. And
21 supposedly, according to the BLM book I have back there it
22 is the most intensive site for mating of various raptors,
23 including the golden eagle, within the whole North American
24 continent.

25 Did you all even look at things such as that when

1 you all were developing what should be inside and outside
2 these pit requirements?

3 A. No, sir, we did not look at anything specific
4 such as that. We do have comments in a letter from the New
5 Mexico Game and Fish that have identified some areas that
6 we could consider for declaring of sensitive areas where we
7 could put more strenuous or different requirements on.

8 But those individual areas throughout the state
9 we would look at under the requirement of -- additional
10 requirements in declared sensitive areas.

11 Q. Is it your belief, based on your testimony this
12 morning that I've heard, that prevention of these health or
13 environmental or groundwater-pollution issues should be the
14 main priority of the Commission?

15 A. Yes, it is.

16 CHAIRMAN WROTENBERY: Thank you, Mr. Newell.

17 Anybody else with questions? Yes?

18 MS. GOLDMAN: I'm Jennifer Goldman with the Oil
19 and Gas Accountability Project.

20 EXAMINATION

21 BY MS. GOLDMAN:

22 Q. Going back to your earlier slides, the one
23 entitled "Pit-Caused Contamination", I was just wondering
24 if you could tell us, of the 557 instances of groundwater
25 contamination, how many -- did you test all 6748 of those

1 pits to groundwater to come up with that number? Or how
2 many were tested?

3 A. A lot -- yes, a lot of the -- No. No, we did not
4 necessarily -- on all six-thousand-some that had soil
5 contamination, all of them did not necessarily go to
6 groundwater, but they went to the bottom of the
7 contamination. They were all tested to the bottom of the
8 contamination where the contamination stopped.

9 It may have been another 20 or 30 feet to
10 groundwater, but if there's no contamination -- Say
11 groundwater is 50 feet, there's no contamination at 30
12 feet, we made the assumption -- and I'm saying no
13 contamination -- we made the assumption that there wasn't
14 any further down than that. We went to the center of the
15 contamination and went as far down as the contamination
16 went.

17 CHAIRMAN WROTENBERY: Other questions of Mr.
18 Anderson?

19 MR. FELDEWERT: Madame Chairperson, Michael
20 Feldewert. I'm here on behalf of IPA of New Mexico. We do
21 have some questions of Mr. Anderson. I would suggest that
22 maybe we could break for lunch and I can go over what we
23 had initially thought we might need to ask, see if we can
24 put some of that down, given some of the testimony here
25 this morning.

1 So I would like the opportunity to ask Mr.
2 Anderson some questions after we break for lunch.

3 CHAIRMAN WROTENBERY: Okay, and I'll give other
4 folks that same opportunity.

5 We will take -- Will one hour be sufficient?
6 We'll take an hour break at lunch, but I'll make it an hour
7 and 10 minutes, and start back at 12:15 -- I mean 1:15.

8 (Thereupon, noon recess was taken at 12:05 p.m.)

9 (The following proceedings had at 1:25 p.m.)

10 CHAIRMAN WROTENBERY: Okay, I think everybody's
11 here now, we can get started again.

12 Let me just say, Ms. MacQuesten has advised me
13 that she has finished making the Division's direct
14 presentation. We still have some more questions, I
15 believe, from the audience for Mr. Anderson. We'll take
16 those next.

17 And then I've got sign-in sheets from 12 or 13 or
18 14 people here, and most of the people signing up indicate
19 that they want to make a statement, in general a fairly
20 brief statement.

21 We do have three people who indicate they would
22 like to offer testimony, so what we'll do is, after we
23 finish Mr. Anderson's portion of the testimony we will move
24 to the other three individuals -- or actually there are
25 four individuals because there's two signed up together --

1 and companies who would like to present testimony, and then
2 take up anybody that would like to make a statement.

3 But let me ask again, is there anybody with
4 scheduling constraints this afternoon who needs to go out
5 of order? And I believe -- Ms. Rees; is that right?

6 MS. REES: Yes.

7 CHAIRMAN WROTENBERY: You would like to go right
8 after Ms. Blancett and Mr. Velasquez, and we'll set that up
9 that way, then.

10 Anybody else with scheduling difficulties?

11 Okay, then we can get started again with
12 questions for Mr. Anderson.

13 Mr. Feldewert, are you ready?

14 MR. FELDEWERT: Thank you.

15 EXAMINATION

16 BY MR. FELDEWERT:

17 Q. Mr. Anderson, on behalf of IPA of New Mexico I
18 want to thank you for the efforts that you and your staff
19 have taken to come up with this Rule. I know it's been an
20 extensive and ongoing effort with a number of meetings, so
21 I want to -- we appreciate that effort.

22 There's some questions we have about the specific
23 language of what has been marked as Division's Exhibit
24 Number 4, which I understand to be the proposed Rule. And
25 if we could turn to that, I first want to make sure I get

1 oriented correctly.

2 As I look at page 2 of that proposed Rule, you
3 have some special requirements. And the way they're split
4 up, as I understand it, is, you have categorized certain
5 pits. You have what are categorized under little (b).(i)
6 as drilling, workover pits, and then as little (b).(ii)
7 disposal and storage pits. Can you just briefly identify
8 the difference between those two categories?

9 A. The basic difference is, disposal and storage
10 pits are long-term pits, where drilling and workover pits
11 are short-duration pits.

12 Q. Now, drilling and workover pits, now, would be
13 short-term pits. Are they associated, I guess, with what
14 some people would call transient operations?

15 A. That's correct.

16 Q. Okay. And these pits are going to be lined; is
17 that correct?

18 A. Unless they obtain an exemption.

19 Q. All right. And the Division has, I assume, come
20 to the conclusion that with the lining and location
21 requirements of these drilling and workover pits, that
22 these short-term, short-lived pits would pose no threat to
23 groundwater?

24 A. That's correct.

25 Q. All right. Now, I have a question, then, about

1 the permitting process, which I believe begins at Section B
2 on page 1. Section B.1.(b) is the one that would apply to
3 the short-term -- what you call these drilling workover
4 pits; is that correct?

5 A. Not necessarily.

6 Q. Okay.

7 A. Those apply to all pits on an
8 exploration/production site. It could be a long-term or --
9 it could be a drilling or workover pit at that well, or it
10 could be a disposal or a storage pit at that well.

11 Q. Okay, can you explain to me exactly how this is
12 going to work with respect to these drilling and workover
13 pits?

14 A. I'm not sure what you're asking.

15 Q. How is the -- Someone who wants to construct a
16 drilling or workover pit, what do they have to do under
17 this Rule --

18 A. The --

19 Q. -- with respect to filing with the Division?

20 A. The pit would be permitted in any number of ways.
21 A company who has a large project that they're doing in the
22 field with similar characteristics in that field such as
23 soil, geology, hydrology, could get a general permit for
24 their pit. And then on the APD when they apply for a
25 drilling permit, they would reference that general permit

1 for the design, construction and operation of that pit and
2 just notify of the location that that pit is going to
3 occupy.

4 If it's a well here or a well there, it would be
5 -- the general construction requirements, the operation and
6 maintenance requirements of that pit would be part of the
7 APD itself.

8 Q. All right, so if you have a well here or a well
9 there in which you need a drilling pit or a workover pit,
10 am I understanding you correctly that what you do is, you
11 file an APD with the Division?

12 A. For drilling a well you have to file an APD --

13 Q. Correct --

14 A. -- yes.

15 Q. -- and on that APD do you then designate your pit
16 area?

17 A. That's correct.

18 Q. Okay. And is that then all that you have to do
19 in terms of the paperwork associated with a drilling and
20 workover pit?

21 A. Until you close it.

22 Q. Until you close it.

23 A. And then when you close it, you submit your
24 closure report. And that can be either on a C-103, a
25 sundry notice or on the closure report, a form closure

1 report, and it was a C-1- -- what was it? 141, I believe?
2 144.

3 Q. 144. Are you contemplating a C-144 for drilling
4 and workover pits?

5 A. Only if necessary. It can be used for any pit.
6 It can be used for any pit.

7 Q. How would you determine whether it's necessary to
8 use a C-144 or whether you could just file a closure notice
9 on your -- I guess it would be your sundry notice, right?

10 A. For a drilling pit, the only time a C-144 would
11 be applicable is if the closure is -- I would put out of
12 the ordinary -- an out-of-the-ordinary closure. Most of
13 the time, the closure procedure would be dictated in the
14 approval of the C-144 -- or in the APD, I'm sorry, in the
15 APD.

16 When that's approved the procedure for closure of
17 a pit would be approved at that same time --

18 Q. All right --

19 A. -- and that would designate whether a C-144 would
20 be used. And the only time a C-144 would be used, if it's
21 not a simple closure --

22 Q. So --

23 A. -- if there's determined to be contamination or
24 something.

25 Q. So if I'm correct, then, what you're

1 contemplating for drilling and reserve pits would be the
2 filing of a standard APD that would have the location of
3 the pit on there and then a reference to the closing that
4 will be performed?

5 A. That's correct.

6 Q. And is that all the filing that would be
7 necessary?

8 A. No, the -- Well, when they complete the well they
9 file a C-103. And if the pit is closed at that time, that
10 would be part of the C-103, the sundry notice.

11 Q. Okay. Is that a process that is similarly used
12 in Texas?

13 A. I do not know.

14 Q. Okay. I want to talk to you a little bit about
15 the netting requirement in this Rule, which is, I believe,
16 on page 2 at the bottom, and it continues over to the top
17 of page 3. Do you see that little (f) down there?

18 Well first of all, I want to talk about the
19 fencing requirement. It says in here, "All pits shall be
20 fenced or enclosed to prevent access by livestock or
21 wildlife." And I remember the discussion about keeping the
22 phrase "wildlife" in there.

23 By including that phrase "wildlife" within the
24 provision, are you contemplating a fencing requirement
25 other than a standard barbed-wire fence that is in use now

1 in the area?

2 A. It has been mentioned to us that a standard
3 three-strand barbed-wire fence won't keep out a deer, it
4 won't keep out -- It will keep out cattle, and that's
5 probably about it. And it's understood that you're not
6 going to keep out elk, even with a stronger fence, unless
7 you want to build an elk fence. There's got to be some
8 common sense applied to this also.

9 Q. Well, that's what I'm trying to figure out. What
10 is the Division contemplating in terms of the fencing
11 requirement under this little paragraph (f)? Is it
12 anything other than a standard barbed-wire fence?

13 A. It could be, depending on where it is.

14 Q. And how is that determination going to be made?

15 A. That would be individually determined on a site-
16 specific basis. If it's determined that a standard barbed-
17 wire fence is not adequate because there's a lot of
18 wildlife that succumbed in the pit or something such as
19 that, then the District can require more stringent fencing
20 requirement.

21 That's what we contemplated when we wrote this.
22 It would be on a case-by-case basis.

23 Q. And how -- As an operator, how are you supposed
24 to know what the fencing requirement is going to be for a
25 -- for example, for a pit?

1 A. I'd say -- Well, it's not explained in here
2 specifically what type of fence, and I don't know of any of
3 our Rules that specify that kind of thing. I would say it
4 would be common sense, you know: If one thing doesn't
5 work, we're going to try something different.

6 Q. Okay, so am I correct that the way this would be
7 applied is that you could use a standard fence unless the
8 Division determined that that was not working, and then
9 something else would be considered?

10 A. I don't see why that would be unreasonable.

11 Q. Okay. With respect to the netting requirement --
12 and the specific phrase I want to look at is at the bottom
13 of page 2 and continues over to the top of page 3. It
14 says, "Drilling and workover pits are exempt from the
15 netting requirement during drilling or workover operations
16 if the pits are kept reasonably free of oil."

17 Now, what does the Division mean by the phrase,
18 "during drilling or workover operations"?

19 A. While the well is being manned by people.

20 Q. All right. Now, does that mean as long as the
21 drilling or -- as long as the rig is there, you don't have
22 to have a netting on your drilling and workover pit?

23 A. That's correct.

24 Q. Okay. You're not contemplating -- Some people
25 have raised this concern. You're not contemplating the

1 fact that when the rig is shut down but remains on site you
2 have to go out and net the pit?

3 A. No.

4 Q. Okay. Now, is this meant to say that you have to
5 net the pit as soon as the rig moves off the well, no
6 matter what the condition of the pit?

7 A. Or remove the hydrocarbons from the pit. It says
8 or --

9 Q. See, that's my problem. It seems to say that no
10 matter what the condition of the pit, you have to net it so
11 long as drilling and workover operations are not ongoing.
12 And I'm wondering, do we need that phrase "during drilling
13 and workover operations"?

14 A. I believe we do.

15 COMMISSIONER LEE: I believe we do too.

16 Q. (By Mr. Feldewert) My question is this: If the
17 drilling and workover operations have ceased and the pit is
18 kept reasonably free of oil, are you going to require
19 netting? Is that how this is supposed to be interpreted?

20 A. Okay, if it can be demonstrated that that
21 "reasonably free of oil" -- and the reason I left that in
22 there, if it can be demonstrated that the "reasonably free
23 of oil" definition as the operator will -- because that's
24 going to be a determination of the operator; the
25 "reasonably" was not in there in the original Division

1 draft -- can demonstrate that the pit is not hazardous to
2 migratory birds, then it wouldn't need to be netted anyway.

3 Q. Okay, and that's what I'm trying to get to. I
4 mean, if they're out there and they've got a drilling pit
5 and the rig has moved off, and the operator looks at it and
6 it's reasonably free of oil, are you contemplating that
7 there's a netting requirement at that point?

8 A. If it's reasonably free of oil, no, until one
9 bird is found.

10 Q. And that's consistent with the -- I mean, I think
11 the existing Rule is 105.B, and that's always read that you
12 either have to have netting or it has to be free of oil,
13 and I just wanted to make sure there wasn't a change in
14 policy as a result of this --

15 A. No --

16 Q. -- particular language.

17 A. -- there's not a change in policy.

18 Q. Okay, that takes care of that.

19 You have in this Rule on page 2, Section (e),
20 middle of (e), it says, "Liquids with greater than two-
21 tenths of one percent free hydrocarbon shall not be
22 discharged to a pit." I'm trying to figure out -- You said
23 this was a nonconsensus item, and if I understand you, this
24 two-tenths-of-one-percent provision came out of some 1977
25 memo; is that right?

1 A. That's correct, mid-1970s.

2 Q. And that was an attempt to identify --

3 A. -- miscellaneous hydrocarbons.

4 Q. -- miscellaneous hydrocarbons, okay.

5 When you are dealing with lined drilling and
6 reserve pits, for example, what is the rationale for
7 putting a percentage threshold on the hydrocarbon content
8 of liquids that are discharged into that pit?

9 A. In a drilling or workover pit?

10 Q. Yeah.

11 A. It's not in there. That's disposal or storage
12 pits.

13 Q. Okay. And if that disposal or storage pit is
14 lined, is there a rationale for having this two-tenths-of-
15 one-percent threshold in there?

16 A. That's part of our charge to prevent the waste of
17 oil.

18 Q. So is that -- is the concern with this two-tenths
19 of one percent, is it a groundwater concern or is it a
20 waste concern?

21 A. For the two-tenths of one percent going to a
22 disposal pond or a storage pond, it's a waste-of-oil
23 concern.

24 Q. Okay, all right. So if someone out there is
25 using a separator, for example, and actually retrieving the

1 oil, there shouldn't be a problem; is that right?

2 A. If the separator is designed to remove the oil
3 down to that level, that's correct.

4 Q. How is this two-tenths-of-one-percent provision
5 going to be enforced by the Division? How do you
6 contemplate that being --

7 A. The only way you can do it is, you centrifuge it
8 out, if it's done. Same way it's been enforced since the
9 mid-1970s.

10 Q. So is there -- I guess I'm trying to figure out,
11 is there a policy change here? We've always had Rule 105,
12 and it always says it has to be reasonably free of oil. Is
13 this the same analysis? I mean, when you talk about two-
14 tenths of one percent, is that going to be a new method of
15 enforcement by the Division where it's somehow going to go
16 out and measure this, or how do they -- how is it going to
17 be --

18 A. I don't know if it's going to be a new method of
19 enforcement or not. I do know that the reason the two-
20 tenths of one percent was put in there was because of the
21 objections to the term "reasonably". So there was some
22 method attempted to quantify the amount of oil in a pit,
23 rather than say a sheen or a skim of oil. And since two-
24 tenths of one percent was already in use in the Division
25 from a memo defining miscellaneous hydrocarbons from the

1 1970s, that's what we chose. It was an arbitrary choice.

2 Q. Has there been much consideration on how this is
3 going to be enforced, how it's going to be measured, how
4 this is going to be implemented?

5 A. I have not considered that, no.

6 Q. Okay. I want to talk about sumps, if I could, on
7 page 4 of Exhibit 4. This was one of those items that
8 wasn't a consensus item again, as I understand --

9 A. That's correct.

10 Q. -- your testimony. Okay.

11 A. That's correct.

12 Q. And "sumps" is defined in your proposed
13 regulations -- and I think Ms. Bailey was there earlier --
14 as predominantly -- as a device that remains predominantly
15 empty, correct?

16 A. That's correct.

17 Q. And a device that is not used to store, treat,
18 dispose of or evaporate products of wastes?

19 A. That's correct.

20 Q. So these are, in essence, as I understand it, as
21 someone who's not too familiar with these, these would be,
22 I guess, catch basins or secondary containment?

23 A. You could call them that, not secondary
24 containment but catch basins, leak catches, things like
25 that.

1 Q. They're kind of backups to facilities --

2 A. Most of them you could call backups, yes.

3 Q. Okay. Now, I have a couple questions about this.

4 When you mentioned the language, being "the integrity of
5 all sumps shall be demonstrated annually", you indicated
6 that you thought that that could be done visually?

7 A. Certainly.

8 Q. Is there any reason why we could not include
9 within this portion of sumps the idea that it could be --
10 this integrity could be demonstrated visually by some other
11 means?

12 A. It's just -- It could be, I don't see the
13 difference. It's -- "integrity demonstrated" doesn't give
14 a method.

15 Q. Okay.

16 A. It just says it will be demonstrated.

17 Q. So would you have an objection to the inclusion
18 of language so that there wouldn't be any confusion that
19 they could be -- this integrity could be demonstrated
20 annually by visual means or some other method?

21 A. If there was confusion, I wouldn't object to it,
22 no. But I don't see any confusion.

23 Q. Do you contemplate any paperwork associated with
24 this?

25 A. Paperwork that the operator maintains but not

1 submits.

2 Q. So you keep a log of your visual inspections?

3 A. Yes.

4 Q. Okay. Now, this definition that is in this
5 Rule -- and Ms. Bailey -- or Commissioner Bailey referred
6 to this earlier. Has a -- It says less than 110 gallons,
7 and when she asked you about that limitation you said it
8 seemed reasonable but didn't really have a rational basis,
9 it was kind of --

10 A. That's correct.

11 Q. Let me ask you this. Why -- In light of the fact
12 that these are defined as devices that remain predominantly
13 empty and devices that are not used to store, treat or
14 dispose of products, why is there any need to have a gallon
15 limitation?

16 A. Because I have seen probably 90 percent of the
17 sumps that I've checked that predominantly contain fluids.

18 Q. Well, those wouldn't fall under this definition,
19 though, would they? I mean --

20 A. Sure, they would fall under the definition of
21 sumps, but they're just never empty.

22 Q. Well, part of the -- I'm -- and I don't mean to
23 quibble, but part of the definition of sumps is that it
24 remains predominantly empty, and it has to remain
25 predominantly empty to fall under the definition.

1 A. That's -- Under the new definition, yes.

2 Q. Okay, and adopting -- And that's maybe where we
3 got confused. Assuming we adopt this new definition of
4 sumps, okay, and we have the language in there
5 "predominantly empty, not used to store or treat", is there
6 any reason to have a gallon limitation?

7 A. Not at the enforcement of -- if it's not emptied,
8 then -- if there's not going to be a gallonage, then there
9 has to be a time limit on how long they can have fluids in
10 them.

11 Q. Well, wouldn't that be the case with all sumps,
12 whether they're big or small?

13 A. Well, I can't define "predominantly empty".

14 Q. Okay.

15 A. If we want to do away with the gallonage, I'd say
16 that all sumps will be emptied within 12 hours of fluids'
17 entry, or something like that.

18 Q. I guess I'm trying to figure out why, if you had
19 a 125-gallon sump that was predominantly empty and was not
20 used to store or treat, why it would be treated differently
21 from a 50-gallon sump?

22 A. When you're -- and between a 125- and a 50-gallon
23 sump there may not be that much difference. But then you
24 get somebody who puts in a 10,000-barrel sump and it has a
25 leak in the bottom of it and it ends up getting filled up,

1 that's a heck of a lot more damage than a 110-gallon sump
2 that fills up and has a leak in it.

3 Q. Now -- and let me -- and you're talking about if
4 it's a hundred and -- What was the number you used, the
5 high -- the big one?

6 A. 10,000-barrel.

7 Q. 10,000-barrel. If that 10,000-barrel was -- fell
8 within a sump definition and stayed predominantly empty and
9 was not used to store, then it wouldn't pose a problem,
10 right?

11 A. Not necessarily. If it was 10,000 barrels and
12 predominantly empty, if it held 10,000 barrels for a day
13 and it had a leak in it, yes, it would be a problem --

14 Q. Okay, now let's talk about that.

15 A. -- it would definitely be a problem.

16 Q. If we leave this in here and you've got -- and
17 you use this 110 number, and you've got a 120-gallon sump,
18 does that become, then, a below-grade tank?

19 A. Yes.

20 Q. And it then falls under the requirements of a
21 below-grade tank, which is on page 4 of this --

22 A. That's correct, leak detection.

23 Q. -- Rule, right? And so you'd have to have a
24 leak-detection system --

25 A. That's correct.

1 Q. -- and you'd have to have a secondary-containment
2 device?

3 A. That's correct.

4 Q. So you would have a 115-gallon sump that is
5 partially below the surface, that itself acts as a catch
6 basin, it's not used for storage, and is predominantly
7 empty --

8 A. That's correct.

9 Q. And under this rule with this limitation in
10 there, you'd have to have a leak-detection system for that
11 vessel --

12 A. That's correct.

13 Q. -- and you'd have to have, I guess what would be
14 a secondary-containment vessel for this catch basin?

15 A. Well, secondary containment, that's correct.

16 Q. For this catch basin?

17 A. That's correct.

18 Q. Okay. Now, let me ask you about your PowerPoint
19 slide which has been marked as Exhibit Number 1. It has a
20 number of pictures in there. I'm looking at page 5. Now,
21 this picture on page 5, which you've labeled a drilling pit
22 picture, do you know when that was taken?

23 COMMISSIONER LEE: It's right there. The date is
24 right there.

25 THE WITNESS: July 12th, 2002.

1 Q. (By Mr. Feldewert) Okay, thank you. And I think
2 you indicated this isn't a drilling pit, it's a pit that's
3 now used to hold produced water.

4 A. It was a drilling pit that was supposed to have
5 been closed.

6 Q. Okay. And when you took this picture, this is in
7 the condition in which it's holding produced water; is that
8 right?

9 A. That's correct.

10 Q. Okay. And do you recall -- Do you know how old
11 this pit is?

12 A. No, I do not.

13 Q. Do you know whether there was any contamination
14 as a result of this pit?

15 A. I do not, off the top of my head. If we want to
16 discuss the contamination by any of these pits, we'll bring
17 Bill Olson up. He's the one that handled the contamination
18 cases.

19 Q. Would you agree with me that this is not a
20 typical drilling pit?

21 A. Would I agree with you that it's not a typical --
22 No, I wouldn't agree with that. I don't know if it is or
23 not, so I can't agree with something I don't know.

24 Q. Okay, you don't know whether this is a typical
25 drilling pit or not a --

1 A. No, I've seen others --

2 Q. -- typical drilling pit?

3 A. -- like this, yes.

4 Q. Okay, but they're not -- You wouldn't say a
5 majority of them look like this?

6 A. No.

7 Q. Okay. Now, the next picture is a picture of a
8 pit that's -- a drilling pit that's being closed, correct?

9 A. Uh-huh, that's correct.

10 Q. All right. Would that be any more representative
11 picture of

12 maybe the size of a drilling pit?

13 A. No, that's in the process -- I believe that's in
14 the process of being closed, and some of the sides have
15 already been pushed in. Now, whether it's representative
16 of the size, there are lots of different size of drilling
17 pits.

18 Q. Do you -- and I want to talk a little bit about
19 the numbers that were thrown out here in these PowerPoint
20 slides. Are you -- And I want to focus here on drilling
21 and workover pits, Mr. Anderson. Are you aware of any
22 drilling and workover pit that has posed an immediate
23 threat to water quality control standards?

24 A. We have two drilling pits that we have confirmed
25 that have caused groundwater contamination exceeding WQCC

1 standards.

2 Q. You have two drilling pits --

3 A. Yes.

4 Q. -- that -- where it --

5 A. That caused groundwater contamination that
6 exceeded WQCC standards.

7 Q. Okay. And can you identify for us those pits and
8 who the operator was?

9 A. I can't right now, no.

10 Q. Can you identify the Division file associated
11 with those pits?

12 A. Well, that would be the operator.

13 Q. Okay.

14 A. Or the -- Do you have the number?

15 MR. OLSON: I'm sorry, what's that?

16 THE WITNESS: Bill can identify those when he
17 comes up.

18 Q. (By Mr. Feldewert) Okay, and it's your
19 understanding that the two pits that you're aware of
20 actually had groundwater that impact -- I'm sorry, that had
21 contamination that impacted groundwater and exceeded the
22 water quality control standards; is that --

23 A. That's correct.

24 Q. -- your understanding?

25 A. Yes.

1 Q. Okay. I'm looking at page 4 of your PowerPoint
2 slide. Now, you said this data was compiled from a 1997
3 registration?

4 A. The top slide, that's correct --

5 Q. Okay, now --

6 A. -- slide number 7.

7 Q. -- let's go to the bottom slide. You identify
8 this as pit-caused contamination, and by "contamination"
9 are you talking about either soil or groundwater?

10 A. That's correct.

11 Q. Okay, what did you define as contamination?

12 A. Contamination is that contamination that required
13 remediation so that -- in the soil -- if it's in the soil,
14 so that soil -- the migration of those contaminants would
15 not go to groundwater and cause groundwater to exceed
16 standards.

17 Q. If we look at the number here at the bottom
18 slide, the number on the left, that 6536, is that soil?

19 A. For locations, that's the total number, of which
20 430 also impacted groundwater.

21 Q. Okay, now the 430 that impacted groundwater, do
22 you know how many of those pose an immediate threat to
23 water quality control standards?

24 A. If they caused groundwater contamination they're
25 on this slide, they -- the Water Quality Control Commission

1 standards were exceeded in those locations. That's why
2 they are counted as groundwater contamination.

3 Q. Okay. So your total of 557 down there, you're
4 representing as situations where a pit caused contamination
5 of groundwater in excess of water quality control
6 standards?

7 A. That's correct.

8 Q. Do you know, Mr. Anderson, how many -- and of
9 those numbers you identify as two involving drilling and
10 reserve pits?

11 A. That's correct.

12 Q. Okay. Do you know how many of these remaining
13 groundwater pits, do you know -- do you recall how many of
14 those still pose a threat to groundwater control -- water
15 quality control standards?

16 A. Do pose a threat or could pose a threat?

17 Q. Still pose a threat.

18 A. Okay, of the 557, all of those pits have been
19 closed. 196 of the groundwater cases have been closed
20 completely. The remainder are still in the process of
21 being either remediated or something is being done with
22 them.

23 Now, if you get down to the -- want a breakdown,
24 the totally closed sites where the groundwater has either
25 been remediated or no longer exceeds standards, there --

1 171 of the 430 location pits have been closed, one of the
2 two drilling or reserve pits have been closed, six of the
3 facility, nine transportation, seven emergency and two of
4 the unknowns have been completely closed.

5 Q. Do you know how many of these pits were unlined?

6 COMMISSIONER LEE: What's your purpose, Mike?

7 MR. FELDEWERT: Well, Dr. Lee, I'm concerned that
8 -- with throwing out of this slide, I want to -- you know,
9 the representation has been made that these -- there's 557
10 pits out there that are causing what they have termed
11 groundwater contamination.

12 We have reviewed the OCD's files and we have not
13 found that to be the case.

14 COMMISSIONER LEE: So you ask him point blank, is
15 that the case?

16 MR. FELDEWERT: And his answer was yes, as I
17 understand it.

18 THE WITNESS: Yes, and I just understand that all
19 of these pits, all of these groundwater cases, were unlined
20 pits.

21 Q. (By Mr. Feldewert) They were all unlined pits?

22 A. Yes.

23 Q. Okay. So under the -- Okay.

24 And under your proposed Rule, which -- and
25 there's no debate about this, the remaining pits out there,

1 most of them are going to be lined except for areas that
2 are determined -- that is, exceptions are allowed?

3 A. Correct.

4 MR. FELDEWERT: Okay, that's all I have. Thank
5 you.

6 COMMISSIONER BAILEY: I'd like to clarify the
7 record.

8 CHAIRMAN WROTENBERY: Certainly.

9 FURTHER EXAMINATION

10 BY COMMISSIONER BAILEY:

11 Q. In the discussion with Mr. Feldewert about the
12 term "reasonably clear of hydrocarbons", Mr. Feldewert
13 implied that that term was in Rule 105, that was being
14 repealed. Could you look at Rule 105 and tell me if that
15 term, "reasonably free of hydrocarbons", is in that Rule?

16 A. No, I didn't -- I didn't --

17 MR. FELDEWERT: I didn't mean to infer that,
18 Commission Bailey, and --

19 THE WITNESS: -- catch that either.

20 MR. FELDEWERT: -- I certainly don't want to
21 imply that.

22 COMMISSIONER BAILEY: Okay, I heard that, and so
23 I just want to have that cleared up.

24 MR. FELDEWERT: Okay, I apologize, and I
25 certainly didn't mean to imply that. It does not -- It

1 says netting or free or oil.

2 THE WITNESS: Yeah, yeah.

3 COMMISSIONER BAILEY: Thank you.

4 CHAIRMAN WROTENBERY: Okay, thank you. Does
5 anybody else have any questions for Mr. Anderson?

6 Okay, Mr. Feldewert, did you want to ask Mr.
7 Olson any questions about the specific pits that are shown
8 in some of these pictures? There were a few questions you
9 asked that Mr. Anderson couldn't answer, but he indicated
10 he thought Mr. Olson might be able to.

11 MR. FELDEWERT: Well, I think it would have to do
12 with the two drilling and reserve pits that he has laid
13 down on the slide.

14 CHAIRMAN WROTENBERY: Uh-huh.

15 MR. FELDEWERT: I certainly would like -- we
16 would like some information on those pits.

17 CHAIRMAN WROTENBERY: Okay. In that case, I
18 don't believe that Ms. MacQuesten had intended to call Mr.
19 Olson unless they're --

20 MS. MacQUESTEN: But he is available for
21 questions and to address any concerns, and he may be able
22 to help us with the information on these pictures. He may
23 also be able to help us with information on the slide
24 regarding pit-caused contamination.

25 CHAIRMAN WROTENBERY: Okay. Well, thank you.

1 Why don't we just ask Mr. Olson to come up and see if he
2 could address at least those two pits in the pictures?

3 MR. ANDERSON: And I'm not going anywhere.

4 CHAIRMAN WROTENBERY: No, you're not.

5 Please stand and be sworn, Mr. Olson.

6 (Thereupon, the witness was sworn.)

7 CHAIRMAN WROTENBERY: If you could just introduce
8 Mr. Olson.

9 WILLIAM C. OLSON,

10 the witness herein, after having been first duly sworn upon
11 his oath, was examined and testified as follows:

12 DIRECT EXAMINATION

13 BY MS. MacQUESTEN:

14 Q. Would you please state your name for the record?

15 A. My name is Bill Olson.

16 Q. Where do you work?

17 A. I'm employed by the Environmental Bureau of the
18 New Mexico Oil Conservation Division.

19 Q. In what capacity?

20 A. Senior Hydrologist for the Environmental Bureau.

21 Q. How long have you been that?

22 A. For the Division, 15 years.

23 Q. Could you summarize your education and relevant
24 work experience?

25 A. I have a bachelor's in geology and a master's in

1 hydrology from the New Mexico Institute of Mining and
2 Technology, and I've been employed for 15 years with the
3 Oil Conservation and also two years as a hydrologist for
4 the New Mexico Environment Department.

5 Q. Have you testified before the Commission on prior
6 occasions?

7 A. Yes, I have.

8 Q. And were you accepted as an expert hydrologist on
9 those occasions?

10 A. Yes, I was.

11 MS. MacQUESTEN: I tender Mr. Olson as an expert
12 hydrologist.

13 CHAIRMAN WROTENBERY: He is so qualified.

14 Q. (By Ms. MacQuesten) Mr. Olson, could you tell us
15 what you had to -- Well, tell us what you can about the two
16 pictures that were at issue earlier. These were the
17 drilling pit, slide number 10, and is it slide number 11
18 also, Mr. Feldewert?

19 MR. FELDEWERT: Those were the two yeah, uh-huh.

20 THE WITNESS: Both of these were sites that were
21 handled by our District Office. They were brought to our
22 attention in Santa Fe because of the violations that were
23 occurring at them. And in particular in slide 10, you're
24 seeing a drilling pit that was converted to taking produced
25 water, then, at that point. And this did have some

1 extensive soil contamination at the site and had been
2 cleaned up with the District Office.

3 Q. (By Ms. MacQuesten) What kind of contamination,
4 if you know?

5 A. I don't recall. I believe they did have some
6 problems with hydrocarbons at the site. I don't recall
7 there being a problem with salts such as chlorides at that
8 point, but I believe there was a problem with the
9 hydrocarbons from this pit in the soils. It did not result
10 in any groundwater contamination, at least that we know of.

11 Q. So slide number 10 is strictly surface
12 contamination?

13 A. It was largely restricted to soil contamination.

14 Q. What can you tell us about slide 11?

15 A. Slide 11 is another drilling it that was
16 converted to disposal of produced waters. Actually, it was
17 used for disposal of produced water for about a seven-year
18 period, approximately, after the well was drilled. And it
19 had some extensive soil contamination that was cleaned up,
20 and again as far as we know we did not see any groundwater
21 contamination during the closure of this.

22 It was handled by the District Office, though, so
23 the specifics of that I would probably have to refer
24 possibly to one of our District employees at that point,
25 because I did not personally work on the closure of that

1 and have all the details in our files on those two sites.

2 Q. While we have you on the stand, were you involved
3 in the preparation of slide number 8, titled "Pit-Caused
4 Contamination"?

5 A. Yes, I was.

6 Q. Can you tell us where these numbers came from?

7 A. These are numbers that are compiled from our
8 files in the Santa Fe office, as well as some of the
9 numbers, especially on location pits, were added to by the
10 District 3 Office as part of the pit-closure projects that
11 were going on in the vulnerable area at that point.

12 Q. Were you personally involved in gathering the
13 information that was used for this slide?

14 A. Yes, I was.

15 Q. The slide lists two groundwater contamination
16 cases involving drilling or reserve pits. Can you give us
17 any further information on that?

18 A. Yes. Yes, I can. I think as you can see, we had
19 about 13 pits in our files here in the Santa Fe office. We
20 do not normally work on drilling and reserve pits. We
21 usually only get cases brought to our attention that are of
22 some special significance that aren't being handled by the
23 District Offices, and usually it's where there's some
24 extensive type of contamination going on, and they refer
25 them up to us at that point.

1 In two of these cases we did have groundwater
2 contamination, and one of them was a pit where a well was
3 drilled in the approximate vicinity of the former drilling
4 pit, and there was a chloride contamination of the
5 groundwater at that point.

6 The other one is a site in the San Juan Basin
7 where it was a relatively shallow groundwater area, and we
8 ended up -- during the closure, there was discovery of BTEX
9 contamination, hydrocarbon contamination of the
10 groundwater, both of those in excess of the state
11 standards.

12 Q. Have those two sites been remediated?

13 A. The one site in the San Juan Basin that had BTEX
14 contamination has been remediated and was closed, I think,
15 in about 2001.

16 The other site remains open, and there's still
17 some point of contention over the contamination at that
18 site, between the operator and the Division at that point.

19 MS. MacQUESTEN: I don't have any further
20 questions.

21 CHAIRMAN WROTENBERY: Thank you.

22 Mr. Feldewert?

23 EXAMINATION

24 BY MR. FELDEWERT:

25 Q. Mr. Olson, could you -- is there -- the Division

1 files associated with these two incidences, can you give me
2 some idea of who the operators were and how we could --
3 What would be the file name?

4 A. One site was, I believe -- with the chloride
5 contamination in Lea County, was Mewbourne's Conoco Federal
6 Number 2.

7 And the other site, I believe, was -- well,
8 previously was an Amoco site. I believe it was the
9 Sullivan Frame A Number 1.

10 Q. Were these both unlined reserve pits?

11 A. Yes, to the best of our knowledge.

12 Q. Okay. Which wouldn't be allowed under the
13 existing Rule?

14 A. That's correct, the current Rule envisions lining
15 of the pits unless it can be demonstrated that there's not
16 a need for a liner.

17 Q. Okay. Now, when it comes to drilling a reserve
18 pit, you do have on file APDs for the wells, correct?

19 A. That's correct.

20 Q. Okay, which will give you some idea of the
21 location of the reserve pits? I mean, you can -- Isn't it
22 true you can generally determine the location of the
23 reserve pit by virtue of an APD?

24 A. Not from what I've seen. I've -- The APDs do not
25 list the locations of drilling pits, from what I've seen.

1 Q. In terms of the slide here, do you know over what
2 time period you're covering with this slide?

3 A. This would be covering the full extent of our
4 files, probably from when they were -- originally started
5 to be gathered in the early to mid-1980s till -- up until
6 roughly the present time. There's probably about -- It
7 might be about a year old on some of this, I don't know. I
8 can't remember exactly what date was that I completed this,
9 because this was originally presented at the -- one of the
10 work group meetings.

11 Q. Do you know how many of these incidences -- or
12 can you give us an idea of how many of these incidences
13 were the result of unlined disposal pits?

14 A. I would say outside of the drilling, reserve and
15 workover pits that you see here, these are all largely
16 disposal pits.

17 Q. Okay. And I want to make sure I understand this,
18 when you -- that number 557 down there, is it your under-
19 -- And you assisted in putting this together?

20 A. That's correct.

21 Q. Okay. And it's your understanding that in each
22 of those instances there was groundwater impact in excess
23 of the water quality control standards?

24 A. In the majority of those. There are a few where
25 we did note that groundwater contamination did occur but at

1 a level below the standards, but it was a smaller
2 percentage of this overall number, and I don't believe,
3 without sitting down and going through listing those, I
4 could give you the exact number of those.

5 But there are some of those that are
6 contamination cases that are -- where groundwater is
7 contaminated, but it may have been at a level right at or
8 just below the standard at that point.

9 But the majority of those are cases which are in
10 excess of the standards.

11 Q. Okay. Did you allow representatives of IPA New
12 Mexico to examine the files that you used to compile this
13 slide?

14 A. Yeah, our records are open to the public and
15 anybody can come in look at them anytime they want.

16 Q. Okay, but do you recall them coming to your
17 Division and asking to take a look, to examine the files
18 that were used to generate this slide?

19 A. Yes, I recall them coming in to look at our
20 Division files, Environmental Bureau files on this.

21 Q. And did you direct them to the files that they
22 should examine?

23 A. I didn't direct them to specific files. I looked
24 at the records that were there and just, you know, told
25 them they were available. Nobody had asked me what

1 specific files they needed to look at, at that point.

2 Q. Were you aware that they were there to look at
3 the files that were used to support your slide?

4 A. Yes.

5 MR. FELDEWERT: Okay, that's all the questions I
6 have. Thank you.

7 CHAIRMAN WROTENBERY: Thank you.

8 Just one second, Mr. Olson, I'd like to clarify
9 something.

10 EXAMINATION

11 BY CHAIRMAN WROTENBERY:

12 Q. Mr. Feldewert asked you whether reserve pits are
13 required to be lined under current Division Rules, and I
14 believe you said yes, current Division Rules envision that
15 reserve pits will be lined.

16 I'm confused by that statement.

17 A. Well, maybe I said that wrong. I think -- maybe
18 I don't know which question now they're referring to, but I
19 thought he was talking about -- that the new Rule would
20 require --

21 Q. The proposed Rule.

22 A. The proposed Rule, that's correct.

23 CHAIRMAN WROTENBERY: Okay, is that -- I'm sorry,
24 Mr. Feldewert, is that what you were referring to?

25 MR. FELDEWERT: The proposed Rule is going to

1 require all reserve pits to be lined.

2 CHAIRMAN WROTENBERY: Okay.

3 THE WITNESS: But that's what I thought I was
4 answering.

5 CHAIRMAN WROTENBERY: Well, good. I just wanted
6 to get that clear in my own mind if not in the record.
7 Okay.

8 Mr. Larsen?

9 MR. LARSEN: Yeah, my name is Cliff Larsen. I'm
10 with the Sierra Club.

11 EXAMINATION

12 BY MR. LARSEN:

13 Q. I wanted to get a clarifying question on this
14 same chart on cause of contamination. On this particular
15 slide it lists 6536 location pits, of which 430 are found
16 to create some contamination of groundwater. Is it your
17 testimony, then, that of the balance of those -- that they
18 have been tested and found not to create any contamination,
19 or they simply -- many of them simply have never been
20 tested?

21 A. No, I believe that on all of these sites that
22 you're seeing, the 6000 --

23 Q. Yes.

24 A. -- I guess 6748 total, these are all sites that
25 had soil contamination as part of them. Typically, when

1 the cleanups are being done, they're done -- groundwater
2 contamination is discovered as part of a soil cleanup,
3 typically.

4 So a lot of the cleanups are done as a dig and a
5 haul type operation where they come in and dig out the
6 contamination, and usually digging until they get out of
7 the contamination, essentially the pit cleans up and it
8 might be contained in the upper 20 feet, say, for example.
9 And then that's confirmed by testing of the soils upon
10 completion of that to show that they have met the Division
11 guidance criteria.

12 Q. So would it be fair to conclude that many of --
13 the balance, of the 6536 that were found to have
14 contaminated soil, had they not been remediated promptly,
15 may have contaminated the groundwater at some future point?

16 A. That is possible, yes.

17 MR. LARSEN: Thank you.

18 CHAIRMAN WROTENBERY: Any other questions for Mr.
19 Olson? Yes?

20 MS. BLANCETT: Madame Chairman Wrotenbery.

21 EXAMINATION

22 BY MS. BLANCETT:

23 Q. Mr. Olson, I'm Tweeti Blancett, I represent
24 Blancett Ranches right now as a member at large.

25 My question is, could you tell me how many

1 representatives there were from San Juan County or the San
2 Juan Basin on this study group, other than industry?

3 A. I wasn't really -- wasn't responsible for setting
4 up the groups, but if I recall -- I don't recall if there
5 were any members from the San Juan Basin, at least public
6 members, at that point.

7 MS. BLANCETT: Thank you, that's my understanding
8 too.

9 Madame Chairman, Commissioner Bailey,
10 Commissioner Lee, I would tell you that in San Juan County
11 we have 35,000 wells, and this committee, the study group,
12 is promulgating rules on an area that had no
13 representation, other than industry, that the rules are
14 going to be enforced by. I feel like this may have been an
15 oversight on somebody's part.

16 The second thing that I would ask is that it
17 appears -- and I will tell you, I haven't done any in-depth
18 analysis of the rules, but it seems to be very short on
19 science, and I would like to have copies of the science. I
20 would be very interested in having copies. And Mr. Olson,
21 Chairman Wrotenbery, thank you very much for the science
22 that you have provided. But I think we're very short on
23 science in many other areas.

24 Thank you.

25 CHAIRMAN WROTENBERY: Thank you, Ms. Blancett.

1 Commissioner Lee?

2 COMMISSIONER LEE: What committee are you talking
3 about?

4 MS. BLANCETT: Excuse me?

5 COMMISSIONER LEE: What committee are you talking
6 about?

7 MS. BLANCETT: San Juan Basin.

8 COMMISSIONER LEE: No, I mean what committee you
9 say you're talking about, non-industry people?

10 MS. BLANCETT: Madame Chairman --

11 THE WITNESS: Well, I believe she was referring
12 to the work group that was set up for the pit rule so...

13 COMMISSIONER LEE: I think the industry only has
14 three people.

15 CHAIRMAN WROTENBERY: The way the work group was
16 set up -- and Mr. Anderson had testified to this earlier --
17 we had three representatives from industry associations,
18 three representatives from environmental and public
19 interest groups, and then we had the State Land Office and
20 the Bureau of Land Management and the Jicarilla Tribe
21 represented as well.

22 COMMISSIONER LEE: So it does have -- Only the
23 industry representative is a minority of the study group,
24 as far as --

25 THE WITNESS: That's correct.

1 CHAIRMAN WROTENBERY: Okay. Anybody else have
2 any questions for Mr. Olson?

3 Mr. Sandoval?

4 MR. SANDOVAL: Thank you.

5 EXAMINATION

6 BY MR. SANDOVAL:

7 Q. Good afternoon, Mr. Olson, I'm David Sandoval. I
8 just have a couple of questions because I got a little
9 confused in terms of the testimony earlier about how the
10 determination was made that these two pits were
11 contaminated and how that plays into the language that's
12 found in the new Rule. And let me see if I can have you
13 confirm my current understanding or to clarify whatever
14 confusion I may have.

15 Your determination that these two particular pits
16 were contaminated was based on a finding that there was
17 presence of contaminants in excess of the Water Quality
18 Commission standards, correct?

19 A. That's correct.

20 Q. All right. And there's reference in the new
21 Rule, Exhibit 4, to those standards in several locations,
22 correct?

23 A. I believe so.

24 Q. All right. But the Rule, the way I read it,
25 never expressly adopts those standards as the standards

1 that will be used to determine whether or not contamination
2 exists in the future; is that correct?

3 A. We have a separate Rule for contamination of
4 groundwater. It's OCD Rule 19. I don't know the specific
5 NMAC citation for that, but it's Rule 19 and it is a rule
6 that's been adopted by the Division, I believe, in 1997 for
7 abatement of groundwater pollution. And in that Rule there
8 is specific reference back to groundwater contamination
9 having to be remediated to the Water Quality Control
10 Commission standards.

11 Q. So then this new Rule would be read in
12 conjunction with Rule 19, and as such the water quality
13 control standards would be applicable here as well?

14 A. Yes, any site under the jurisdiction of the Oil
15 Conservation Division that results in groundwater
16 contamination is then subject to the abatement provisions
17 of Rule 19, regardless of whether it's -- whatever type of
18 pit it is.

19 Q. All right. And maybe you're not the best person
20 to answer this question, but Mr. Anderson, I believe,
21 testified that certain guidelines were no longer going to
22 be used in making these considerations and that they were
23 being replaced, I think, with what he referred to as kind
24 of more standard -- general standards. And I think when he
25 testified about that he was concentrating on the phrasing

1 that appears several times in these regulations that reads
2 something to this effect: to prevent contamination of fresh
3 water and protect public health and environment.

4 Do you read that phrase to also incorporate the
5 Water Quality Control Commission standards in terms of
6 assisting the OCD in making the determination as to whether
7 or not there's a threat of contamination?

8 A. Yes, actually the Division has always interpreted
9 it that way. The protection for fresh water is statutory
10 language in the Oil and Gas Act. And in making that
11 determination for protection of fresh waters, we refer back
12 to the New Mexico Water Quality Control Commission because
13 they are the regulatory body in the State that sets
14 standards for ground waters and surface waters.

15 Q. Okay, thank you very much. I have one last
16 question.

17 I've got in front of me a group -- a set of
18 guidelines that are titled "Unlined Surface Impoundment
19 Closure Guidelines" that were apparently promulgated in
20 February of 1993. Are you familiar with those?

21 A. Yes, I largely wrote those.

22 Q. And how are these affected by any of the changes
23 that are being made or proposed in this new Rule?

24 A. There are some changes that we have drafted
25 recently that would have to come into play with the new

1 Rule. The current guidelines specifically exempt drilling
2 and production pits. I believe it's in the preface or
3 introduction where it specifically does that. They were
4 designed at the time in 1993 to deal with the pit closures
5 in the San Juan Basin, and this is disposal and production-
6 type pits like Mr. Feldewert was discussing, and that was a
7 result of Oil Conservation Commission Order R-7940-C that
8 was adopted, I believe, in 1993.

9 Q. But these aren't being abandoned or rescinded as
10 part of this rulemaking procedure?

11 A. They are not. They're actually -- At this point
12 we have redrafted them to be able to cover lined pits.
13 These did not envision closure of lined pits within them.
14 At this point we have been redrafting those to cover
15 drilling pits as well as other types of lined pits and the
16 closure of those as well.

17 MR. SANDOVAL: Very good. Thank you very much,
18 thank you.

19 CHAIRMAN WROTENBERY: Thank you, Mr. Sandoval.

20 Anybody else? Yes?

21 EXAMINATION

22 BY MR. NEWELL:

23 Q. Hello, Mr. Olson. I have just a few questions
24 here. In reference to the definitions of "exempted
25 aquifer" --

1 A. Could you point out to me where you're referring
2 to exactly?

3 Q. In the definitions it's alphabetized --

4 A. Uh-huh.

5 Q. -- and it's under E, definitions beginning with
6 E. And I believe it's the only definition -- or actually
7 there's two under the category of E, and the first one, E
8 (1), is "exempted aquifer". And I'm going to call your
9 attention first to E.(1).(b) and then E.(1).(c).

10 A. Okay, I see those.

11 Q. Okay. Under this definition, would there be a
12 position that could be taken by the oil company that would
13 allow them to avoid the application of a rule by arguing
14 that they were at an exempted aquifer because the
15 groundwater in question was a certain distance from where
16 any type of current use for that water is being undertaken?

17 And particularly in the Ogallala, we have a
18 situation where certainly there are areas right now where
19 the groundwater may not be being used, but it doesn't mean
20 that at some point in time, since it's a depleted or a
21 depleting resources, that that resource will not have to be
22 tapped into at other points, other than what's envisioned
23 right now, especially when you look at it in terms of 30-,
24 40- or 50-year water plans for these communities.

25 The language that concerns me in there seems to

1 allow an exemption for location of a groundwater aquifer,
2 and I was wondering, what was the logic behind location,
3 because in New Mexico all our water seems to be a precious
4 resource?

5 A. Well, I can tell you, this provision is put in
6 there for the underground injection control purposes and
7 deals largely with being able to inject into a certain
8 geologic horizon that may or may not be a source of water.
9 And it's done for protection of groundwater under the Safe
10 Drinking Water Act.

11 Q. And I see it relates to depth, and I would kind
12 of agree with your answer as it relates to depth, but it
13 also has four locations, so that would, to me, be another
14 dimension to this thing, where it's not just the depth of
15 the groundwater, it's where that groundwater may be
16 located, like it may be Ogallala Aquifer water, which is
17 shallow, but it may be, let's say, 30 miles west of
18 Lovington and no one is using it right now.

19 And that would seem to be a criteria under this
20 definition, whereby someone who wanted to get around the
21 application of the regulations relating to protection of
22 groundwater could argue that it was an exempted aquifer.

23 A. Well, I'll tell you, the Division's position on
24 this -- and this is consistent with that of the regulations
25 of the Water Quality Control Commission -- that all water

1 that has a quality of 10,000 milligrams per liter of total
2 dissolved solids or less and has a foreseeable beneficial
3 use, regardless of whether it's being used now or not, is
4 considered protectable water that we look to protect, and
5 what this new Rule would look to protect as well.

6 So it does not matter if the water is not
7 currently being used. The State has been very consistent
8 in its position for quite a long time. I think the
9 Division has been since approximately the mid-1960s when
10 they adopted the first groundwater protection measures in
11 Lea County, which was Oil Conservation Commission Order
12 3221, which banned unlined pits in large parts of Lea
13 County. And a lot of what was envisioned, even through the
14 testimony back then, was the future protection of water,
15 whether it's being used or not.

16 And it fell back to correspondence and
17 discussions that the Division had back in the 1960s with
18 the State Engineer as to what was detectible water. We do
19 have some documents on file with the Division giving us the
20 State Engineer's opinions in the 1960s about what is
21 protectable water, and it comes back to the definition that
22 I was just giving you of 10,000 milligrams per liter or
23 less of total dissolved solids and have a foreseeable
24 beneficial use.

25 Q. Let me call your attention to the next subsection

1 of that definition --

2 COMMISSIONER LEE: Before we go on, let's go back
3 to your question. Your question is Lovington, 30 miles out
4 of Lovington you have good water. I think under the New
5 Mexico law you cannot touch it.

6 MR. NEWELL: Okay --

7 COMMISSIONER LEE: 10,000 p.p.m., that is the
8 good protection for groundwater.

9 MR. NEWELL: Yes, Dr. Lee, I just wanted to make
10 sure that this didn't create a loophole that --

11 COMMISSIONER LEE: But I want to be very, very
12 clear, so we have this kind of -- you know, because I don't
13 want anybody here to have the wrong impression, saying that
14 industry is trying to use those waters. No, industry is
15 not going to tap into the fresh water.

16 MR. NEWELL: Well, we do have some history in Lea
17 County where there's significant areas of contamination,
18 and -- and this is what I was going to get into in the next
19 part of my question, Dr. Lee -- there are areas where it
20 may not be economically cost-effective, according to some
21 people, to go clean up the contamination because it's so
22 immense. And I will cite for you an example.

23 An area right on the northwest corner of Hobbs
24 that's generally known as the Windmill Oil Company area,
25 where the spill on the aquifer is larger than the Exxon

1 Valdez spill, and it's been there since the 1950s. No one
2 has gone in and cleaned it up. And if there's an exemption
3 for economically feasible, does that mean someone could do
4 something on the northwest corner of Hobbs and argue where
5 the aquifer is already so messed up it's economically not
6 feasible to clean it up, therefore it's an exempt aquifer
7 under the application of the Rule?

8 COMMISSIONER LEE: You know, maybe a lot of
9 people here have already made up their mind, but we have to
10 be fair. This is -- We are searching for a compromise for
11 the solution, so... And I think we have to be fair, so...

12 THE WITNESS: Well, I guess the only thing when
13 you've come back to the exempted aquifers, that wasn't -- I
14 think the only place you'll see that referred to through
15 the regulations is in the UIC portions of that, so it's --
16 I mean, there are provisions --

17 CHAIRMAN WROTENBERY: That is true, and exempt
18 aquifers are defined by the State in consultation with EPA,
19 it's a joint decision-making process, and the threshold is
20 quite high. So this provision is primarily designed to
21 address those oil-and-gas-producing zones that are also
22 fairly fresh, and it enables operators to conduct enhanced-
23 recovery operations in those particular zones. That's the
24 primary focus of that provision in the underground
25 injection and control program.

1 MR. NEWELL: And I appreciate that, Ms. Chairman.
2 I just want you all to understand that our firm engages in
3 litigation from time to time involving people who've had
4 areas that they own, or groundwater under areas that they
5 own, contaminated, and I would just suggest to you we've
6 had some very creative arguments made in court cases, based
7 upon the regulations of this Commission.

8 So it's my belief that it's best to try to come
9 to as precise a definition as we possibly can if we're
10 trying to fulfill the intent that Mr. Anderson talked about
11 of protection and prevention of contamination, because if
12 someone sees the definition and views it as a loophole to
13 get around what should be a common belief that we should
14 prevent contamination then, you know, perhaps the
15 regulation is not as effective as it otherwise could be.

16 COMMISSIONER LEE: If you have a bad apple, then
17 you go out to the bad apple and instead of punish the good
18 apples, this is my personal opinion on the whole case. You
19 cannot use one bad apple, then you set up a rule, make sure
20 nobody can live with that. I think if we have a bad apple,
21 we have to vigorously go after that. However, set up
22 10,000 rules, it doesn't help you, the cost.

23 MR. NEWELL: Thank you. Just a couple more
24 questions, if I might.

25 CHAIRMAN WROTENBERY: Yes.

1 MR. NEWELL: Then I'll move on to a different
2 area.

3 CHAIRMAN WROTENBERY: Okay.

4 Q. (By Mr. Newell) Mr. Olson, are you familiar with
5 closed-pit systems on drilling?

6 A. I'm not a petroleum engineer, but I am familiar.
7 I've seen some, but that's about the extent of my
8 engineering knowledge of them.

9 Q. And they're in use in New Mexico in certain areas
10 of the oilfield, correct?

11 A. That's correct.

12 Q. And that would be a more effective preventive
13 mechanism for the goal -- or to achieve the goal of
14 prevention of pollution, either to the groundwater or to
15 the soils, then even lined pits, correct?

16 A. I would say it's a method. I think there's cases
17 where lined pits may be appropriate, and there's others
18 where unlined pits may be appropriate if they're drilling
19 with fresh water, freshwater muds, and they don't produce
20 hydrocarbons back to them.

21 Q. But a closed-pit system would be the most
22 effective of all of the systems, the unlined, lined or
23 closed-pit systems, if the goal is protection of the
24 environment, correct?

25 A. I'd say it's one. I mean, if you have a short-

1 term use of a pit with a lined pit, and I believe that
2 would be just -- I mean, you have a liner that has --
3 that's relatively impermeable, which would be essentially
4 the same as a steel pit at that point. I don't know that
5 there would be a lot of difference, except that you may
6 have some differences in how you finish out the site or
7 possibly -- maybe economics and closure, I don't -- you
8 know, that's the only thing. But in terms of actual
9 effectiveness, a liner could be just as effective as a
10 tank.

11 Q. Okay. A tank has some structural-integrity
12 advantages that liners don't have, correct?

13 A. Yes, they're constructed of steel and they're
14 easy to move in out of a site. They're usually truck-
15 haulable.

16 Q. And as I understand it from both your testimony
17 and Mr. Anderson's testimony, the reason there weren't many
18 pit -- or drilling-pit contamination areas identified was
19 because from the records that you all have up here, there's
20 just not that much review of those unless they're the more
21 extreme examples that have been brought to your attention,
22 correct?

23 A. That's correct, we have not done an extensive
24 study of those. And I think as pointed out with some of
25 the problems with the APDs, we don't always know, if we go

1 back and look at a contamination site today, necessarily
2 where the drilling pit was on a particular site.

3 MR. NEWELL: And one last thing, and I'll say
4 this for the record: I appreciate the efforts that you've
5 made personally.

6 CHAIRMAN WROTENBERY: Thank you, Mr. Newell.

7 Any other questions for Mr. Olson?

8 MS. MacQUESTEN: If I could just follow up?

9 CHAIRMAN WROTENBERY: Yes, Ms. MacQuesten.

10 EXAMINATION

11 BY MS. MacQUESTEN:

12 Q. Mr. Olson, you were asked a number of questions
13 about the water quality control standards and the work of
14 the Water Quality Control Commission, and I don't remember
15 whether I asked you when we talked about your background
16 and experience what your connection is to the Commission?

17 A. I've been the designee on the Water Quality
18 Control Commission for the Oil Conservation Division for
19 approximately 13 years.

20 MS. MacQUESTEN: Thank you.

21 CHAIRMAN WROTENBERY: Thank you, Mr. Olson and
22 Mr. Anderson, for your testimony.

23 And at this point how about we go on and ask Dr.
24 Neeper to present his testimony?

25 (Thereupon, the witness was sworn.)

1 DR. NEEPER: Thank you. Do you wish to have your
2 counsel before me or have me qualify myself?

3 CHAIRMAN WROTENBERY: You can go ahead and give
4 us your education and experience, and that will take care
5 of it.

6 DR. NEEPER: In the interest of saving time, can
7 we have somebody else plug this in and make it operate, and
8 I --

9 COMMISSIONER LEE: I know the PhD cannot do that.

10 (Laughter)

11 DR. NEEPER: I at one time was an experimentalist
12 but now I do only theory.

13 DONALD A. NEEPER,
14 the witness herein, after having been first duly sworn upon
15 his oath, testified as follows:

16 DIRECT TESTIMONY

17 BY THE WITNESS:

18 DR. NEEPER: My name is Donald Neeper. By way of
19 educational background, I have a PhD in thermal physics.
20 After four years of post-doctoral research, I spent 25
21 years at the Los Alamos National Laboratory. During my
22 last year or two there, I was in charge of a facility
23 investigation of a rather extensive site that was
24 contaminated both with chemicals, volatile chemicals, and
25 radioactive substances.

1 After taking early retirement ten years ago, I
2 continued working part-time as an industrial -- with an
3 industrial consulting firm on environmental cleanup,
4 particularly as concerns the vadose zone.

5 I speak here not as an oilfield engineer or a
6 petroleum engineer, but rather as a person who has at least
7 some experience and qualification in cleanup of
8 contamination in the vadose zone, and it is mostly to the
9 vadose zone that I wish to address my comments.

10 I have copies, hard copies, for each of the
11 Commissioners, which may make it a little easier to follow
12 my discussion. There is a hard copy for the record. If
13 you wish to call this an exhibit --

14 CHAIRMAN WROTENBERY: Okay.

15 DR. NEEPER: -- I cannot remember, if it's an
16 exhibit does it require copies for the audience? I
17 suddenly remembered, maybe there's a rule.

18 MR. BROOKS: I do not believe there is a rule on
19 that subject. Of course, in an adjudicatory proceeding we
20 would follow the Rules of Civil Procedure and require
21 copies for opposing counsel, however in a rulemaking
22 proceeding --

23 CHAIRMAN WROTENBERY: We'll mark this exhibit as
24 Neeper Exhibit Number 1, and we can make copies available
25 to anybody who's interested in looking at this later in the

1 day.

2 DR. NEEPER: That's fine. I will just switch
3 tables so we can get the images up on the screen.

4 I will introduce my testimony with a short
5 discussion of hydrology of the vadose zone. It's not
6 intended to bore everybody, but rather it's by the fact
7 that repeatedly in this hearing we have heard discussions
8 of groundwater contamination, as though that were the only
9 thing that could be contaminated, or the only kind of
10 contamination of interest, that groundwater is always our
11 item of protection.

12 Actually, we are out to protect the entire
13 environment. It is one of the --

14 COMMISSIONER LEE: Focus.

15 DR. NEEPER: -- one of the Department's goals.
16 The second goal, explicitly, is to protect the environment
17 as such, which is a larger word than just groundwater.

18 Within the vadose zone -- that is, the region
19 between the groundwater and the ground surface -- there is
20 water in the porosity of the soil, and it is that water
21 upon which all of your non-aquatic green plants live, and
22 therefore that is the basis of most of our food supply and
23 what we think of as the environment in which vertebrates
24 and bugs and all kinds of other things live. So that water
25 is very important, whereas we normally think only of the

1 groundwater.

2 If I put up a diagram here, I am plotting depth
3 below the ground on the vertical axis and the volumetric
4 moisture, the amount of moisture per unit volume that's in
5 the soil. This happens to be near Los Alamos and very dry
6 rock, and borehole number 8, the blue line, you notice,
7 goes down to about 1-percent volumetric moisture. Not
8 unusual for this part of the country. That's very dry
9 rock.

10 On the other hand, the red line, you'll notice,
11 goes down about a hundred feet of depth with about 4 or 5
12 percent of moisture. The borehole indicated by the red
13 line was drilled through asphalt. That asphalt covered a
14 much larger area than a pit, but it's covering a previous
15 evaporation pit.

16 And what we see here some -- I can't remember, 10
17 or 20 -- 10 or 15 years after the pit was closed, we see a
18 difference down to a hundred feet. The difference may be
19 due to the asphalt, the difference may be due to the former
20 evaporation pit, the difference may be due to both. It's
21 hard to tell at this point. The point I'm making of that
22 is, when you have a surface disturbance or surface
23 activity, you can very much affect things to a great depth
24 in terms of the unsaturated-zone hydrology.

25 COMMISSIONER LEE: Although I'm not a scientist

1 -- keep this one here -- I'm an engineer, so I'm going to
2 ask you a question.

3 This is the -- saturation. Is this one is
4 moving? Is this fluid moving, or stay there?

5 DR. NEEPER: I will answer that in a moment, if I
6 may.

7 COMMISSIONER LEE: Okay, the --

8 DR. NEEPER: At the moment, what this measurement
9 represents is simply, every dot on the map here is a soil
10 sample that was taken with a split-spoon sampler.

11 COMMISSIONER LEE: What I'm asking is, this fluid
12 is moving or not?

13 DR. NEEPER: I would like in one minute --

14 COMMISSIONER LEE: Okay --

15 DR. NEEPER: -- to answer that.

16 COMMISSIONER LEE: -- another question is, you
17 are under the pressure, very low-pressure system. Your
18 asphalt is in the solution sense, or your asphalt is
19 attached to your soil?

20 DR. NEEPER: The asphalt is strictly pavement,
21 strictly a thin layer on top, as you would --

22 COMMISSIONER LEE: No, the --

23 DR. NEEPER: -- make for a road surface.

24 COMMISSIONER LEE: No, no, the content of the
25 asphaltine. Okay. Content of asphaltine. Is this

1 asphaltine still under this kind of situation -- are they
2 attached to the soil or they're moving with the fluids?

3 DR. NEEPER: The asphalt is not mobile. It is
4 sitting on the surface of the ground as a road. It is a
5 paved -- an area that was paved for functional purposes.

6 COMMISSIONER LEE: Okay, thank you.

7 DR. NEEPER: It would strictly be pavement, avoid
8 the mud.

9 COMMISSIONER LEE: All right. Can you define the
10 vadose zone for our audience?

11 DR. NEEPER: I did, and I will be glad to repeat
12 that. This is the region between the water table and the
13 surface of the ground.

14 Water that is in the vadose zone is held under
15 suction, just like water in a sponge. If you stick a
16 sponge in a glass of water, it will suck water up into the
17 sponge. Likewise, water in the vadose zone is held under
18 suction. What that means is, it requires energy to get the
19 water back out of the vadose zone. In fact, the
20 measurement of that suction is just the energy per unit
21 volume that it takes to get the water back out, and that is
22 called the suction, often measured in units of pressure or
23 hydraulic head.

24 In principle, you can think of it as a vertical
25 sponge. If it were dipping in water, the water at the top

1 of the sponge would be under suction equal to the head at
2 the height of the sponge.

3 COMMISSIONER LEE: With 50 percent of the
4 porosity, how far in reality you have a vadose zone?

5 DR. NEEPER: All the way, sir.

6 COMMISSIONER LEE: All the way to the surface?

7 DR. NEEPER: Here you see volumetric moisture,
8 and in a minute I will show you the suction of that, or a
9 similar situation. The water table there is at a depth of
10 about 800 feet.

11 Here is a plot of suction in a similar borehole,
12 a nearby location. The left-hand plot, I show the
13 volumetric moisture -- it's a different borehole -- and I
14 show along with it the suction. You can see to some extent
15 in the red line the suction correlates with the volumetric
16 moisture. When you have less moisture you have more
17 suction, it's harder to get the water back out. If the
18 sponge were totally full, you'd get the water out very
19 easily by shaking it.

20 If we look in the right-hand graph, we see the
21 total head. That means that's the suction added to the
22 gravitational energy, and normally the water would flow
23 according to the gradient or the change of that head. So
24 water in the vadose zone is moving. That is in answer to
25 your question, Commissioner, Lee. The water is moving.

1 Ordinarily, when we don't think of it some other
2 way, when we haven't measured anything, we think it would
3 flow according to the slope of the unit gradient, that is,
4 losing one foot of pressure per one foot of depth going
5 into the soil.

6 What we see when you go in and measure, in fact,
7 the total potential does not necessarily follow such a
8 simple assumption. The reason for my stating this is, you
9 don't know what's going on in the unsaturated zone
10 hydrology unless you're very well acquainted with the area
11 or you go in and measure it. We were surprised by some of
12 this.

13 Now, a surprising point is to notice that the
14 total head below -- from about -- I need to get the depth
15 scale on here again. From a vertical depth of about 90
16 feet below the ground up to about 60 feet below the ground,
17 the slope is such that as you go shallower, the suction, or
18 the total potential, is greater.

19 In answer to your question about does the water
20 flow, this moisture is flowing upwards, this moisture is
21 flowing downwards. And so you can have moisture going up,
22 down or sideways in the vadose zone, depending on where the
23 local potential gradient is. And therefore we have to make
24 careful -- either careful measurements to know, or be
25 careful in the assumptions we make about the vadose zone.

1 Does this ever really count in the real world?

2 Yes. In particular, up near ground surface in our arid
3 locations we get rainfall and infiltration, moisture goes
4 in. Most of that moisture turns right around and goes back
5 out and is re-evaporated.

6 So right near the surface, the gradient is going
7 both directions. It will go one way for a while, and then
8 it will rain and it will go the other way. And what
9 happens is, soluble contaminants, or soluble things, can
10 then come right back to the surface.

11 Here, for example, is a picture of a rock.
12 That's solid rock, but it's 50-percent porosity, it's
13 Bandelier tuff. It shows up probably better in the colored
14 pictures in the solid handout. That rock is sitting in an
15 undisturbed canyon. This is after a fairly wet winter.
16 The picture was taken in June.

17 You can't see it very well in the transparency,
18 but you can see it in the print: The rock is covered with
19 a white substance. Those are the salts that have been
20 brought up out of the soil and evaporated on the surface of
21 that rock in the dry springtime.

22 I watched that rock because it's behind my house
23 a ways, and along come the summer rains, washed away, and
24 the next year we go through the same process all over
25 again.

1 Similar process I illustrate in the lower photo
2 where you see white salts along rock, porous rock along the
3 roadcut. The rock is simply exposed, and in the springtime
4 the salts come out, the summer rains come and wash it away,
5 and we go through the same process the next year.

6 So there is a concern with salt release from
7 pits, that that salt is not necessarily contained within
8 the pit. Even if you have a liner, that liner will
9 eventually fail. No liner is guaranteed forever. If you
10 have infiltration or any moisture coming from above, you
11 will have, in our arid country, opportunity to suck the
12 salts or anything that's soluble back up toward the surface
13 of the ground into the root zone. And therefore, we ought
14 to be careful what we do.

15 With that, I will address specific comments to
16 the proposed Rule. Somewhere in this scramble I lost my
17 own testimony. I have a -- I now have a copy.

18 Particularly to the Rule, I suggest exemptions
19 should be few. The rule does grandfather a lot of old
20 pits. I am very sympathetic to the industry, I don't think
21 the industry should be forced immediately to respond.

22 But if a pit is bad because it is unlined, then
23 it should be brought into current compliance. If an
24 unlined pit is a bad thing, then it shouldn't matter
25 whether the pit is new or the pit is old. It should

1 somehow be brought into compliance.

2 Section C.2.(a) allows pits to be located
3 adjacent to a watercourse so long as some level of the pit
4 is, quote, "safely above the ordinary high water mark". We
5 heard discussion of that word "ordinary" this morning.
6 This language is in potential conflict with a construction
7 guideline, at present, at least, which simply says "high
8 water level", without that vague term "ordinary".

9 I pay attention to words carefully because, as a
10 previous questioner brought up, words can get into court
11 cases and be misconstrued. Or even in very difficult cases
12 of enforcement, words can be misconstrued.

13 In our arroyos out there, I would say in many of
14 our arroyos, 364 days of the year the arroyo is dry. The
15 ordinary high-water level is the bottom of the arroyo. The
16 Rule, as written, it can be firmly argued, should allow
17 pits in the bottom of the arroyo.

18 Section C.2.(b) and C.2.(c) provide for double
19 liners and leak detection. I commend the Division for
20 proposing that. I think that is very wise. However,
21 neither the proposed Rule nor the guidelines are specific
22 in terms of pit construction. We use general terms such as
23 "good resistance to tears and punctures".

24 Liner materials, I suggest, should be specified
25 by performance. How well does it perform? There are

1 ASTM -- American Society for Testing Materials -- standards
2 for such things as puncture resistance and stress cracking
3 due to weather. Those industries which sell liner
4 materials, in fact, specify their materials by those
5 standard tests. And therefore, I think it would be wise,
6 either in our Rule or our guideline, simply to specify
7 performance and let the industry choose which kind of liner
8 and what kind of thickness they want.

9 I'll give an example. A rule could specify
10 permeability simply by requiring that any liner, whether
11 synthetic or constructed of clay, simply must have a
12 demonstrated transmission less than the equivalent of a
13 layer one foot thick with a hydraulic conductivity less
14 than 10^{-8} centimeter per second. I think it can be that
15 simple.

16 Our construction guideline simply says we should
17 take wave action into account, we should prevent
18 contamination and protect the environment. Such terms are
19 subject to wide interpretation, are, I think, difficult to
20 enforce.

21 I find vague terms to be irresponsible to the
22 industry, actually, because a responsible member of the
23 industry will be trying to do their best correct thing,
24 while someone else can slip in and do a cheaper job under
25 vague terms and get away with it, and that's not fair to

1 the industry that tries hard to do the right thing.

2 Section C.2.(e) specifies the words we heard
3 discussed earlier about spray-borne solids, that they must
4 remain within the pond's lined perimeter. I again bring up
5 -- this is ambiguous language, it's in potential conflict
6 with the guideline that says spray-borne salt, as we heard
7 this morning. I suggest the rule should require that
8 spray-borne solids and dissolved solids are confined to the
9 lined perimeter. That simple change in wording would cover
10 all of the cases of both particulate solid and dissolved
11 solids.

12 Section C.2.(g) provides a blanket exemption for
13 about 300 square miles of the southeast and for several
14 counties of the San Juan Basin that are within what is
15 named or termed oil and gas producing areas of the San Juan
16 Basin, so long as they are more than 100 feet above a named
17 river or 50 feet above any other channel. I have two
18 objections to this language.

19 First, the language is not sufficiently precise
20 for regulatory purposes. For example, is the Chama River a
21 river? It's not named, so presumably, then, it is a creek
22 and subject to the 50-foot limit rather than the 100-foot
23 limit.

24 When an area is defined as being the oil-
25 producing area, to me that means if an oil company drills

1 there it's in the oil-producing area, but if a geothermal
2 company drills there it's not in the oil-producing area.
3 And so the exemption applies to one and not the other, and
4 I would like our language to be much more definite.

5 My big issue with this is that blanket exemptions
6 may protect water in many cases but do not necessarily
7 protect the environment. It's particularly the salts that
8 I worry about if we discharge large quantities of produced
9 water in the San Juan Basin to unlined pits.

10 I've shown you moisture profiles that indicate
11 that soluble contaminants can move any which way in the
12 subsurface. We also know that if you have significant
13 quantities of water placed on the landscape, that water can
14 move downward much more rapidly than you would predict,
15 just due to the permeability or hydraulic conductivity of
16 the ground. This was demonstrated at Los Alamos where
17 water that was tossed on dry landscape, discharge water,
18 made its way to the aquifer about 600 feet down through
19 apparently preferentially flow channels. Even though you
20 would never predict it could get there, high explosives
21 were found in the groundwater.

22 So soluble contaminants, once discharged to the
23 ground, can move back up to the root zone. We should
24 simply not allow the discharge or the burial of soluble
25 contaminants. I can understand the burial of things such

1 as minerals, drilling muds that might be harmless,
2 particularly chips which you take from the site itself
3 anyway. It seems reasonable to bury them. I cannot see
4 burial being allowed for soluble contaminants.

5 It has been argued that the Division has
6 authority to protect water, and this term "protecting
7 groundwater" has come up very often. It has been argued
8 that we cannot require pit liners in the absence of
9 groundwater. I find this argument unfounded, because the
10 second goal of the Division, as I point out, or of the
11 Department, is to protect the environment. And protection
12 of the environment is cited no less than 11 times in this
13 Rule itself.

14 Part of that environment, the living environment,
15 really depends upon the pore water. That's the vadose
16 zone. That's the first thing I think that we need to
17 protect.

18 Section C.2.(g) allows discharge to an unlined
19 pit in any area where the discharge meets WQCC standards.
20 At first glance, that seems very reasonable. However, it
21 invites an argument that says, I need to discharge
22 something that's beyond the standards; I will find a way to
23 dilute it, and then what I discharge is within the
24 standards.

25 That happens. The Division already has a

1 proposal from one company who wishes to dilute its soils,
2 its contaminated soils, with petroleum until they fall
3 under the threshold for remediation. Water is being added
4 to contaminated mine water in the southern part of the
5 state in order to meet standards sufficient that it can be
6 discharged.

7 I bring up particularly, as far as the vadose
8 zone is concerned in arid regions, it is not necessarily
9 the concentration of the contaminant in the water that
10 counts, it's the total amount of contaminating substance
11 that you release.

12 If I drop a teaspoonful of saltwater out in the
13 San Juan Basin it makes no difference. If I am discharging
14 1000 barrels a day of water at 4 milligrams of salt per
15 liter, then I am probably going to have quite an impact
16 because a lot of that will evaporate, particularly if I put
17 it in an evaporation pit. Then what soaks into the ground
18 has been concentrated. So I think we need to look at what
19 is the total substance being released.

20 Section F requires the closure of pits within six
21 months. I'll bring up that the stronger guideline --
22 stronger is this review board -- the stronger guideline for
23 workover pits is 120 days.

24 I suggest the 120-day limit is more applicable
25 here because Section C.2.(a) of the proposed Rule would

1 allow workover pits in the bottom of a watercourse. And if
2 you just wait a while in the bottom of a watercourse,
3 sooner or later there will be a flash flood and you'll get
4 your workover pit washed out.

5 I've already discussed burial of wastes. This is
6 a picture -- probably does not show on the plastic, will
7 show a little better in the printout -- this is simply an
8 area in southern New Mexico of ranch land. I'm told --
9 it's not my land, so I only know -- have the rancher's word
10 for it -- it's been several years since the pit was closed.
11 And what it is, is an environmental disaster area. Things
12 will not grow there again. Since Biblical times, I think
13 the way to condemn a man originally was to sow his land
14 with salt, and it is the sowing of salt that I am
15 addressing here today.

16 In summary, I wish to commend the OCD for its
17 effort to develop a pit rule requiring liners. I suggest
18 that the proposed Rule is faulty in that it exempts large
19 areas from the liner requirement. Other industries in our
20 nation are not allowed to dump their wastes into the
21 environment. The same responsibility should be held up for
22 the petroleum industry. If the petroleum industry either
23 will not or cannot be held to that level of responsibility,
24 it should not be permitted into new, pristine areas of our
25 state.

1 I thank you for your patience.

2 CHAIRMAN WROTENBERY: Thank you, Dr. Neeper.

3 Questions from the Commissioners?

4 Yes, Mr. Larsen? Mr. Neeper.

5 EXAMINATION

6 BY MR. LARSEN:

7 Q. Quick question just for clarification. You
8 didn't touch on paragraph E, big E, which is drilling
9 fluids and cuttings. This is one of the nonconsensus ones.
10 You said that you do not -- you recommend against burying
11 anything on-site. Could you suggest language in E? How
12 would you write E, this section on drilling fluids and
13 cuttings?

14 A. I will back up two points there, back up two
15 levels.

16 First, I should explain why it is I'm testifying
17 as an individual, because the Commissioners may wonder.
18 I'm sometimes known to work with a citizens' group, New
19 Mexico Citizens for Clean Air and Water.

20 This issue was handed to someone else in the
21 group because I was frankly too busy, and that person would
22 speak for the group could he be here. He is not here
23 because he has had recent serious surgery, and that way we
24 could not work together. And so I am speaking as a private
25 citizen. I don't want what I say here confused with the

1 group, and I believe he was the person that held on the
2 group for nonburial, flat nonburial. Therefore I wanted to
3 clarify that issue and why my words may be a little
4 different.

5 I don't want to get into wordsmithing here, but
6 in general I would say harmless nonsoluble minerals should
7 be allowed to be buried on-site.

8 Likewise, I would suggest drill cuttings. The
9 drill cuttings were cut from that site anyway. As a
10 responsible party once, I was stuck with my drill cuttings,
11 I couldn't even put them back in the hole they came from,
12 and I know how hard that can be. It makes perfect sense to
13 put your drill cuttings back in the hole if what you have
14 is a dry hole. So I would not have trouble with nonsoluble
15 minerals being buried on site.

16 CHAIRMAN WROTENBERY: Other questions of Dr.
17 Neeper?

18 Yes, Mr. Newell?

19 MR. NEWELL: One real quickly.

20 EXAMINATION

21 BY MR. NEWELL:

22 Q. On F.2, Surface Restoration, I think this kind of
23 dovetails with your presentation. Would you expect it to
24 be a requirement, or would you prefer it to be a
25 requirement that the industry that put the pit in restore

1 the surface to its pre-pit condition instead of just having
2 to readjust the contours so that there's no pond? I mean,
3 as I see it, there's no requirement for reseeding or any
4 other effort necessary to try to restore the surface to its
5 pre-damaged condition.

6 A. I would in part deflect the question.

7 I believe the guideline suggests reseeding, am I
8 right? I would certainly be in favor of restoring it to
9 its pre-pit condition, but I know that is not a
10 possibility. Once you have torn up the ground like that,
11 you're not going to get it back to pristine condition. So
12 let's be realistic and restore it to some kind of
13 equivalent biological productivity. Reseeding, yes.
14 Contouring, yes. But I cannot reasonable demand a pristine
15 reconstruction.

16 CHAIRMAN WROTENBERY: Other questions of Dr.
17 Neeper?

18 EXAMINATION

19 BY CHAIRMAN WROTENBERY:

20 Q. Dr. Neeper, I didn't hear whether you mentioned
21 that you were a member of the STRONGER review team that sat
22 with the Oil Conservation Division staff for a number of
23 days and went over the requirements of our Rules and the --

24 A. I didn't mention that --

25 Q. -- operation of our program for a number --

1 A. I didn't want to --

2 Q. -- in great detail.

3 A. -- get it confused with my testimony here, which
4 has no bearing on STRONGER per se. I had no association
5 with STRONGER, and this is strictly my testimony as a
6 private citizen.

7 CHAIRMAN WROTENBERY: Thank you, Dr. Neeper, for
8 your testimony.

9 DR. NEEPER: I'll unplug this so that it doesn't
10 buzz in somebody else's ears.

11 CHAIRMAN WROTENBERY: Okay, and we will enter
12 Neeper Exhibit Number 1 into evidence.

13 It's probably about time to take a short break.
14 We'll take a 10-minute break.

15 (Thereupon, a recess was taken at 3:08 p.m.)

16 (The following proceedings had at 3:30 p.m.)

17 CHAIRMAN WROTENBERY: We'll get started again.

18 (Off the record)

19 CHAIRMAN WROTENBERY: Okay, we'll go back on the
20 record, and Ms. Blancett and Mr. Velasquez would you stand
21 and be sworn, please?

22 (Thereupon, the witnesses were sworn.)

23 CHAIRMAN WROTENBERY: And we need another chair
24 up there.

25 MS. BLANCETT: We can stand, we're okay, we're

1 okay.

2 TWEETI BLANCETT, CHRIS VELASQUEZ

3 the witnesses herein, after having been first duly sworn
4 upon their oaths, testified as follows:

5 DIRECT TESTIMONY

6 BY MS. BLANCETT AND MR. VELASQUEZ:

7 MS. BLANCETT: I'm Tweeti Blancett, Aztec, New
8 Mexico. I'm a member of OGAP, San Juan Citizens Alliance
9 and Republicans for Environmental Protection. I'm also a
10 member of the New Mexico Cattle Growers, San Juan Basin
11 Livestock, Stewards of the Range, and Paragon Resources.
12 So I wear several different hats.

13 Today what I'm going to give you is a
14 presentation that is co-presentation from OGAP and San Juan
15 Citizens Alliance.

16 MR. VELASQUEZ: And my name is Chris Velasquez.
17 I'm from Blanco, New Mexico. I am a rancher, and I
18 appreciate the Commission letting us have some time to
19 bring some information to you, and I'd like to submit some
20 written comments after I get done, and some pictures with
21 it, along.

22 MS. BLANCETT: I just want to say that the
23 Blancetts have standing. We've been in the same basin for
24 parts of three centuries, and the little guy right up
25 there, he's our eighth generation. Chris also -- I could

1 do a picture of his family and it would be just like this.

2 Our home is in northwestern New Mexico. This is
3 a picture of our farm. I could do a picture of Chris's and
4 it would look just the same, except he's on the San Juan
5 River and I'm on the Animas.

6 This is a picture of both Chris' and I's ranch.
7 It looks out across from one permit to the other. This is
8 federal land. It's high piñon and juniper, and it's
9 beautiful. But we have a problem.

10 Now this is the Burlington pit, and this is the
11 unlined -- the torn pits that we want to talk about. This
12 is fences that are down, that have access for both wildlife
13 and livestock.

14 I would tell you on this picture, if you'll look
15 right up here in the corner, that is a brace post. San
16 Juan group of ranchers working with BLM -- and Chris can
17 address this -- gave fence standards. And if you guys are
18 deciding on fence standards, you might let him tell you
19 about them.

20 MR. VELASQUEZ: We required that they have a 48-
21 inch fence around those pits with mesh wire and barbed wire
22 on top, so the wildlife and the livestock could stay out of
23 those pits. In 2001 I had some cows get into a pit, and
24 the fence was down on the corner. It had been down for a
25 year. And the wildlife -- it's a wildlife habitat area for

1 the summer, on my summer range -- they'd come in there in
2 the winter, and this pit had been in there for over a year.
3 My cows got into it. I had 20 of them that aborted their
4 calves. I had to have them tested.

5 I tested the water on that pit. I've got the
6 test results in here, but you can see the picture and that
7 pit that had been open for over a year. I'll pass the
8 picture around for the Commission so they can see it. It
9 cost a lot of trouble on me. And finally on October 13th,
10 not long ago, I finally got reimbursed for my damages on
11 those cows. But I had to call a vet, check everything out,
12 make sure we sent it to the oil company so I could get
13 reimbursed for damages.

14 MS. BLANCETT: Okay, these are the pits, right
15 here. This one has just the wire there. And if you'll
16 notice the track marks, that's where they pull up with the
17 back of their trucks and load the water. The pit won't
18 hold anything now.

19 This pit also is a real good example of -- right
20 over here in this corner, this stuff is deadly, anything
21 gets in and drinks it. We have also water-sample reports
22 that we can present to you where the stuff that goes into
23 these pits -- and this one is unlined -- it's deadly. It
24 is not good for wildlife or livestock.

25 This right up here is an overspray on the trees.

1 This right here is an overspray on the ground. This all is
2 disturbed, every bit of this ground is disturbed. And once
3 it has been part of a drilling operation like this, not
4 only is it disturbed, it's contaminated.

5 Okay, now this is an example of a pit where the
6 fence -- If you'll look at the fence, see, it's the net
7 wire fence with the steel post and the top barbed wire.
8 The pit linings are torn. This is all disturbed area.
9 This is trash. This out in here is drilling mud. It also
10 has some of the black -- what I call gunk, but are
11 petroleum by-products that when we've had it tested, it's
12 deadly.

13 COMMISSIONER LEE: Is that iron sulfide?

14 MS. BLANCETT: This right here?

15 COMMISSIONER LEE: The black stuff.

16 MS. BLANCETT: These facts?

17 COMMISSIONER LEE: No, the black stuff.

18 MS. BLANCETT: Oh, the black stuff. You know,
19 you have producers here and you probably want to ask them
20 what's in the pit. I don't feel qualified to discuss
21 what's in the pit. I just know that when we had it tested,
22 it's deadly, and with Chris as well. Maybe some of the pit
23 guys can -- the producers in here can tell you what's in
24 those pits. You have several representatives.

25 MR. VELASQUEZ: On that pit that I passed the

1 paper around, there's a water quality on it, what made the
2 cows abort, and I also had a lot of wildlife get into those
3 pits.

4 MS. BLANCETT: This is kind of an interesting
5 picture. This woman right here is a Canadian indian, and
6 they're down because they wanted to know what coalbed
7 methane meant.

8 So let's talk a little bit about San Juan County,
9 because that's all that I know how to talk about. In San
10 Juan County last year we generated \$4.5 billion, guys.
11 That's bigger than some state budgets. One-eighth of that
12 went to the state, to private landowners, royalty owners
13 and the federal government, which is about \$400 million.
14 The 7/8 of that, the billions, went to the producer of
15 those resources.

16 \$4.5 billion -- My comma is out of place. \$4.5
17 billion, guys, tells you that New Mexico ought to be the
18 richest state in the Union. We ought to have quality
19 education, we ought to have quality health care, we should
20 have a wonderful infrastructure.

21 But this money isn't staying in New Mexico, or
22 the state or the federal government. Seven-eighths of it
23 leaves this area.

24 But in San Juan County, for that, what we get is,
25 we have -- This is our road system in San Juan County, and

1 this is from the San Juan County road map. This right here
2 is Farmington, that's Aztec and that's Bloomfield. This is
3 the road that goes to Albuquerque, this is the road that
4 goes to Dulce, this is the road that goes to Shiprock, this
5 is the road that goes to Gallup. That's our road system
6 with federal, state and county roads.

7 These are our roads with oilfield roads in San
8 Juan County. For every one of those roads you see, there's
9 at least one well site. Each one of those roads parallel
10 at least one pipeline, maybe more.

11 In San Juan County we have 35,000 wells and
12 counting. The black dots are conventional wells -- the
13 black dots are coalbed methane. The red dots are
14 conventional wells. There's Aztec, there's Farmington,
15 there's Shiprock, up here is Durango. Here's the HD
16 Mountains that you may or may not hear about.

17 Okay, in San Juan County we have road damage.

18 MR. VELASQUEZ: And a lot of erosion and sediment
19 going into the waters, in the rivers. And the reason --
20 what we're concerned about is, the roads are not to
21 standards, and most of that water is staying in the middle
22 of the road, creating an arroyo. And whenever it rains,
23 whenever we do get a little bit of rain, all that silt
24 either goes into the Animas or the San Juan River.

25 MS. BLANCETT: Okay, we have pipelines. There's

1 eight major transportation lines, and that's the way they
2 look.

3 We have contaminant spills. When we were talking
4 about salting the earth, this is a 1998 salt spill. The
5 ground is still sterile. They've taken the soil out,
6 they've replaced it with topsoil, they've reseeded four
7 times. The ground is still sterile.

8 This saltwater spill ran a quarter of a mile down
9 an arroyo, killed the trees, the shrubs, the grasses,
10 anything that was in its path for a quarter of a mile.

11 Here's a well where the containment berms and the
12 tanks spill. They go over the berms, they go onto the well
13 sites. When the rains come, they leach away from there.

14 I have on our property better than 400 wells in
15 32,000 acres, 800 miles of roads and pipelines. There are
16 none of them in compliance, in all forms. If the well pad
17 is in compliance, the road getting to it isn't or the
18 pipeline coming out of it isn't.

19 This is on state land. I want to make sure that
20 I pick on everybody evenly. This is a spill that we
21 reported over and over and over and over again. It has
22 finally been cleaned up to the extent that this tank right
23 now, right here, is covered with mesh wire, and they threw
24 gravel and dirt on this and dug out the part that wasn't --
25 that was contaminated and stacked it on the side of the

1 well location.

2 This is an open pit. Now, if you'll notice, it's
3 fenced, it has wire, and it's an open pit. It's four years
4 old. We've asked for this to be contained, enclosed. And
5 if you put your hand in that water that looks -- or that
6 liquid there, it comes out, it's oily, it smells, it
7 stinks, and I wouldn't want anything to drink it.

8 Okay, this right here is an example of what they
9 drink when they get in these pens, and this is what -- you
10 have the water analysis of what comes out of this.
11 Burlington paid for two of these dead cows. There were two
12 more that Koch was supposed to pay part that was never paid
13 for them. But the question I would ask you is, what about
14 the wildlife?

15 And then I want you to look at the environment
16 right here. When this is covered up -- This one is an
17 unlined pit, so the black plastic doesn't just get covered
18 up and dug up and blown all over the country. This one
19 just has the drudges of the pit covered up, and when the
20 first rains come, because it's not reseeded in a timely
21 manner or the drought doesn't allow the seed to go, all it
22 does is create erosion and further contamination of the
23 topsoil and the watersheds.

24 Here's some dead cows.

25 MR. VELASQUEZ: That valve on the tank froze and

1 it spilled -- it dumped all the liquids out, and those cows
2 got ahold of it outside the fenced area and drank, and they
3 didn't make it out of the well location before they were
4 dead.

5 It's been real costly to my operation. In the
6 last ten years I lost over 80 cows, either to chemicals or
7 some kind of deadly poison from the wells and also getting
8 runned over by oilfield equipment.

9 This is a well location on state land. It takes
10 two pictures. It's about three to four acres, and they
11 reseeded, reclaimed the bottom of it, never reclaimed the
12 top of it. The pipeline was a mess. It takes two pictures
13 to put that one well location together. They done that
14 last year.

15 MS. BLANCETT: Okay, this was taken last week.
16 This is a Koch well. And I want you to look at -- It's
17 fenced properly, it's braced. The lining -- This is a
18 brand-new well. The lining appears to be all intact. We
19 didn't find any notices of torn lining. It seemed to be
20 intact. I can't see the bottom of it. This end over here
21 is full of contaminants.

22 The other thing that they do is, they put their
23 trash in these wells, then they cover them up. But the
24 land around the area is totally disturbed. It's nothing
25 for them to disturb three to five acres, and the way

1 workovers seem to work in our part of the world -- I can't
2 address anything else -- is that within 18 to 24 months,
3 once they cover this all up, they come back in and tear it
4 up or -- tear it up again and work it over again. The land
5 never has the opportunity to heal.

6 We have seven pastures on our ranch that we're
7 required and we try to rotate so that there is ample time
8 for the forage to regenerate itself and for the water to
9 replenish itself.

10 What happens, though, is, the oilfield is never
11 out of those pastures, so there is never a rest for the
12 land, because they are not restricted from any use in any
13 area. And there's no planning that takes place, so that
14 when we're in a pasture rotation they're drilling somewhere
15 else. They have none of the restrictions for the surface
16 that we do. In fact, they have no charges on the surface
17 for stewardship like the grazing permittee is, whether it's
18 on state land or federal land.

19 Okay, this is just another shot of that same
20 thing. These are tanks that they haul in.

21 MR. VELASQUEZ: They usually hold water that they
22 haul out of the river or a storage pond, into those, and
23 then they put them when they drill, and that water ends up
24 in those ponds, and they dump in those ponds before they
25 put those tanks up.

1 And really, Commission, to solve all that problem
2 about the open pits, Burlington and BP are doing something
3 on the workover.

4 You'll see a tank there. This picture was taken
5 December of 2002. They can hold all their chemicals in
6 that one tank and they can dispose of it correctly, instead
7 of leaving them on the ground, and eliminate having to put
8 those plastic liners and bury everything in place with all
9 the contamination on the ground.

10 But I do commend Burlington and BP for starting
11 to do that.

12 MS. BLANCETT: Okay, this is a Koch disposal pit.
13 We were talking about the water that goes in these
14 evaporation pits. This is on our ranch. This was taken
15 two weeks ago. I mean, last week.

16 This area right here is where the overspray
17 occurs, all the way around the pit. And this is a picture
18 back from it. This entire area is salt-sprayed. There
19 were a lot of dead trees on this site.

20 MR. VELASQUEZ: There was piñons and juniper
21 trees that were probably four feet in diameter. They were
22 dead. The only thing sticking out were the sticks, the
23 bigger parts of those trees. And to do the reclamation on
24 this well site or this disposal site, they cut all the
25 trees down. That was their reclamation on that part.

1 MS. BLANCETT: I would have to say that I did see
2 some evidence of seed out here, but since the soil is
3 completely salt-saturated the seed didn't germinate.

4 This is a closer sight of it, and if you'll see,
5 the pit overflows periodically. There's a trench that runs
6 right along here. When it overflows sufficiently, it runs
7 down, and one of our stock ponds catch the excess water.

8 Two years ago we were to rotate into the pasture
9 that this disposal plant is in, and it had overrun so badly
10 that when it went down into the stock pond, that it was so
11 full of the saltwater and the -- whatever they put in here,
12 which is supposed to be just the disposal water, I'm not
13 sure that that's what it is, but it was so full we couldn't
14 even put our cattle into this pasture. We moved them to
15 another pasture. We set up a temporary storage tank and a
16 waterer, and we had a load of water hauled in.

17 We also asked Koch Energy to haul water to us
18 because they had contaminated our water supply, and they
19 told us they would haul us one load of water for all summer
20 long. That's not exactly being a good neighbor when you
21 contaminate the land which somebody is using.

22 This is an example of erosion all the way outside
23 the pit.

24 These -- I don't know about the rest of New
25 Mexico. I was raised in southern New Mexico and it seems

1 like, if my memory serves me well, we had wind down there
2 too. But I will tell you, when these little sprayers start
3 throwing that water up into the air, it doesn't stay in
4 that pit, it goes all the way around that pit.

5 And so if you're looking at saltwater disposal
6 plants that spray it in the air, don't do any more of
7 these. And I would request that OCD take the two that's on
8 our ranch off and reclaim the land, because all you're
9 doing is contaminating the existing land, contaminating the
10 land around it, and the water supply.

11 Make it real simple. Our ranch is gone. Our
12 ranch and Chris's ranch is gone. There is no viable
13 enterprise anymore, it's gone. And when you take an asset
14 away from people that have had it for generations and you
15 put them in a corner and you tell them, "like it", when
16 they come out of that corner they aren't happy.

17 So what we're trying to tell you today is what is
18 happening in northwestern New Mexico and has happened in
19 northwestern New Mexico. And we want to tell you that we
20 don't believe that any of the government agencies are doing
21 their job to protect the land and water. BLM is not doing
22 their job, you guys aren't doing your job, the State of New
23 Mexico isn't doing their job and the environmental
24 protection agencies aren't doing their job. Because if
25 they were, we wouldn't have examples of these pictures.

1 And if you think that I just went out onto our
2 ranch and got, out of these 400 wells -- were able to pull
3 a couple that were really bad examples, then I challenge
4 you, come any day you want to come. You pick any road on
5 my ranch or Chris's ranch and we'll show you what we just
6 showed you here. This is not the exception, this is the
7 rule in northwestern New Mexico.

8 MR. VELASQUEZ: I've got something else. I had
9 two natural springs on my winter allotment, and when they
10 done the well location they put it almost on top of the
11 first one. I had permanent water there for the wildlife
12 and the livestock. As the result of it, I've had to go to
13 an alternative watering system on it. This cost me about
14 \$9000 to put an alternative system to compensate for the
15 water that they messed up on that one location. If they
16 would have had an on-site before they had made this well
17 location, some of -- most of that problem could be avoided.

18 MS. BLANCETT: But you wanted recommendations,
19 this committee wanted recommendations. And what we're
20 telling you is, what is happening in New Mexico is going to
21 happen all across the west, because the people that operate
22 in New Mexico operate in Colorado, they operate in Arizona,
23 they operate in Wyoming, they operate in Montana.

24 So do we want northwestern New Mexico and
25 southeastern New Mexico to be the standard, or do we want

1 to step up to the plate and say, We've got a problem and
2 we're going to work on correcting it?

3 And only by working on these problems and talking
4 about them and bringing them out like we've done today,
5 with passion and interest, are we going to find solutions
6 to the things that we're doing to our land and our water.

7 And we believe that the American public and the
8 New Mexicans are not going to continue to allow oil and gas
9 to damage the land and the water, and they're going to
10 require the government entities to start complying with
11 their own regulations. Not new regulations.

12 You know, the pit rules that you have, that
13 doesn't help for the ones that are already on the ground.
14 They're not even following the existing rules. What makes
15 you think tightening the rules are going to make any
16 difference? They're not following the ones that are there.

17 So what are we going to do? We're going to have
18 to step up to the plate and admit we've done some things
19 wrong, we're going to have to work together, and we're
20 going to have to comply with the existing regulations. And
21 you government entities are going to have to enforce those
22 rules and regulations, because ladies and gentlemen, we're
23 the generation that stands to inherit the wind.

24 MR. VELASQUEZ: Right now -- and I didn't have
25 time to take a picture -- there's a well location that they

1 worked over and they put a pit right next to the river.
2 The liner is broke on it. It's been there for six months.
3 The pit -- if it was contaminated, that water is going into
4 the river right now, as we speak, and nobody's done
5 anything about it. I just happened to see it yesterday
6 when I was riding to town.

7 MS. BLANCETT: What we would like to see is
8 closed systems. You don't have any open pits. That way
9 you don't contaminate the water, you don't contaminate,
10 tear up the soil, you don't contribute to noxious weeds,
11 you don't allow for erosion.

12 They drill, put it in tanks and haul it off and
13 dispose it in injection wells. I don't want any more going
14 up in the air.

15 We thank you very much for your time and the
16 opportunity to present this.

17 CHAIRMAN WROTENBERY: Thank you for your
18 testimony.

19 Let me ask about the exhibits you have submitted.
20 You did provide us for the record a copy of your --

21 MS. BLANCETT: -- the entire --

22 CHAIRMAN WROTENBERY: -- PowerPoint presentation.

23 MS. BLANCETT: Yes.

24 CHAIRMAN WROTENBERY: And then in addition to
25 that I believe we've got --

1 MR. VELASQUEZ: I think there's five different --
2 and I numbered them alongside the paragraph where it
3 states --

4 CHAIRMAN WROTENBERY: Okay --

5 MR. VELASQUEZ: -- so they're numbered up there
6 on top, and --

7 CHAIRMAN WROTENBERY: -- we've got pictures
8 number 2 and 4.

9 MR. VELASQUEZ: There should be five of them all
10 together.

11 CHAIRMAN WROTENBERY: Okay, here's 5, 3. And
12 what's 1?

13 MR. VELASQUEZ: That one right there.

14 CHAIRMAN WROTENBERY: This is 1?

15 MR. VELASQUEZ: Yeah, that's --

16 CHAIRMAN WROTENBERY: Okay. And then what --

17 MR. VELASQUEZ: I just brought that up to show
18 you what they can do.

19 CHAIRMAN WROTENBERY: Okay, thank you. And then
20 you have some written comments here --

21 MR. VELASQUEZ: Yes, I have some written
22 comments --

23 CHAIRMAN WROTENBERY: -- to go along with the
24 pictures?

25 MR. VELASQUEZ: With the pictures, yeah --

1 CHAIRMAN WROTENBERY: Okay.

2 MR. VELASQUEZ: -- with the paragraph on it.

3 That was just a noxious weed, I just brought that for
4 later.

5 CHAIRMAN WROTENBERY: Okay, then we'll admit this
6 set of exhibits into evidence as well.

7 MR. VELASQUEZ: And I appreciate your time.

8 CHAIRMAN WROTENBERY: Thank you. Does anybody
9 have any questions for Mr. Velasquez?

10 Did Ms. Blancett walk out?

11 MR. SANDOVAL: No, she's right here.

12 CHAIRMAN WROTENBERY: Oh, here she is.

13 MS. BLANCETT: Yes, sorry.

14 EXAMINATION

15 BY MR. LARSEN:

16 Q. Mr. Velasquez passed around a photo of a tank or
17 a closed system. Will I --

18 MR. VELASQUEZ: Sure.

19 Q. -- get to see that? And how did he convince
20 Burlington to do that?

21 MR. VELASQUEZ: They've been doing it on their
22 own, and BP has too, which is a good idea, and I appreciate
23 your efforts. That tells me that they know how to do it
24 right.

25 CHAIRMAN WROTENBERY: Okay, Commissioners, any

1 questions?

2 COMMISSIONER BAILEY: No questions.

3 CHAIRMAN WROTENBERY: Thank you very much --

4 MS. BLANCETT: Thank you.

5 CHAIRMAN WROTENBERY: -- Ms. Blancett and Mr.
6 Velasquez, for your testimony.

7 And I did -- Yes, Ms. Rees, I did promise you
8 that we would go ahead and take your statement.

9 MS. REES: Thank you.

10 CHAIRMAN WROTENBERY: You can catch a ride back?

11 MS. REES: Yes.

12 I am Janet Rees and I'm a resident of Bloomfield,
13 New Mexico. Except for one year, I've lived in San Juan
14 County since 1967. I'm an avid birdwatcher, an amateur
15 naturalist, with a passion for the protection of wildlife
16 and habitat. I'm here today to present concerns I have
17 with the statewide pit rule proposed by the Oil
18 Conservation Division.

19 I've grown increasingly concerned about the
20 impact of oil and gas development in the Four Corners
21 region. As you all are aware, San Juan County has been
22 advised that we have a ground level ozone problem that
23 threatens to exceed federal limits set by the Environmental
24 Protection Agency and that it is putting many people at
25 greater risk for respiratory and cardiovascular problems.

1 The Air Quality Bureau of New Mexico Environment Department
2 tells us that, based upon information from permitting, that
3 the oil/gas industry is the biggest producer of volatile
4 organic compounds, one of the precursors of ozone, in San
5 Juan County. As I talk with some of my ranching neighbors,
6 I'm appalled to hear the livestock losses that they suffer
7 because of the toxins their stock have ingested from these
8 pits.

9 There is an ever-increasing pressure on New
10 Mexico to help meet the nation's domestic energy needs,
11 with thousands of wells proposed for federal lands and more
12 oil and gas development on state and private land. This
13 development will bring a large number of new pits.
14 Problems exist with the State and BLM's enforcement of
15 existing regulations as seen most recently in Lovington,
16 New Mexico. Because of the huge scope and the cumulative
17 impacts of the impending development, it is essential to do
18 it the best way possible. I'm told that over \$2 billion a
19 year of federal revenues is generated from oil and gas
20 activity in San Juan County. It seems to me that the oil
21 and gas industry can afford to pay for cleaner and better
22 technology.

23 Please put the welfare of all New Mexicans first
24 and change the way the Oil Conservation District --
25 Division, I'm sorry -- does business. Please move quickly

1 at every opportunity to set the bar higher for industry and
2 to hold the OCD accountable for better regulations,
3 enforced more consistently. Unless inspections are
4 conducted and regulations are enforced, it is very likely
5 that all the energy that went into designing a new
6 permitting process and the changes reflected in this new
7 Rule that are meant to protect our groundwater and
8 environment will effect no positive change.

9 Please consider the following issues and specific
10 suggestions:

11 Concerning Section 2.(g).(iv) [sic] and Section
12 capital letter G, exemptions to pit linings should be
13 prohibited without exception. The proposed Rule grants
14 exemptions to certain areas in the San Juan and Permian
15 Basins. Pits typically contain toxic and hazardous
16 materials. It would be irresponsible to allow leaching of
17 these materials into the ground and their eventual
18 potential transport via water and air over time. Why take
19 the risk of exempting any area from a precautionary and
20 simple thing like lining a pit? In addition, the OCD is
21 given a lot of leeway to grant exemptions for anything
22 covered under this Rule (netting pits, lining pits, closing
23 pits, reclaiming sites) without requiring that an operator
24 prove that he needs the exemption. This basically makes
25 the rules a mockery. Need must be proven before a request

1 for an exemption can be considered, and granting exemptions
2 should only rarely occur.

3 Special Requirements for Pits, 2.(f) under C,
4 Design, Construction and Operational Standards, states that
5 screening, netting, covering, et cetera, shall be required
6 for all tanks exceeding 16 feet in diameter. These
7 protective measures must be required for all tanks. While
8 the 16-feet rule might exclude waterfowl, it is not a magic
9 number for smaller birds. I recently found, when I checked
10 a couple of tanks that were much, much smaller than 16, a
11 bird carcass in each one. There was also a chicken-wire
12 covering over each one. One of the coverings had been
13 torn, the other chicken wire was probably 8 to 10 inches
14 from the surface of the tank.

15 Regarding Fencing and Netting, C.2.(f), I am
16 concerned that the Division can grant an exemption to the
17 screening, netting or covering requirement upon showing
18 that an alternative method will adequately protect
19 migratory birds or that the tank or pit is not hazardous to
20 migratory birds. I question how industry could reasonably
21 show the tank or pit is not hazardous unless it contained
22 potable water. The United States Environmental Protection
23 Agency Region VIII -- which is not our region, by the
24 way -- includes our neighboring states, Colorado and Utah.
25 It states that improper construction or operation of pits

1 used by the oil and gas exploration and production
2 industries results in significant losses of mammals and
3 birds yearly. I have the website for this information too
4 on the print information that I gave you. The U.S. Fish
5 and Wildlife Service describes the significant threat posed
6 by oilfield waste to aquatic birds, small songbirds, bats,
7 pronghorn, deer and other wildlife on the website that I
8 provide here.

9 Elk and deer are likely drinking toxic substances
10 from the pits and aborting or dying, just like Mr.
11 Velasquez's livestock. It is important to remember that
12 even if wildlife does not die immediately, ingested toxins
13 can lead to death away from the pits or the toxins can make
14 them more susceptible to disease and predation.

15 The Migratory Bird Treaty Act prohibits the
16 "taking" of migratory birds, and "taking" includes exposed
17 oil/gas waste pits that result in bird deaths. The Wyoming
18 Oil and Gas Conservation Commission sets one good example
19 of what can be done in their regulation of pits in Chapter
20 4, Section 1, under Pollution and Surface Damage, that
21 requires that pits be completely fenced when the pits
22 contain oil or other harmful substances. They must be
23 netted or screened to avoid loss of wildlife, domestic
24 animals or migratory birds.

25 The U.S. Fish and Wildlife Service in their

1 solution section found in one of the above-mentioned
2 websites recommends closed containment systems -- we heard
3 this in the previous presentation -- closed containment
4 systems for oil and gas field waste as their preferred
5 systems for dealing with drilling and production fluids,
6 because such systems require little or not maintenance and
7 they can be moved from site to site. Closed systems
8 eliminate soil contamination and the ensuing remediation
9 expense. They do not attract wildlife, they serve to
10 isolate toxins from the environment. However, if pits are
11 used, the Fish and Wildlife reports the most effective
12 deterrent is netting. They report deterrents that do not
13 work are flagging, reflectors, strobe lites and Zon guns.
14 From the U.S. Fish and Wildlife accounting of this issue,
15 it seems there may be no satisfactory alternative methods,
16 and I urge you not only to grant no exceptions to netting
17 but to quickly move to strengthen your policy on pits by
18 making closed systems the industry standard for oil and gas
19 field waste.

20 In a memorandum to oil and gas personnel dated
21 July 26, 1989, regarding the implementation of migratory
22 bird protection regulations, Order Number R-8952, OCD in
23 number 13 states, "Cooperative efforts should be
24 established and maintained between industry and state and
25 federal government agencies to further quantify migratory

1 bird losses, where they are taking place, and to work
2 together to develop economical means to prevent such future
3 losses." This was a commendable requirement, but has it
4 been carried out?

5 I appreciate my opportunity to air my concerns.
6 In making your final decisions, please ask yourselves if
7 you want your dogs, cats or horses drinking from these
8 pits, if you want one of them in your back yard. Industry
9 has a responsibility to do the right thing by its neighbors
10 and to help protect wildlife.

11 Thank you.

12 CHAIRMAN WROTENBERY: Thank you, Ms. Rees. And
13 did you leave a copy of your statement with --

14 THE WITNESS: I did, yes.

15 CHAIRMAN WROTENBERY: -- Steve? Great.

16 Mr. Newell, did you need to go ahead and make
17 your statement?

18 MR. NEWELL: So I can leave, if that's all right.

19 CHAIRMAN WROTENBERY: That will be fine, thank
20 you.

21 MR. NEWELL: Thank you very much for
22 accommodating me.

23 (Off the record)

24 CHAIRMAN WROTENBERY: Mr. Newell?

25 MR. NEWELL: Thank you, I appreciate the

1 opportunity to address the Commission.

2 I think what we have here is a clear example of
3 competing interests that have come before this Commission
4 and given you all the opportunity to review various sides
5 of this issue. I might suggest to you that certainly
6 history indicates that far too long in this state, that
7 choice of competing interest has deferred in favor of the
8 industry, and we would ask this Commission now to change
9 that approach. It's time to defer to the protection of the
10 environment, the health and welfare of the people of this
11 state and the wildlife that are impacted.

12 The dollars and the economics of these issues are
13 not only economics associated with how much it costs to
14 drill, for example, using a closed-pit system, but also
15 what is the environmental cost when they have to come back
16 in and clean up, or the litigation cost when they end up in
17 court, either with, you know, some firm out of Houston or
18 some firm in New Mexico or some firm elsewhere, trying to
19 advocate on behalf of some rancher whose livelihood has
20 been ruined because of actions taken by the industry.

21 The closed-pit system is a great example of where
22 a very economically feasible alternative that would
23 eliminate probably 99 percent of the problems that have
24 been raised here with respect to drilling pits and workover
25 pits could be implemented, and should be implemented.

1 Again, you know, I want to be specific and
2 succinct. There should be no exempted areas. Just in that
3 small area that's carved out in southeast New Mexico there
4 are the Maroon Cliffs archeological site where paleo-indian
5 artifacts date back to, I believe, at least 5000 B.C. and
6 maybe 12,000 B.C., and that's an area that's exempted.
7 They could go in and put an unlined pit and then remediate
8 it in some way that was not effective, and the next rain,
9 all of a sudden you've contaminated archaeological effects
10 that have been there thousands of years.

11 And then as I mentioned this morning in questions
12 to Mr. Anderson, there is the Los Medranos raptor site,
13 which is a singularly unique site in the whole North
14 American continent for the congregation of raptors and the
15 mating ground of various raptors, and it too is an exempted
16 area. And as we've seen by some of the presentations here
17 today, just because they may not be getting into the actual
18 pits themselves, their habitat is being destroyed. And
19 when you destroy the habitat, particularly with something
20 as sensitive as raptors, you're going to involve and impair
21 the ability of that area to sustain the historic place it
22 has been.

23 Some of the discussion this morning with Mr.
24 Anderson involved burial of various contaminants on site,
25 and I would suggest to you that's a taking, that's a

1 governmental taking.

2 And if you allow and mandate burial on site,
3 someone is going to sue the government of the State of New
4 Mexico under a taking statute, because I don't believe that
5 this Commission or any governmental body has the right to
6 mandate that a surface owner take and dispose of or allow
7 disposition of contaminated waste on his or her property,
8 certainly not without just compensation, and not without
9 due process of law as the Constitution allows or requires.

10 And any regulation that mandates burial on site
11 and not disposal to a regulated, certified facility -- and
12 I know there are representatives here who have such
13 regulated, certified facilities -- that would be the
14 appropriate place to put the contaminants from these pits,
15 and burial on site is an area where I would strongly
16 caution this Commission from going.

17 Finally, the restoration provisions are
18 completely tepid. The only thing you have in here is that
19 they have to restore the contour. And as we've seen from
20 numerous pictures and various testimonies that have been
21 offered, restoration needs to be effective, it needs to be
22 something that has some teeth in it. I'm sure the State
23 Land Commissioner doesn't want the oil industry, after it
24 goes out and drills on a site, to just be able to walk away
25 and strip away any benefits of the natural environment on

1 that site and just leave it in that condition for years or
2 maybe even decades to come.

3 When I first got out and started practicing law,
4 a gentleman who we represent took me on top of a tank
5 battery and pointed out an area where you could see there
6 was a distinct change in vegetation, there wasn't any grass
7 growing. The only thing, there were some noxious weeds.
8 He said -- and this gentleman was in his sixties -- he told
9 me that that was a saltwater spill that happened when he
10 was in his teens. So nearly fifty years later, the
11 environment is still degraded because of that saltwater.
12 And that's the type of long-range harm that we are looking
13 at here.

14 And then finally and in conclusion, anything that
15 doesn't protect the groundwater, any loopholes that we
16 leave into this that allows the industry to pollute the
17 groundwater without taking proper precautions either to
18 protect it or to go in and clean it up when it's done is
19 going to look very short-sighted 30, 40 or 50 years from
20 now, when water is even more of an acute problem than it is
21 right now.

22 I mean, when we go in -- and I went to the
23 bathroom in this building and I saw a sign encouraging
24 everyone to protect the water. And I would encourage this
25 Commission to do the same thing. I mean, what is really

1 more effective? Having someone not run the water a little
2 longer when they're washing their hands, or having real
3 teeth in regulations that will make sure that pits can't go
4 pollute gallons, and millions of gallons, of water that is
5 in a depletable, un rechargeable, or very slightly
6 rechargeable resource. And I would suggest more so than
7 any signs in any motels or any facilities in Santa Fe, this
8 Commission has the ability to step up to the plate and
9 protect the resources of this state.

10 And I encourage the Commission to do that, I
11 encourage the Commission to change from, I think, an
12 industry-friendly position it has maintained in the past,
13 and take a more balanced position in its regulation.

14 Thank you.

15 CHAIRMAN WROTENBERY: Thank you for your
16 comments, Mr. Newell.

17 At this point, Mr. Feldewert, would you like to
18 present your testimony on behalf of IPANM?

19 MR. FELDEWERT: If I may, I just have a brief
20 issue for Controlled Recovery, Inc., and deal with that
21 first and then IPANM?

22 CHAIRMAN WROTENBERY: That would be just fine.

23 MR. FELDEWERT: I'm here on behalf of Controlled
24 Recovery, Inc., and we've entered an appearance in this
25 case solely for the purpose of putting into evidence what

1 has been marked as CRI Exhibit Number 1, if I could just
2 approach --

3 CHAIRMAN WROTENBERY: Certainly.

4 MR. FELDEWERT: Exhibit Number 1 is nothing more
5 than the July 31 letter that I wrote to the Commission's
6 attorney at that time, Mr. Brooks, and his July 31st
7 response. And we put this into the record only because
8 initially when this Rule was being promulgated there was
9 some confusion arising out of previous drafts, the language
10 dealing with what was exempt -- what facilities were exempt
11 and what were not exempt.

12 And this letter simply confirms that the
13 Commission considers CRI's surface waste management
14 facility, like all the other surface waste management
15 facilities that are regulated under Rule 711 to be exempt
16 from all provisions of this pit rule under consideration
17 today, and I just move the admission of this exhibit into
18 the record.

19 CHAIRMAN WROTENBERY: And CRI Exhibit Number 1 is
20 admitted into evidence.

21 MR. BROOKS: Mr. Feldewert, I believe that
22 there's a typographical error in your letter in reference
23 to 19.15.9.771. I believe that should be .711, should it
24 not?

25 MR. FELDEWERT: You're correct, Mr. Brooks, and I

1 was hoping you wouldn't point that out in front of
2 everybody here in the room, but you are correct.

3 Okay. We then -- I'm here on behalf of IPA New
4 Mexico, and we've commented earlier about -- you know,
5 appreciate the effort that the Division had put into this.
6 We think this regulation is a very good effort and
7 represents an effort to step up to the plate and work out
8 issues that have been problems here in New Mexico for some
9 time.

10 The regulations, we believe, go a long way
11 towards dealing with some issues that, you know, have
12 obviously stirred a lot of emotion here today. We think
13 it's a very reasonable rule, we think it's very balanced,
14 and resolves a lot of the competing interests that this
15 Commission has to deal with.

16 We have some very few remaining comments. Mr.
17 Gantner is available. With your permission, I'd like to
18 have him come up here and just outline in very brief
19 fashion what additional considerations we would like you to
20 take into account with respect to the language of this
21 Rule.

22 We will then have some very brief testimony from
23 Mr. Manthei, who is a field personnel, about some of the
24 particular provisions, again focusing on the language of
25 this Rule.

1 And then finally Mr. Randy Hicks has got a short
2 PowerPoint presentation that we'd like to present, so we
3 hope to wrap this up pretty quick.

4 CHAIRMAN WROTENBERY: Okay, thank you.

5 How about we have Mr. Gantner, Mr. Manthei and
6 Mr. Hicks all stand and be sworn at this point?

7 (Thereupon, the witnesses were sworn.)

8 MR. GANTNER: I do have some handouts. I have
9 one for each member of the Commission, there's one for
10 exhibit purposes, and I do have extra copies for people in
11 the audience that would like that. What these represent
12 are joint IPANM/NMOGA consensus pit rule, as well as
13 proposed definitions. With my comments, I'm going to be
14 able to just go through those briefly.

15 CHAIRMAN WROTENBERY: And Mr. Gantner, at this
16 point are you commenting on behalf of both IPANM and NMOGA?

17 MR. GANTNER: Yes.

18 BRUCE GANTNER,
19 the witness herein, after having been first duly sworn upon
20 his oath, was testified as follows:

21 DIRECT TESTIMONY

22 BY THE WITNESS:

23 MR. GANTNER: Chairman Wrotenbery, Commissioners,
24 appreciate the opportunity to just briefly give some
25 comments.

1 As you know, NMOGA representatives have been
2 working with NMOGA, NMOCD and other members of consensus
3 committee on this proposed Rule for over a year. And the
4 process has certainly been challenging for everyone, but I
5 think it was a good process to hear it from all sides, just
6 as today's hearing is the same.

7 NMOGA/IPANM would like to point out to the
8 Commissioners that with any rulemaking there should be a
9 justifiable need established first, and then the rulemaking
10 process should focus on addressing that need.

11 In that regard, NMOGA and IPANM members looked
12 through the OCD files, as was mentioned earlier today, and
13 looking through those files of groundwater-impact cases,
14 the NMOGA and IPANM group could find no evidence of
15 groundwater contaminations related to drilling and workover
16 pits.

17 Now, you heard earlier today there were two cases
18 out of, I think, some 450, so obviously maybe we didn't
19 catch those cases. But given the total amount of wells
20 drilled, we would just purport that those few cases are
21 certainly like Dr. Lee said: You focus on those problems
22 and not the whole -- and particularly the cases that we
23 found were related to production pits, spills and releases
24 and the like. So specifically we feel the Rule is better
25 addressed at addressing problem issues, and not the whole

1 spectrum.

2 Another comment that NMOGA/IPANM would like to
3 make is with regard to the pit construction and closure
4 guidelines. We are pleased to see that reference to the
5 current guidelines were removed from the Rule, as that
6 tended to give those guidelines basically as rulemaking.
7 We understand that these guidelines are really necessary to
8 help expedite the technical review and approval of
9 projects. However, we'd like to encourage the OCD -- and
10 we heard that earlier, that that is the intention, to allow
11 for industry and public input on those technical guidelines
12 as they're revised in the near future.

13 And then as a final general comment, NMOGA/IPANM
14 would like to compliment the OCD for incorporating many of
15 our industry comments and suggestions into the present
16 version of the Rule. And these changes have gone a long
17 way to make that Rule more acceptable to industry.

18 Nevertheless, there still remain some few
19 industry concerns on the present Rule.

20 The first one has to do with the permitting of
21 drilling, workover and completion pits, and that is in
22 Section B.1.(b). NMOGA/IPANM proposed that drilling and
23 workover pits be allowed via a permit-by-rule approach,
24 which is presently the Rule as it is written, requires
25 permitting through APDs, sundry or electronically as

1 otherwise required in the chapter. It's NMOGA/IPANM's
2 position that there's no need for permitting of temporary
3 pits such as drilling, completion or workover pits,
4 provided that the operator designs and installs these pits
5 in accordance with the requirements of the Rule.

6 This permit-by-rule approach makes even more
7 sense, given the OCD's limited staffing and budget, which
8 is better focused on production and disposal pits, which
9 have a longer intended life.

10 Furthermore, small workover permits that
11 currently do not even require sundry notices -- and I think
12 you're aware of this, that those pits can be done as you're
13 doing tubing repairs or small pump repairs don't even
14 require a sundry notice, so wouldn't even be captured under
15 your Rule. We clearly feel that those should not require a
16 separate permit to be submitted for approval.

17 Our second point, this has to do with Section
18 B.3.(b), NMOGA/IPANM proposed more reasonable compliance
19 deadlines than those currently stated, and I think Mr.
20 Anderson quoted about those that some allowance should be
21 made. Basically I'll just summarize ours, that we think
22 that once the Rule is promulgated at that point, that we
23 ought to have six months from the effective date of the
24 Rule to notify the OCD of the existence of below-grade
25 tanks and unlined pits.

1 As far as the other compliance deadlines, as he
2 said, really they should all be tied to the effective date
3 of the Rule, and putting absolute dates at this time could
4 be a compounding issue if this Rule doesn't take effect
5 until in the spring or that.

6 Our third point, which has to do with Section
7 C.2.(e), NMOGA/IPANM-proposed language under disposal and
8 storage pits require that the pit be kept reasonably free
9 of oil and not prohibit discharge of fluids with greater
10 than 0.2 percent of oil content.

11 We appreciate that NMOCD has eliminated previous
12 language which required a skimmer tank where the oil
13 content in liquids was greater than .02 percent.
14 Nevertheless, to prohibit the discharge into pits where the
15 hydrocarbon is 0.2 percent is still troublesome for two
16 points.

17 One, such protection is unnecessary to prevent
18 impact to human health and the environment. And I think we
19 heard earlier from Mr. Anderson that the intent was to
20 conserve as a resource, to make sure that we're not wasting
21 oil.

22 We feel that the issue, if it's that, it becomes
23 difficult -- If you look at a field person that goes out to
24 that well, how would he be able to judge whether 0.2
25 percent is going into a pit? His better judgment is to

1 look at the layer and say, Is that pit reasonably free of
2 oil? He can't judge 0.2 percent.

3 It's not -- We even heard earlier that you
4 couldn't even as an inspector make that judgment. But
5 reasonable people, as you said, can look at that and say
6 whether it's reasonably free. And if that lease operator
7 discovers that, he can certainly get the pit pumped, to
8 allow it to separate again, and fix the problem.

9 So we feel that the terms "reasonably free of
10 oil" is better than the 0.2-percent threshold.

11 A fourth point has to do with Section C.2.(f),
12 and IPANM/NMOGA propose alternative language that exempts
13 netting of pits for drilling and workover operations as
14 long as pits are kept reasonably free of oil. And what's
15 troublesome there is, that would say only when drilling and
16 workover operations are occurring.

17 I think we heard earlier from Mr. Anderson's
18 testimony that he would feel that even if the rig moves off
19 and it's kept reasonably free, that it wouldn't have to be
20 netted. But yet the specific wording says only during
21 drilling and workover operations.

22 So we feel that the language should be changed to
23 imply that if the pit is kept reasonably free of oil, both
24 during drilling and frankly after the rig is moved off, it
25 should be allowed.

1 Fifth point has to do with Section C.4.
2 NMOGA/IPANM propose alternative language that requires
3 annual visual inspection or other means of integrity of
4 sumps exceeding 30 gallons in the capacity. NMOGA/IPANM
5 believe that visual inspections are sufficient means of
6 demonstrating integrity, but other means should be allowed.
7 And so there should be no confusion. And so by inserting
8 the words "visual and other means" clearly establishes the
9 Commission and the OCD's intention that visual would be an
10 acceptable means.

11 Furthermore, there is no legitimate reason to
12 require integrity testing of very small sumps. And so
13 contingent with that wording is our definition of sumps,
14 which we have no gallon threshold. We felt that sumps are
15 basically those units in the soil or below grade that are
16 kept reasonably empty. And so a sump should not have a
17 threshold definition, as long as it meets all the criteria
18 that was stated earlier.

19 Point six, NMOGA proposes alternative language
20 that does not require permitting of impoundments or other
21 structures used by operators to meet SPCC requirements, and
22 you mentioned that earlier as well, Chairman Wrotenbery.
23 We feel that the current language could be construed to
24 require that those impoundments -- not so much the berms
25 around tanks, I think that's clear, but there are other

1 means under SPCC rules where you can build an impoundment
2 to contain a potential spill, and yet that, under the
3 definitions under Section D.5 would be construed as a pit,
4 which would require permitting.

5 The difference being, emergency pits are designed
6 ahead of time to contain emergencies, and you expect them
7 to occur, so you're going to design a liner and all the
8 appropriate things. Those should be pits, but not these
9 temporary impoundments that are actually set there to deal
10 with SPCC requirements. So we would like that language
11 changed.

12 Point seven -- and I only have two more --
13 NMOGA/IPANM propose alternative language that does not
14 require formal closure reports for drilling and workover
15 pits as long as they are closed in accordance with APD or
16 sundry notices, or in accordance with generally accepted
17 practices.

18 Furthermore, NMOGA/IPANM propose alternative
19 language that allows for below-grade tanks and lined pits
20 to be closed by visual determination once the tank or lined
21 pit is being removed and demonstrates visual integrity. In
22 other words, once the liner of that pit has been pulled out
23 and you can see that there has been no visual
24 contamination, that they should be able to be closed just
25 by filling in the excavation.

1 The current OCD Rule language would require soil
2 testing and documented closure of drilling and workover
3 pits, as well as for lined pits and below-grade tanks.

4 So we feel that -- in particular, that drilling
5 and workover pits should not have to follow the same
6 closure guidelines as unlined production pits.

7 Furthermore, our proposed permit-by-rule process, closure
8 reports for drilling and workover, should not be required
9 as long as the pits are closed in accordance with what has
10 been stated on the APD or sundry notices.

11 With respect to below-grade tanks and lined pits,
12 we strongly contend that each of those below-grade or pit
13 does not need a special closure procedure as long as there
14 have been no visual soil impacts. It's very clear, from my
15 experience, when you're out there, once you've removed one
16 of those pits, removed the liner, you can tell when there's
17 been contamination, in which case, if there has been, we
18 fully support that a formal closure report would be
19 required.

20 Point eight, that has to do with Section F.2.
21 NMOGA/IPANM propose alternative language that surface
22 restoration of pits, that the operator contour the area
23 where the pit was located to prevent erosion and prevent
24 ponding, except where that area will be used for
25 operations.

1 Many times when we remove these pits, we are
2 going to go back and set a tank or another type facility
3 there, and if we're intending to re-use it, there's no
4 provision there that we wouldn't have to go back in a year
5 and re-contour it, how can you re-contour when we have
6 facilities sitting there? So we feel that should be
7 reworded.

8 And then the terms "prevent ponding", we feel it
9 should state "extended ponding". Those of us that deal
10 with construction and recontouring, you know that when you
11 get a rain you can have little ponds or pools there, and
12 that isn't what we're talking about, and I think we have
13 the concurrence. But we'd like it understood that little
14 incidental pools of water there are not the issue.

15 Last point has to do with Section G.3.
16 NMOGA/IPANM propose alternative language that the operator
17 must give notice of proposed exemptions only to surface
18 owners of record where the pit is to be located, and not to
19 anyone at the discretion of the OCD. We feel that it's
20 appropriate to give notice to the surface owner of record,
21 but not to entities that have no ownership in the issue,
22 and that OCD has the appropriate oversight to protect the
23 general public health and the environment and that it's too
24 cumbersome a process to allow for any at-will notice to any
25 other person.

1 Thank you for the opportunity for these comments.
2 Those are all stated in the specific definitions in the
3 proposed Rule.

4 CHAIRMAN WROTENBERY: Any questions,
5 Commissioners?

6 Just a second, Mr. Gantner, I did want to ask a
7 little bit more about this sump issue.

8 EXAMINATION

9 BY CHAIRMAN WROTENBERY:

10 Q. I'm having a little difficulty figuring out how
11 you distinguish between sumps and other -- certain other
12 types of pits if you don't have some kind of size limit --

13 A. -- threshold.

14 Q. -- on the sump. For instance, some emergency
15 structures that would be called emergency pits currently --

16 A. Yeah, they remain generally free.

17 Q. Yes, they would meet, I think, most of the
18 criteria, if not all of the criteria, of your revised
19 definition --

20 A. Yeah.

21 Q. -- so how --

22 A. I would have no problem if you wanted to put a
23 maximum size and say anything above that. But we tend to
24 have, I guess, folks that do create some larger ones, and
25 they are really legitimate sumps, and we would hate to see

1 them drawn into a pit definition when they really meet the
2 intent of that.

3 But yet I see your point, that if you left it
4 unlimited then you could have a, you know, 10,000-barrel
5 emergency pit labeled as that --

6 Q. As a sump.

7 A. -- which really is a pit. So I don't know. We
8 threw out some numbers earlier amongst ourselves. I mean,
9 something like 250 gallons or something, you know, larger,
10 I think would be somewhat acceptable to us.

11 But to allow -- again, you do allow for
12 exceptions, and if an operator then wanted to apply for an
13 exemption, could do that and say, I really feel that that
14 meets that definition as well.

15 Q. Uh-huh. Okay, and can you talk to me a little
16 bit more about your concern about having to apply on an APD
17 for approval of a reserve pit?

18 A. APDs don't bother me, because that's drill wells.
19 And we know we send those processes in, but we do so many
20 more workovers and things of that nature, and those -- many
21 times, some of those are pre-sundry, some of them are post-
22 sundries. So how do we deal with that, and approval?

23 We feel that the issues, at least based on the
24 research that we did looking through the records, that
25 these temporary pits are not the issue, and if you all --

1 if you concur with that, then we ought to really be
2 focusing on the long-term pits.

3 So we think a permit-by-rule approach which says
4 that if you meet this standard you can build and construct
5 it, and if you don't meet the standard then you need for --
6 then you need to apply.

7 So we would rather -- and I would think that
8 would take less effort on the OCD's part of having to
9 physically -- somebody look over every one of those and
10 say, Does it meet our criteria, does it meet...

11 So that's basically our sense. We feel that a
12 permit-by-rule approach would be a more -- that meets the
13 technological requirements that you're expecting, if we
14 meet that we should be able to construct it, it's
15 automatically permitted. If it isn't going to meet it,
16 then we have to apply and ask for a specific permit, you
17 know, like this is a novel design, I need your permission
18 to do that. But if it meets the standard criteria, then I
19 don't need to.

20 Q. And how would the OCD be notified of the use --
21 the construction and use of that pit and that kind of
22 regulatory structure, where you're authorizing --

23 A. Well, of course the APDs --

24 Q. -- the pit by Rule?

25 A. -- by the drill wells and all workovers, you

1 would know by the sundries. Some of them come in pre-,
2 some of them post. Probably the only ones you wouldn't,
3 which you don't now, and that's those temporary emergency
4 pits. So maybe a post-incident sundry needs to be -- or a
5 post sundry needs to be done for that too.

6 I don't think there would be a problem as far as
7 notification.

8 CHAIRMAN WROTENBERY: Thank you for your
9 testimony.

10 Does anybody else have any questions? Yes, Mr.
11 Boyd?

12 EXAMINATION

13 BY MR. BOYD:

14 Q. I'm Irvin Boyd, and you were talking about
15 whenever you had a drilling pit or workover pit or
16 something, when you remove the liner you can tell if it had
17 been leaking or something. Is that what you said, you
18 could remove the liner and see if it had been leaking?

19 A. Well, I guess what I was talking, normally what
20 occurs on a drilling pit in which a liner is there, you
21 don't remove the liner. Generally the practice is, what is
22 done is, that liner is cut and folded over, and then the
23 soils are put back. So I wasn't really speaking to
24 drilling and workover pits that are lined. What I was
25 talking about was more the lined production pits, pits that

1 had been lined or maybe a lined emergency pit, that if I'm
2 closing that pit because I'm going to permanently abandon
3 it, in those cases I might remove the liner or I might
4 leave it in place too.

5 Q. From my experience in Lea County -- and I've seen
6 lots of pits and so forth -- when the pit liner is removed,
7 they take a 'dozer in there and just rip it to pieces. And
8 you're talking about folding it over and covering it up.
9 That may be the plan, but I've never seen it happen.

10 A. Generally, that's what we do.

11 Q. But I wanted you to tell me how you remove the
12 liner and check underneath after you've completed with the
13 pit?

14 A. The liner might be more difficult. I'm thinking
15 probably more of these below-grade tanks and that, where
16 it's an intact, you know, unit that you're pulling out. We
17 have been requested at times to pull out liners, and you're
18 right, that's a difficult situation.

19 MR. BOYD: Thank you.

20 CHAIRMAN WROTENBERY: Mr. Sandoval, did you
21 have --

22 MR. SANDOVAL: I have a few questions, thank you.

23 EXAMINATION

24 BY MR. SANDOVAL:

25 Q. I'm sorry, sir, there were three names that were

1 introduced or sworn in all at once, I didn't get yours.

2 A. I'm sorry, my name is Bruce Gantner. I'm a co-
3 chair of NMOGA's Environmental Committee.

4 Q. Very good. And who are you employed with?

5 A. Burlington Resources.

6 Q. And how long have you been with Burlington?

7 A. Eleven years.

8 Q. In what capacity?

9 A. Manager of environmental safety.

10 Q. And where are you located or headquartered?

11 A. Farmington, is where I'm located.

12 Q. Okay. I've got a couple questions about your
13 proposed changes to the OCD's recommended Rule or proposed
14 Rule, and let me start with the Section (e) on page 3 with
15 regard to disposal and storage pits, in which you redline
16 out the specific statement of two-tenths of one percent of
17 free hydrocarbon and propose to change that language to the
18 term "reasonably free of oil".

19 What, in your judgment -- Is there a way of
20 quantifying, in your judgment, what "reasonably free of
21 oil" means?

22 A. I tend to think in terms of our folks that go out
23 in the field and how they could apply those. They couldn't
24 apply a 0.2 percent of what's flowing into that pit.

25 But when they see a pit and they see an oil layer

1 on it, that they could do a -- they have a device called a
2 water-cut device, that they can go and see on the tape that
3 I have an oil layer on top. They can say hey, this
4 separator is not working, or I need to do something to get
5 the oil back into the tank, obviously, and then obviously
6 keep the water, you know, clear. I see a field person
7 could judge that.

8 Q. So you've got -- I mean, you're responding in
9 terms of what a field person would do or not do out there.

10 A. That's correct.

11 Q. But let's assume there's a problem out there and
12 the OCD has been called in to take a look at it, and the
13 OCD now has to make a determination as to whether or not
14 the site is reasonably free of oil. How is the OCD, with
15 this sort of language in the regulation, going to be able
16 to make that determination?

17 A. I would hope they would apply the same logic as
18 that field person and say that if you can have a measurable
19 layer of oil on that, then oil is being wasted. It ought
20 to be put into the tank.

21 Q. Is there --

22 A. 0.2 percent, the way that's worded, you would
23 have to take the flow of water into there and know how much
24 water has flowed into there and then do a water cut to show
25 that it's 0.2 percent. It would be a very difficult task

1 for them to do.

2 Q. So the problem with the number is not the number
3 itself but the testing that would be required to learn
4 whether that number was being complied with?

5 A. I see it as a very practical compliance
6 difficulty, both for a field person, our guy, who wants to
7 comply, and then as well as the OCD person that's going to
8 go out there to say you are complying or not.

9 Q. And if it's difficult and too tedious to test, to
10 arrive at a specific number --

11 A. Right.

12 Q. -- I mean, it's going to be too difficult and too
13 tedious to arrive at any number. So would it then be
14 having to resort to some sort of visual or subjective
15 analysis or decision-making process in order to determine
16 whether there's a reasonable freedom of oil in that
17 location?

18 A. I can see the argument, but I guess I feel that
19 our field people and I could go out and apply a good
20 standard as to whether that separator is working, if there
21 is one there. Or if there isn't, if there is no separator
22 and there's a layer of oil on there, then it's not meeting
23 the purpose.

24 Q. The reason I started with this is not so much to
25 try to get into an argument with you, because you're the

1 engineer, you're the person that's got the technical
2 expertise out there, and there's no way that I'm going to
3 be able to convince you, right here, that perhaps my view
4 is the correct one.

5 But also, I think I'm looking at this rulemaking
6 proceeding, perhaps, with some rose-colored glasses and
7 trying to view an ideal world here where perhaps, wouldn't
8 it be easier for everyone concerned, for the industry
9 people, for the surface owner, for the public in general
10 and certainly for the OCD inspectors, to know specifically
11 what it is that they're looking for and to be able to
12 quantify that very -- in a detailed manner to say, yes,
13 this location is in compliance with regs, or no, it isn't
14 in compliance with regs? And wouldn't that just make life
15 a lot easier for everyone, and why is it difficult to
16 accept that notion and try to substitute it with this kind
17 of more subjective sense of reasonably free from oil?

18 A. That's the million-dollar question. I mean, I
19 can see what you're saying. A percentage does not work,
20 absolutely. So I would rather see it if you had to
21 quantify something, you should quantify a layer.

22 Q. And do you have a specific size or length of
23 layer that would be, in NMOGA's mind, acceptable?

24 A. Obviously a pit that's 20 feet in diameter -- I
25 mean, you could have a very small layer of an eighth of an

1 inch, and yet maybe that's too much for one that's that
2 big. And yet if I had a pit six feet in diameter, maybe
3 it's a little --

4 Q. So it's not worth it?

5 A. Well, I'm just saying that's something that
6 surely could be discussed in more -- to come up with that.
7 But I think a layer approach versus a percentage would be
8 better.

9 Q. Okay. Let me then track into something that we
10 do have some, I think, consensus about or agreement with.
11 Mr. Olson testified that the Water Quality Control
12 Commission standards are supposed to be read into -- or are
13 supposed to be read in conjunction with his proposed Rule.
14 Do you agree with that?

15 A. To me, they're inherent in their standards that
16 you protect groundwater, and protection of groundwater
17 means the water quality control standards.

18 Q. Okay. In terms of some notice issues, I see here
19 towards the last of your proposed language, you do agree
20 that the surface of the land on which the pit is to be --
21 or is located and is to be closed, is entitled to notice of
22 your intent to close?

23 A. Absolutely.

24 Q. At what time is that notice required, as you read
25 this regulation?

1 A. Well, obviously if you're looking at an
2 exemption, if I'm required to register, you know, a new
3 pit, you know, prior to -- you know, like a below-grade
4 tank or a producing pit, I'm required to notify the OCD
5 before that gets done.

6 Q. And as part of that same process --

7 A. And I would think --

8 Q. -- you're notifying --

9 A. -- at that point --

10 Q. -- the landowner?

11 A. -- I have to give them, you know, if I'm not
12 applying for an exemption. Now if I'm applying for an
13 exemption, I'm either going to have to go for a permit or
14 I'm going to have to go for an exemption. And so at the
15 time I apply for the exemption, I think I would have to
16 give them proof that I have notified -- if you were the
17 landowner, I'd have to give them proof that you've been
18 notified.

19 Q. Would there be a group of people other than the
20 surface owner who might perhaps have a more direct interest
21 than just the public in general, perhaps neighboring
22 landowners that maybe should be included in this group of
23 people that you're agreeing to, to provide notice to?

24 A. I think in this -- typical situations we have,
25 no, but maybe there are some --

1 Q. Because the locations are all within the ranch?

2 A. -- maybe somebody can give me an example where I
3 would think so.

4 Q. Okay.

5 A. Just off the cuff, knowing how we do the size of
6 acreages there, no.

7 Q. Let me, I think, just touch base on one more,
8 perhaps two more topics. I'd like to take you to --
9 actually, we were -- Section F, the enclosure and
10 restoration provisions.

11 Again, going back to the point I was kind of
12 getting to in addressing the reasonably-free-of-oil
13 standard, you know, there's some language in these
14 regulations that remains, you know, subject to
15 interpretation. And one of my concerns is the second
16 sentence, that you leave intact in your proposal, that
17 begins with, In appropriate cases, the Division may require
18 the operator to file a detailed closure plan before any
19 closure may commence. And I believe Mr. Anderson was asked
20 by Mr. Newell or someone else earlier this morning what he
21 thought constituted an appropriate case. I'd like to ask
22 you what your thoughts are in that regard.

23 A. There have been cases with Mr. Olson and others
24 with the Division where, when there's a substantial
25 contamination found, something that might be particularly

1 in a sensitive area, very shallow groundwater, might be
2 nearby residential wells, water wells, I think those
3 situations might require a detailed plan that the Division
4 would want to review and approve.

5 Q. Any others?

6 A. I mean, those are just ones that comes to the
7 surface of my thought. I mean, there might be other
8 circumstances.

9 Q. Or like circumstances such as those?

10 A. That's what I'm talking about. When you're
11 talking about some exposure risk issues or that, then I
12 think it's probably -- those are situations from my
13 experience that are called for.

14 Q. The notice provisions here in terms of notice
15 going directly to the land owner apply only when exemptions
16 to these regs are --

17 A. That's correct.

18 Q. -- are being sought. Is it unreasonable to
19 expect notice for a -- Would it be unreasonable to require
20 that an operator give notice to the landowner prior to
21 closing a pit, just a standard, you know, disposal pit
22 that's been out there and that's been worked?

23 A. I don't know. I think of situations, and most of
24 the pits -- we're going through a program now in our
25 company, closing like 800, 900 pits that have been out

1 there. We're going to get out of earthen production pits.
2 A lot of those were tested perfectly clean. No notice is
3 required to give to the Division now. It would be under
4 this Rule.

5 I would see no benefit, you know, to necessarily
6 give notice of closing a clean pit. But again, oftentimes
7 in these cases where we are drilling on a well and that,
8 the notice would have gone to the landowner because you
9 have a landman that settles with those issues with them.
10 And sometimes some of those operators want to use those
11 pits for water purposes and that. So, you know, there is
12 some notice given, I guess, indirectly through the land
13 process.

14 Q. So what would be so much more difficult to
15 require the more direct -- the formal notice to the
16 landowner?

17 A. Again, I guess it's just a matter of need and
18 that.

19 Q. And in terms of -- You talked about how many
20 times you do some testing out there and it comes back just
21 fine in your view. Are those test results provided to the
22 surface owner after you receive those results?

23 A. Generally not, right now.

24 Q. And are the landowners ever given an opportunity
25 to go in there and do some independent testing on their

1 own?

2 A. Well, I mean, it's their land, so they have
3 access to their property.

4 Q. And how would they know, though, that you intend
5 on closing that if you don't give them notice, so that they
6 then have the opportunity to, as you say, on their land
7 conduct that testing.

8 A. They wouldn't.

9 MR. SANDOVAL: Okay. I have nothing further,
10 thank you.

11 CHAIRMAN WROTENBERY: Thank you, Mr. Sandoval?

12 Yes, Mr. Larsen?

13 MR. LARSEN: If I could ask a question. May I
14 sit over here?

15 CHAIRMAN WROTENBERY: Sure.

16 EXAMINATION

17 BY MR. LARSEN:

18 Q. The subject of sumps. Sumps came up earlier
19 where we were trying to write this Rule. And we said to
20 the industry, Tell me about a sump. What is a sump and how
21 is it used?

22 They said, Well, you know, out in the field we
23 get one of these oilfield drums, we kind of cut it in half,
24 we stick it under a place that might leak. It might leak.
25 So we kind of scatter them around and then -- that's what

1 they are. So it's about 20 gallons.

2 So we wrote this thing and said, Okay, as long as
3 it's under 21 gallons you've got a sump. We got into
4 discussions about visual inspections. It seemed to me that
5 if you cut off an oilfield drum and you want to visually
6 inspect it, you pick it up and hold it up to the sun and
7 see if you can see the sun through it.

8 Now, this thing is transmogrified like the great
9 Hulk into becoming, as it was described by Roger -- It went
10 from an oilfield drum cut in half -- I'm sorry, an oilfield
11 barrel cut in half, to a drum, to two drums. Now it's
12 being proposed 250 gallons or unlimited.

13 Now, what happened to this little thing sitting
14 under a connection to catch drips? How did it become a
15 250-gallon drip container?

16 A. I don't have any like that. I mean, generally
17 ours are fairly small, but some people, some areas might
18 have them larger. So I think what Commissioner -- Chairman
19 Wrotenbery was asking, isn't there some benefit, which I
20 could see, a maximum limitation above which you would say
21 that's not a sump any longer, that it's either a pit or a
22 below-grade tank. I think that's what she was asking.

23 Q. Well, my question is, how do you get -- how does
24 a drip container --

25 A. Right.

1 Q. -- get to be of the size that -- even Roger's
2 size, 110 gallons worth of drips? What happened to our --
3 you know, it has gone from being -- What we've created, it
4 would seem to me, is a loophole by which an underground
5 tank or one that's partially underground is -- by calling
6 it a sump you somehow get away from the Rules. Do you see
7 it that way?

8 A. Well, the -- you wouldn't be getting away from
9 the Rules that a sump is a sump, and then for those that
10 are larger than a size -- and we suggested 30 gallons --

11 Q. Thirty gallons?

12 A. Right. -- that those should get inspected.
13 Those that are smaller than that are, frankly -- to me they
14 just aren't sufficient enough to cause, you know, problems
15 to the environment and public health, because we keep those
16 empty.

17 Q. How do you -- okay, so from your -- Your
18 recommendation is that a sump that is greater than, in your
19 -- 30 gallons --

20 A. -- would get inspected.

21 Q. -- needs to be inspected --

22 A. Yes.

23 Q. -- in some fashion other than visually?

24 A. Well, visual would be one means, or other means
25 have been --

1 Q. How do you visually inspect, say, a 55-gallon
2 drum half underground?

3 A. I'd say it's empty and you're going to take a
4 flashlight and you're going to attempt to --

5 Q. And what's the flashlight going to see?

6 A. Well, you're going to see if it's, you know, got
7 penetrations or that through it.

8 Q. How do you see a penetration with a flashlight
9 down the top when the bottom's under the ground? I can --
10 I've still got the vision of holding it up to the sun where
11 I can kind of --

12 A. Well, that would be one way --

13 Q. -- see it that way, but --

14 A. -- that would be one way.

15 Q. -- the flashlight down into the one in the
16 ground, I'm -- so that the visual inspection is not
17 something that -- for anything over the 30 gallons that
18 you've -- having some kind of an inspection or test is not
19 an unreasonable thing to do to something that can't be
20 removed and held up to the sun?

21 A. Again, you want to establish integrity, and if
22 you're going to use it as a sump above a certain threshold,
23 that should establish integrity.

24 Q. Is the sump used for something other than
25 catching drips?

1 A. Not the ones we have.

2 Q. Okay. So you're not in a position to tell me why
3 other people feel a need to have gigantic containers to
4 catch drips?

5 A. I would probably have a larger container if I had
6 a potential to lose more -- to lose more fluid.

7 Q. But you represent a really big company --

8 A. Yes.

9 Q. -- a really lot of stuff?

10 A. Right.

11 Q. I mean, if you don't need it, why would anybody
12 else?

13 A. Where we use sumps is on the load-out lines on
14 oil tanks or that where the guy comes along and he pulls
15 his hose off and --

16 Q. Yeah.

17 A. -- things drip there --

18 Q. Sure.

19 A. -- or within the berm. That's where we use
20 sumps.

21 MR. LARSEN: Okay, thank you very much.

22 CHAIRMAN WROTENBERY: Thank you, Mr. Larsen.
23 Anybody else have questions for Mr. Gantner?

24 Thank you for your testimony, Mr. Gantner.

25 It's a little after 5:00 now. Based on the

1 information I have on the sign-in sheets, we still have
2 somewhere between an hour and a half to two hours of
3 testimony and comments to go, so I believe we will adjourn
4 for the evening.

5 I did want to ask, is there anybody here who
6 cannot be here tomorrow morning? And we will go ahead and
7 take your comments then.

8 B.J. BROCK: One to three minutes?

9 CHAIRMAN WROTENBERY: Okay.

10 B.J. BROCK: Okay. So, you know, I'm going to be
11 very, very fast. I think I'm going to be the fastest one.

12 CHAIRMAN WROTENBERY: Okay, thank you.

13 B.J. BROCK: And I am basically reading comments
14 that we have submitted to the Commission prior to this,
15 just reading it into the record --

16 CHAIRMAN WROTENBERY: Okay, and let me --

17 B.J. BROCK: -- and I'm hoping --

18 CHAIRMAN WROTENBERY: -- Ms. Brock --

19 B.J. BROCK: Yes, I am --

20 CHAIRMAN WROTENBERY: -- and --

21 B.J. BROCK: -- B.J. Brock with New Mexico Cattle
22 Growers. This has been signed by --

23 CHAIRMAN WROTENBERY: Okay, I believe I've got
24 those comments then.

25 B.J. BROCK: The steer.

1 CHAIRMAN WROTENBERY: Yes, and --

2 B.J. BROCK: Unmistakable.

3 CHAIRMAN WROTENBERY: -- Caren Cowan signed
4 these?

5 B.J. BROCK: Yes.

6 CHAIRMAN WROTENBERY: Okay, we have those --

7 B.J. BROCK: Wonderful --

8 CHAIRMAN WROTENBERY: -- comments.

9 B.J. BROCK: -- wonderful. And as I said, my
10 name is B.J. Brock. Madame Chair, members of the
11 Commission, members of the audience, I am basically reading
12 a summary into the Rules today -- into the record, I'm
13 sorry.

14 One of -- the basic thing -- one of our basic
15 points here is, ideally, we would like to see enforcement
16 of the present regulations now in effect reach a consistent
17 level before new regulations are considered for adoption.
18 That's our main point that we wish to make.

19 However, if the new pit rule is adopted, we have
20 the following comments and concerns:

21 We feel that all pits should be lined.

22 No pits should be located on flood plains.

23 And no silicone material should be allowed in the
24 pit. As our producers tell us, the silicone causes the
25 contents of the pit to become thick and syrupy, which makes

1 the contamination even more damaging to the environment.

2 Present practices allow for the liner to simply
3 be buried at the site; and other garbage is being buried
4 along with the liner. The possibility of seepage into
5 groundwater causing contamination is increased greatly by
6 this practice. The liner and all other materials
7 associated with the site should be disposed of at a
8 designated OCD waste site only. Fresh soil should replace
9 what has been taken out, to aid in returning the land to
10 its original integrity.

11 Mud pits at present are allowed to sit and dry or
12 seep into the ground; then dirt is simply pushed over them.

13 Whenever a pit is closed, dismantled and buried,
14 the contamination is spread over a much larger surface,
15 increasing the odds of contamination. Our members tell us
16 that no reclamation of the sites seems possible. Some pits
17 in the southeast part of the state are some 40 years old,
18 and nothing but noxious weeds can grow over them. And this
19 has been attested to over and over again today. The best-
20 case scenario is to use steel tanks to ensure that the site
21 is free from contamination to the soil or ground or surface
22 water.

23 And basically this is just a summary to some of
24 our producers. We represent some 2000 members in the State
25 of New Mexico. And I want to thank you for your time. It

1 was less than three minutes.

2 CHAIRMAN WROTENBERY: Thank you, Ms. Brock.

3 MS. BROCK: Thank you very much.

4 MR. MORROW: I want to ask her a question. I
5 just need to go tonight, if that's okay?

6 CHAIRMAN WROTENBERY: Oh, okay, sure.

7 Thank you, Ms. Brock. Thank you very much, we
8 appreciate it.

9 MR. MORROW: My name is Cody Morrow, representing
10 the State Land Office, Surface Division. This statement is
11 presented on behalf of Jerry King, the Assistant
12 Commissioner for Surface Resources.

13 First I'd like to convey the State Land Office's
14 commitment to providing optimum customer to all our lessees
15 while ensuring that all surface and water resources in
16 these areas will be protected for the perpetuity of the
17 trust. Part of our agency's mission is to strive to build
18 partnerships to conserve, protect and maintain the highest
19 level of stewardship for state trust lands while generating
20 revenues to support public education institutions.

21 In general, the SLO supports and encourages any
22 attempt by OCD to reduce the environmental impact of oil
23 and gas activities on all surface and subsurface resources.
24 As such, the proposed OCD Rule for regulating placement,
25 design, construction, use and closure of pits and below-

1 grade tanks represents significant improvement in the
2 protection of water resources. The SLO concurs with much
3 of the proposed rules, however there are some concerns that
4 the Rule does not go far enough in regard to siting
5 restrictions and disposition of existing pits.

6 With regard to the first concern, site
7 restrictions, the SLO feels that under 19.5.2 we would like
8 to require additional exclusionary zones to include the
9 following:

10 Sensitive aquifer (recharge zone)
11 Private water supply wells
12 Wetlands (as defined by the Army Corps of
13 Engineers)
14 Intermittent streams
15 Perennial streams
16 100-year flood plains
17 Significant cultural and archaeological resources
18 Critical habitat of threatened and endangered
19 species.

20 With regard to the second concern, the
21 disposition of existing pits, the SLO suggests that OCD
22 consider an accelerated schedule for closure and
23 remediation of unlined pits. There is, in general, no
24 environmentally sound justification for the continued use
25 of unlined pits in any geohydrological regime within the

1 state. Unlined pits are essentially a *de facto* disposal
2 unit that translate operational savings for oil and gas
3 operators into collective environmental costs for the
4 citizens of New Mexico. These cost shifts are typically
5 referred to as environmental externalities. The extent to
6 which the proposed pit rule reduces those externalities
7 will determine the extent to which this Rule will be
8 considered good policy in the future.

9 Thank you.

10 CHAIRMAN WROTENBERY: Thank you. And do you have
11 a copy of those comments --

12 MR. MORROW: Yes, I do.

13 CHAIRMAN WROTENBERY: -- for us?

14 MR. MORROW: I'll give you this copy.

15 CHAIRMAN WROTENBERY: Great.

16 MR. MORROW: Thank you for your time, I
17 appreciate it.

18 CHAIRMAN WROTENBERY: Thank you, Mr. Morrow.

19 Nine o'clock tomorrow. Is there anybody else who
20 cannot be here tomorrow? Yes, Jennifer.

21 MS. GOLDMAN: Thank you for taking my comments.
22 My name is Jennifer Goldman, I'm with the Oil and Gas
23 Accountability Project. We've submitted written comments
24 that you all should have, and today I just wanted to
25 highlight a few of those and also amend our written

1 comments to support the closed drilling systems that have
2 been recommended here today by several people.

3 The Oil and Gas Accountability Project, or OGAP,
4 is a nonprofit organization dedicated to working with
5 residents of oil- and gas-field communities to produce and
6 prevent the damaging impacts of irresponsible oil and gas
7 development. We've worked extensively with residents,
8 landowners, concerned citizens in the San Juan, Permian and
9 Raton Basins, and while we're generally supportive of the
10 effort on the Division's part to move the pit rule in the
11 direction of unlined pits, we think this is a pretty small
12 step and would like to see things like the closed drilling
13 system.

14 I'm going to skip the anecdotal stuff since it's
15 late.

16 I'd just like to highlight two topics that I
17 believe are at the root of whether or not the Division's
18 current proposal will assist in bringing about a more
19 responsible level of oil and gas development in this state.
20 The two topics that I want to address today are general
21 enforcement practices of the Division and the manner that
22 the Division proposes to handle exemptions in this Rule.

23 First, general enforcement practices, you've
24 already heard from people like Tweeti Blancett and Ms. Rees
25 and Chris Velasquez that the Division's track record of

1 enforcement is in question by people living in the field.
2 I'd like to underscore for the record that this Rule will
3 mean nothing to those living in oil and gas communities if
4 provisions for leak detection of disposal or storage pits
5 are not consistently enforced to protect our soil and water
6 resources. The same is true for the two-tenths of one
7 percent free of hydrocarbons issue that we have talked
8 about today. If that is adopted by the Commission,
9 obviously it needs to be consistently enforced to mean
10 anything to folks living in the field.

11 This is also true of provisions for surface
12 restoration and the closure of existing pits. I know that
13 Mr. Velasquez, for instance, in his written comments
14 suggested that restoration be required immediately after
15 companies start production. OGAP in our written comments
16 recommended that the Commission look at six months rather
17 than the Division's recommendation of one year. If the
18 Division is going to live up to serving New Mexicans well,
19 they ought to set the bar higher for industry and enforce
20 this higher standard.

21 The same is true for putting a deadline on
22 phasing out existing pits. The Division says a year and a
23 half. OGAP -- I thought, pretty judiciously -- recommended
24 a year in our written comments, although the idea is that
25 we support phasing out existing pits sooner rather than

1 later. A year is plenty of time for companies to phase out
2 unlined pits. Again, Mrs. Blancett talked about the money
3 that's leaving San Juan County. It's a lot of money, and I
4 think if industry has to throw a little money at the
5 situation to make this phaseout feasible, that that's
6 reasonable.

7 The second topic I want to address are exceptions
8 and discretions that too broadly favor industry. As the
9 Rule is written, the Division retains a broad amount of
10 discretion to grant exemptions, and operators are not
11 required to prove that they need an exemption. Exemptions
12 should require the applicant demonstrate a need for
13 exemptions so that exceptions don't overwhelm the rule. As
14 it is written, the Rule actually puts the burden on the
15 adjacent land owners or the public when they object to an
16 exception. The proposal allows the Division Director to
17 determine whether "the objection has technical merit".
18 This wrongly puts the burden on the surface owner or
19 resident to show why the exemption should not be granted.
20 Again, it is not unreasonable that the burden for an
21 exemption be borne by the industry that is extracting
22 resources from the state. I think that they will spend the
23 time and money -- Let them spend the time and money to
24 prove by an exemption, and I bet that we'll all start
25 seeing companies happily accomplishing what they need to

1 accomplish to meet the regulation.

2 Thank you for the opportunity to comment on this
3 Rule, and I've got a copy of my verbal --

4 CHAIRMAN WROTENBERY: Thank you. And I believe
5 the written comments to which you referred earlier, Ms.
6 Goldman, are the comments dated September 8th? Do I --

7 MS. GOLDMAN: Yes.

8 CHAIRMAN WROTENBERY: -- have the correct
9 version? Okay. Thank you very much.

10 Yes?

11 MR. SIMPSON: I wanted to ask a question. Can
12 we, after your hearing -- are comments going to be accepted
13 after a certain date, written dates?

14 CHAIRMAN WROTENBERY: Let me ask you, would you
15 like to submit some? We had said in our prehearing order
16 that we'd make that determination at the close of the
17 hearing, and part of the decision was going to be based on
18 whether there was a request to --

19 MR. SIMPSON: Well, I would like to --

20 CHAIRMAN WROTENBERY: -- submit them.

21 MR. SIMPSON: -- request that, because there's a
22 lot of technical testimony that's provided, and it's
23 usually customary, especially on a regulatory process like
24 this, that the public be given time to look at those
25 exhibits and then comment. So I would suggest at least a

1 20- to 30-day comment period after the close of this public
2 hearing, or this oral public hearing, and I represent New
3 Mexico Wildlife Federation and ConservAmerica.

4 CHAIRMAN WROTENBERY: Okay. Well, we'll take a
5 look at that tomorrow. I think we probably will give a
6 comment period. We would like to get comments in just as
7 soon as we can, because we are hopeful that we can take
8 final action on this rulemaking proceeding at the next
9 Commission meeting in December, which is scheduled for the
10 11th of December, so we'd like to set up some sort of a
11 time frame where we can get the comments in early enough to
12 consider it.

13 MR. SIMPSON: Fifteen days --

14 CHAIRMAN WROTENBERY: I'm sorry?

15 MR. SIMPSON: Fifteen days, if you will post your
16 exhibits on your website, then that would be great.

17 CHAIRMAN WROTENBERY: Okay.

18 MR. SIMPSON: Everybody could judiciously comment
19 and get this process going.

20 CHAIRMAN WROTENBERY: Okay. We'll work on that
21 tomorrow and set the date that the comments are due before
22 we leave tomorrow.

23 Anybody else who can't make it back tomorrow
24 morning?

25 MR. DUGGAR: I would like to make a comment --

1 make my presentation, make it very short, very precise.

2 CHAIRMAN WROTENBERY: Please come on up.

3 MR. DUGGAR: I appreciate that. My name is Greg
4 Duggar. I am from the Otero Mesa. I think I know some of
5 the members of this committee and some of the people in the
6 audience. I have a booklet for members of -- I think
7 perhaps you already have one of these.

8 CHAIRMAN WROTENBERY: Mr. Duggar, you had
9 submitted some information earlier.

10 MR. DUGGAR: That is correct, and this is --

11 CHAIRMAN WROTENBERY: Is this the same --

12 MR. DUGGAR: -- supplemental --

13 CHAIRMAN WROTENBERY: -- material or --
14 supplemental to that?

15 MR. DUGGAR: -- to that information.

16 CHAIRMAN WROTENBERY: Okay.

17 MR. DUGGAR: And I'll make this -- I have a
18 whiskey voice and a Texas accent, but bear with me.

19 Threshold energy came to Otero, the Crow Flat
20 portion of the Otero Mesa this past summer, drilled two
21 wells. Both have been plugged. Some of this is, as you
22 know, the postponement of the meetings. The time that has
23 elapsed, they have plugged and abandoned two of these
24 wells.

25 My complaint, which is in this booklet and a

1 complaint that I submitted about a month ago or six weeks
2 ago to the Commission, which you have, and I would like
3 quickly to read a letter that goes with this presentation,
4 which is in the back of -- and this is -- Drilling fluid
5 samples were collected from a drilling fluid pit at the
6 Chiricahua R-21 Federal Number site in New Mexico Township
7 24 South, Range 11 East [sic] on July the 21st of this
8 year. This drilling fluid was trucked into this location
9 from another drilling location in the State of Texas --
10 perhaps from the Heyco operation, or that could be Yates
11 Petroleum, and I'm not certain of which entity -- according
12 to conversations with the driver or one of the water trucks
13 dumping the drilling fluid into the pits at the Chiricahua.
14 The drilling operation at this location was under the
15 direction of Threshold Development. The drilling fluid was
16 analyzed and collected by -- the collection was made by
17 Sandia Lab and sent to an independent laboratory, and these
18 were the results of what we found in that sample.

19 As you can see, the APD for the Chiricahua
20 Federal restricted the drilling fluids to be "fresh" water
21 for the upper 2500 feet of the borehole. The BLM
22 definition of "fresh" water is contamination of "not more
23 than 1000 parts per million total dissolved solids,
24 provided that such water does not contain objectionable
25 levels of any constituent that is -- excuse me with the

1 word -- that is toxic to animals, plant or aquatic life
2 unless otherwise specified in applicable notices or
3 orders." It is clear that the drilling fluid in the pit at
4 the Chiricahua did not meet the definition of "fresh"
5 water, as you can see.

6 And for everyone's information, the TDS's on the
7 sample, the chlorides alone were 3130 parts per million.
8 The total dissolved solids were in excess of 7000 parts per
9 million. *E. coli* was present, and one other -- as I will
10 go on, there will be one other thing that was found in
11 this.

12 The BLM was informed that there was drilling
13 fluid of questionable quality in the fluid pits at the well
14 site multiple times while it was being hauled to the well
15 site. Only after the BLM was informed that samples of the
16 drilling fluid had been collected and were being analyzed
17 by an independent third party did the BLM act. At that
18 point the BLM obtained and analyzed samples of the drilling
19 fluid and determined that the drilling fluid in the pit
20 exceeded the freshwater limit for chloride and issued a
21 notice of noncompliance to threshold regarding the fluid.
22 The drilling fluid was subsequently moved. However, in the
23 meantime this drilling fluid has been applied to both the
24 drilling pad and the roads in the area, and the BLM never
25 analyzed for any other contaminants. Clearly, this was a

1 serious oversight on the part of BLM, considering the level
2 of contaminants that the drilling fluids contained.

3 All of these contaminants are above the Safe
4 Water Drinking Act [sic] standards. Of particular interest
5 is the level of gross alpha radioactivity, five times the
6 maximum contaminant level allowed. The naturally occurring
7 radioactive material (NORM) is often a result of drilling
8 activities associated with oil and gas exploration. Along
9 these lines, drilling fluids from the HEYCO well, mentioned
10 above, are perhaps the source of this NORM.

11 The residents of the Crow Flats and Otero Mesa in
12 southern Otero County are terribly concerned that our sole
13 source of water (groundwater from the underlying limestone
14 aquifer) will be contaminated by one or more of these
15 above-listed constituents -- perhaps I'm not saying that
16 correctly -- after witnessing, first-hand, the blatant
17 disregard by the oil and gas industry for laws and
18 regulations that have been developed to protect groundwater
19 resources. We are concerned that this water was applied to
20 both roads and private lands, an alfalfa field of which
21 produces hay for a dairy in Lovington, New Mexico. We are
22 concerned that this water was applied to the private lands
23 and was not sufficiently tested to quantify -- qualify --
24 potential levels of contamination. We feel the following
25 steps should be taken in order to deal with this situation:

1 Considering the results of the analysis provided,
2 the OCD, the BLM and/or some regulatory entity should
3 obtain soil and vegetation samples -- which have been taken
4 at this point by the BLM -- where it is suspected that this
5 contaminated drilling fluid was applied to the ground to
6 determine that the contamination exists and whether we or
7 our livestock are at risk for experiencing any adverse
8 health effects as a result.

9 There was a -- Soil samples were taken at the rig
10 location but not at the alfalfa field and the county -- the
11 country road that the fluid was hauled to. And in the
12 booklet it shows a short synopsis of how we tracked the
13 movement of this fluid.

14 The source of the contamination should be
15 determined. Threshold Company is of the opinion that the
16 water hauling service stopped in Dell City, Texas, on the
17 way to the Chiricahua well site with "fresh water" and
18 picked up a load of waste and delivered the entire load to
19 the Chiricahua. This might account for the *e. coli* and
20 coliform bacteria in the sample. However, if this is
21 indeed the case, the dairy and the Department of health
22 should be aware that those cattle are contaminated with
23 alpha radiation, no matter how minute. I don't think
24 anyone wants their children drinking that type of milk.

25 As it is suspected [*sic*], the HEYCO well or Yates

1 well in Texas is the source of the contaminated drilling
2 fluid, then we would like to know why this type of
3 contaminated material is allowed to be transported across
4 state lines and used at will, rather than being disposed of
5 at a site designed to accommodate such material. It would
6 seem that the transport of this material would be regulated
7 in some manner.

8 In addition, we feel that it is necessary to more
9 thoroughly dispose of the drilling fluid pit material.
10 After contaminating [sic] drilling fluids having
11 constituents as mentioned above, it is unacceptable to
12 leave this material in place and only cover it as current
13 regulations allow. We feel this is necessary to completely
14 remove all material associated with the drilling fluid pits
15 and that they be disposed of at a facility designated [sic]
16 and designed and permitted to accommodate such materials.
17 This would entail quantifying the materials of the drilling
18 fluids by an independent third party laboratory. And our
19 suggestions to that would be Sandia Laboratories that have
20 experience in the area to conduct that research.

21 And based on the conduct of business that we have
22 experienced associated with the Chiricahua drilling
23 operation, it is clear that the existing regulations are
24 either inadequate or that enforcement of existing
25 regulations is insignificant. The geologic environment

1 that exists in the Crow Flats/Otero Mesa is one of karst
2 limestone. Therefore, contaminants on the surface or in
3 pits at the surface have essentially direct access to the
4 underlying groundwater systems through fractures and
5 solution cavities. This means that surface contaminants
6 have the potential to be moved quickly into the groundwater
7 system through this karst formation or environment.

8 The groundwater resource of the Crow Flats/Otero
9 Mesa (New Mexico Salt Basin) region is extremely valuable
10 on a local, state, regional and international level. It is
11 estimated there are 15 million acre feet of recoverable
12 potable water in the New Mexico portion of the Salt Basin.
13 Contamination of any sort of this karst environment would
14 move quickly and would result in huge amounts of unusable
15 water that was once potable. Does the OCD, BLM or any
16 other entity want to take responsibility for rendering a
17 significant potable groundwater resource unusable because
18 of regulations or enforcement mechanisms that were not
19 sufficient to protect it from oil and gas drilling
20 activities. Given the current situation in New Mexico and
21 the southwest in general, we think that would be a poor
22 position.

23 And quickly, the recommendations that we would
24 have from our area to the pit rules is that Sandia
25 Laboratories should be the entity to monitor the water

1 activities relative to our area and -- as well as other
2 areas of New Mexico. That is, an area of expertise that
3 they do have in New Mexico that is invaluable to all
4 citizens of New Mexico.

5 COMMISSIONER LEE: Why do you trust Sandia so
6 much? They are federal --

7 MR. DUGGAR: In Sandia --

8 COMMISSIONER LEE: They are federal employees.

9 MR. DUGGAR: Well, they are federal employees,
10 absolutely, sir, but our drinking water is where we must be
11 extraordinarily cautious with our drinking water supply,
12 and we do not have any other entity that is available to
13 assist us in this process, certainly not the OCD. But our
14 recommendation would simply be that, or perhaps that we
15 should remove the responsibility from the OCD and hand it
16 to the Environmental Department of New Mexico to mitigate
17 these problems with the pit rules.

18 And that quickly -- I would like to again
19 reiterate, would like to leave the books open for two
20 weeks, 30 days, for additional comments.

21 And that would be my comment for this day, and I
22 thank you very kindly for your patience. And we would like
23 to have someone to visit that site and to get us some
24 answers as to what has happened and officially investigate
25 why we ended up with that problem in Otero County.

1 Thank you all.

2 CHAIRMAN WROTENBERY: Thank you, Mr. Duggar, for
3 your comments, and we will follow up on your complaint.

4 Okay, I think we will call it a day and start
5 back up at 9:00 a.m. in the morning.

6 (Evening recess taken at 5:30 p.m.)

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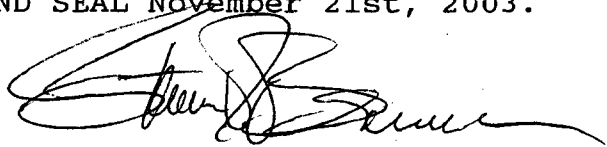
CERTIFICATE OF REPORTER

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, 2003.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2006

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:)

) CASE NO. 12,969

APPLICATION OF APPLICATION OF THE)
NEW MEXICO OIL CONSERVATION DIVISION,)
THROUGH THE ENVIRONMENTAL BUREAU CHIEF,)
FOR ADOPTION OF A NEW RULE REGULATING)
PITS AND BELOW-GRADE TANKS; AMENDMENT OF)
19.15.1.7 NMAC AND 19.15.5.313 NMAC;)
RESCISSION OF 19.15.1.18 NMAC,)
19.5.3.105 NMAC AND 19.15.2.1 THROUGH)
19.15.2.15 NMAC; AND RESCISSION OF)
ORDERS R-3221, R-3221-A, R-3221-B,)
R-3221-B-1, R-3221-C, R-3221-D, R-7940,)
R-7940-A, R-7940-B, R-7940-B(1) AND)
R-7940-C)

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Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

REPORTER'S TRANSCRIPT OF PROCEEDINGS
COMMISSION HEARING

BEFORE: LORI WROTENBERY, CHAIRMAN
JAMI BAILEY, COMMISSIONER
ROBERT LEE, COMMISSIONER

Volume II, November 14th, 2003
Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission, LORI WROTENBERY, Chairman, on Thursday and Friday, November 13th and 14th, 2003, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

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

C U M U L A T I V E I N D E X

Thursday-Friday, November 13th-14th, 2003
 (Volumes I and II)
 Commission Hearing
 CASE NO. 12,969

PAGE

Volume I, Thursday, November 13th, 2003

EXHIBITS 4

APPEARANCES 6

DIVISION WITNESSES:

ROGER C. ANDERSON (Environmental Bureau Chief,
 NMOCD)

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A P P E A R A N C E S

FOR THE COMMISSION:

DAVID K. BROOKS, JR.
Assistant General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

FOR THE DIVISION:

GAIL MacQUESTEN
Deputy General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

CHERYL BADA
Assistant General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

FOR CONTROLLED RECOVERY, INC. and
INDEPENDENT PETROLEUM ASSOCIATION OF NEW MEXICO:

HOLLAND & HART, L.L.P., and CAMPBELL & CARR
110 N. Guadalupe, Suite 1
P.O. Box 2208
Santa Fe, New Mexico 87504-2208
By: MICHAEL H. FELDEWERT

* * *

ALSO PRESENT:

Irvin Boyd
Rancher
Eunice, NM

B.J. Brock
New Mexico Cattle Growers' Association
Albuquerque, NM

John Byrom
IPANM/D.J. Simmons
Farmington, NM

Greg Duggar
Citizen
Otero County, NM

Richard Ezeanyim
NMOCD
Santa Fe, NM

Jack Ford
NMOCD
Santa Fe, NM

Denny Foust
NMOCD
Aztec, NM

Dan Girand
Mack Energy
Artesia, NM

Jennifer Goldman
Associate Director
Oil and Gas Accountability Project
El Prado, NM

Tim W. Gum
District Supervisor
Artesia District Office (District 2), NMOCD
Artesia, NM

Rachel Jankowitz
New Mexico Game and Fish
Santa Fe, NM

(Continued...)

ALSO PRESENT (Continued):

Carl L. Johnson
Rancher
Tatum, New Mexico

Martyne Kieling
NMOCD
Santa Fe, NM

Clifford K. Larsen
Sierra Club
Santa Fe, NM

Ken Marsh
Controlled Recovery, Inc.
Hobbs, NM

Ed Martin
NMOCD
Santa Fe, NM

Cody Morrow
State Land Office
Santa Fe, NM

Tom Nance
IPANM
Santa Fe, NM

Donald A. Neeper
Private citizen
Los Alamos, NM

Michael Newell
Attorney at Law
Heidel Law Firm
P.O. Drawer 1559
Lovington, New Mexico 88260

Wayne Price
NMOCD
Santa Fe, NM

Janet Rees
Citizen
Bloomfield, NM

(Continued...)

ALSO PRESENT (Continued):

David Sandoval
Attorney at Law
Heard, Robins, Cloud, Lubel & Greenwood, L.L.P.
300 Paseo de Peralta, Suite 200
Santa Fe, New Mexico 87501

Dixon Sandoval
Jicarilla Apache
Dulce, NM

Deborah D. Seligman
NMOGA
Santa Fe, NM

Oscar Simpson
New Mexico Wildlife Federation/ConservAmerica
Albuquerque, NM

Mike Starrett
OXY Permian
Houston, TX

Steven Wells
BLM
Santa Fe, NM

* * *

1 WHEREUPON, the following proceedings were had at
2 9:05 a.m.:

3 CHAIRMAN WROTENBERY: Okay, good morning. We'll
4 go back on the record, and we left off yesterday in the
5 middle of the presentation on behalf of IPANM.

6 Mr. Feldewert, would you like to proceed?

7 MR. FELDEWERT: Yes, ma'am. We'd call Robert
8 Manthei to the stand. And I believe the witnesses have all
9 been sworn.

10 CHAIRMAN WROTENBERY: Yes, we did that yesterday.

11 ROBERT L. MANTHEI,
12 the witness herein, after having been first duly sworn upon
13 his oath, was examined and testified as follows:

14 DIRECT EXAMINATION

15 BY MR. FELDEWERT:

16 Q. Could you please state your name for the record
17 and where you reside?

18 A. My name is Robert Manthei, and I reside in
19 Andrews, Texas.

20 Q. By whom are you employed and in what capacity?

21 A. I'm employed by BP America in the capacity of
22 operations supervisor for southeast New Mexico operations.

23 Q. Could you give the Commissioners some idea of
24 what your operational duties entail?

25 A. My operational duties right now are dealing with

1 regulatory issues, landowner issues, land stakings and
2 measurement supervisor for southeast New Mexico.

3 Q. And in connection with those operational duties,
4 are you on a daily basis familiar with the facilities that
5 are used in southeast New Mexico?

6 A. Yes, I am.

7 Q. How many properties do you oversee, Mr. Manthei?

8 A. We have over a hundred properties in southeast
9 New Mexico, probably between 150 and -- or 100 to 150
10 properties.

11 Q. How long have you been working in this capacity
12 in one way or another in New Mexico?

13 A. I've been involved in the oil and gas industry in
14 New Mexico for the last 23 years.

15 Q. Could you just very briefly outline your work
16 history in New Mexico for the Commissioners?

17 A. I started with ARCO Oil and Gas in 1980 as a
18 roustabout. I was a lease pumper for three and a half
19 years, and then I was promoted to production supervisor.
20 Those duties included our operations in southeast New
21 Mexico, and I was responsible for the initial production on
22 new wells, operations of existing facilities and also the
23 P-and-A and restoration of those wells?

24 Q. Now, have you spent your entire career in
25 southeast New Mexico?

1 A. Yes, I have. In 1993 I was transferred to Hobbs,
2 and at that point I picked up the regulatory duties and
3 landowner issues. And then in 1997 I picked up the
4 responsibilities for the Eunice-area production, and I
5 maintained those duties up until 2000 when I picked up the
6 measurement duties for oil and gas measurement, and I still
7 retained all the regulatory functions and the land
8 functions.

9 Q. How long have you been what I would call a field
10 man in New Mexico?

11 A. For those 23 years.

12 Q. Okay. And have you testified before the Division
13 previously as an expert witness in oil and gas field
14 operations?

15 A. Yes, I have, I testified before the Division in
16 2002.

17 Q. Okay. There's been -- I want to focus here a
18 little bit about -- on drilling and workover pits. As a
19 field man, could you briefly tell the Commissioners what a
20 drilling and workover pit is, how it's constructed, what
21 goes into it and what the normal life span is for these
22 types of pits?

23 A. The common drilling and workover pits that I'm
24 familiar with, on the drilling side, most of these pits are
25 a below-grade pit, they're lined, they contain freshwater-

1 based drilling fluids for the drilling of the wells. Then
2 after the well is drilled and completed they're usually
3 closed somewhere within six to twelve months of that
4 completion.

5 Q. What's the normal size of a drilling pit?

6 A. Drilling pits normally will range from about 100
7 by 100 foot, anywhere from four to six foot deep, and then
8 on the larger, deeper wells they'll range up to 150 by 120
9 by about six foot deep.

10 Q. Okay, and I think you mentioned that these pits
11 are generally closed within six to twelve months?

12 A. Yes.

13 Q. Okay. And what about a workover pit? How does
14 that differ from a drilling pit?

15 A. A workover pit differs from a drilling pit
16 because you don't need the large volumes of fluids when
17 you're doing your workovers. Typically, these workover
18 pits will be used for cement casing squeezes or if you're
19 going to do a frac. Sometimes they're used to flow back
20 in, but the size of those are relatively smaller. Most
21 small pits used for cement squeezes are going to be about
22 20 by 50 foot, maybe four foot deep.

23 Q. And what's the normal life span of these workover
24 pits?

25 A. Usually on these pits, they're emptied shortly

1 after the work is done and usually are covered within two
2 to four weeks after that.

3 Q. Okay, so if we're dealing with drilling and
4 workover pits -- and I mean a true drilling and workover
5 pit, one that's not been converted into some kind of a
6 disposal pit -- usually they are -- these are pits with
7 short lifespans?

8 A. That's correct.

9 Q. Okay. Now, I want to turn and direct the
10 Division to Division's Exhibit Number 4, and I want to take
11 a look at page 2 of this proposed Rule, and you go down to
12 the bottom. There's been some discussion about paragraph
13 (f), the fencing and netting aspect of this Rule. And I'm
14 focusing on the sentence that starts at the bottom of page
15 2 and carries over to the top of page 3 that deals with
16 drilling and workover pits.

17 Now, the Division personnel have testified that
18 under the provisions of this Rule a netting will not be
19 required if these drilling and workover pits are kept
20 reasonably free of oil. Now, as a field man, would you
21 please describe to the Commission what this phrase,
22 "reasonably free of oil", means in the oilfield?

23 A. What it means in the oilfield is, if you have a
24 measurable amount of oil on the surface of that pit, then
25 it's not reasonably free.

1 Q. So are you talking about a situation where you
2 have a separation of oil and water that's measurable and
3 apparent on the surface?

4 A. That's correct.

5 Q. And in that situation that pit would not be
6 reasonably free of oil?

7 A. No, it would not.

8 Q. Okay. Is that phrase understandable and
9 enforceable? Is that a phrase that an operator can
10 understand and enforce and implement in the field?

11 A. Yes.

12 Q. Okay. And this standard, "reasonably free of
13 oil", in your experience has that been the standard that
14 has been the practice in the field for some time?

15 A. That has been on our drilling operations, as long
16 as we've kept the pits reasonably free of oil we have not
17 re-netted them and have not been required to.

18 Q. In your 23 years of experience, Mr. Manthei, have
19 you ever observed a dead migratory bird in a drilling and
20 workover pit?

21 A. No, I have not.

22 Q. Now, I want to turn to -- I want to stay on that
23 page, if I may, and focus a little bit on paragraph (e)
24 right above it, which deals -- Now, in this situation we're
25 dealing with disposal and storage pits. That's a different

1 kind of pit, isn't it?

2 A. Yes, that's correct.

3 Q. These are the longer-lived pits, and they're
4 generally larger?

5 A. They're generally larger than a workover pit.
6 These pits are designed for continuous use and for,
7 typically, the lifespan of the operations.

8 Q. And down in the southeast part of the state these
9 are lined pits, are they not?

10 A. Yes, unless they're an exempt.

11 Q. Okay. Now, this portion of the Rule has a
12 percentage limitation on the hydrocarbon contents of the
13 liquids of 0.2 percent --

14 A. That's correct.

15 Q. -- and the Division has testified that that
16 provision was put in there as a result of concerns over
17 waste. They don't want to see oil wasted. Is this type of
18 a waste problem, is this common in the field?

19 A. Not normally.

20 Q. And why is that?

21 A. There's separation equipment that's associated
22 with these pits. You're either using a two-phase or a
23 three-phase separator, or you're using a settling tank.
24 And free water is drained off the bottom in most cases, and
25 there's very little detectable amounts of oil in it.

1 Q. Now, one of the things that the Division
2 testified to, it didn't consider whether this percentage
3 limitation would be enforceable -- it didn't consider how
4 it would be implemented or how it would be enforced. And
5 I'm wondering if you could describe for the Commissioners
6 the operational problems that you see that are associated
7 with a fixed percentage of hydrocarbon contents and
8 liquids.

9 A. The problem with (e) is that the two-tenths of
10 one percent is related to the discharge, and the discharge
11 is what would have to be measured, not the contents of the
12 pit. If you're going to get an accurate measurement of the
13 contents of that stream, then you're going to have to treat
14 that stream as if you were trying to sell oil. So you're
15 going to have to gather a composite sample, which is going
16 to have to be a representative sample of the entire stream.

17 Then you're going to have to take that stream,
18 and it's going to have to be continuously mixed until you
19 have a homogeneous fluid, and at that point take that
20 sample to get an accurate reading.

21 Q. In your experience, is it going to be difficult
22 for an operator to monitor and judge compliance with this
23 kind of a percentage standard on a daily, or even a weekly
24 or monthly basis?

25 A. It's going to be very difficult, because if you

1 do not capture the full stream and use that for a
2 representative sample, your measurements are going to be
3 inaccurate. If you try to obtain that sample off of a pipe
4 it's going to be inaccurate because you're going to be
5 sampling only a partial stream.

6 We've done a lot of study in the field on two-
7 phase flow of oil and water in pipelines, and you can get
8 anywhere from 100-percent water if you sample off the
9 bottom to 100-percent oil if you sample off the top, and
10 it's not a representative sample and is not an accurate
11 measurement for two-tenths of one percent.

12 Q. Okay, but you recognize that the Division needs
13 some kind of a standard, do you not?

14 A. That is correct.

15 Q. All right. Now, can an operator -- on a daily
16 basis can they determine if there's an oil layer on their
17 pit and deal with that problem?

18 A. Yes, he can.

19 Q. On page -- I don't know if the Commissioners
20 still have it, but on page 3 of the handout that IPA New
21 Mexico presented yesterday, Mr. Gantner presented, there is
22 a proposed change in the percentage -- a proposed change in
23 this percentage limitation in this paragraph (e), and they
24 propose that the language be changed to say "liquids
25 discharged to a pit shall be kept reasonably free of oil".

1 A. That's correct.

2 Q. Mr. Manthei, is that an understandable and
3 enforceable measurement for an operator in the field?

4 A. Yes, that standard would meet all applications.

5 Q. What is it about that standard that is easily
6 understood and enforceable by an operator in the field?

7 A. The part about "reasonably free"?

8 Q. Yes.

9 A. That is a measurement that can be made visually
10 by the operator.

11 Q. Is that this measurable-layer issue that you've
12 been talking about?

13 A. Yes, it is.

14 Q. Okay, and what will happen when an operator --
15 when a -- if a -- you know, a good operator out there, if
16 they see a measurable layer of oil in their pit, what are
17 they going to do?

18 A. That will be recovered off the pit, it will be
19 picked up by a vacuum truck or some other pump method and
20 will be sent to a reclaiming facility.

21 Q. Is that -- Are the economics there, to capture
22 that layer of oil off of these pits?

23 A. In some cases it is.

24 Q. Okay. Now, does -- In opinion, does this
25 language proposed by IPA New Mexico -- this "reasonably

1 free of oil", does that standard give the Division the
2 flexibility and leverage it needs to require separation or
3 skimming in the isolated cases where a problem may exist
4 with oil in these pits?

5 A. Yes, it does.

6 Q. And is that standard a measurable and enforceable
7 rule or standard that an operator in the field can
8 understand and implement?

9 A. Yes, it is.

10 Q. Okay. Now, finally, I'd like to turn to this
11 discussion about sumps. We've had a lot of discussion
12 about sumps. And I'm looking on page 4 of the proposed
13 Rule, and also I think we're going to be dealing with the
14 definition of sumps.

15 I want you to tell the Commissioners as an oil-
16 -- you know, as an oilfield man with 23 years of
17 experience, what is a sump and how are they used?

18 A. Basically a sump refers to two different
19 applications. The first application is, we have load
20 lines, connection lines on our tanks, and every time you
21 sell a tank of oil or you haul a load of water you're going
22 to have a residual amount of drip from that connection when
23 it's broken. What we've tried to do is to prevent anything
24 from reaching the ground, and so we've placed these small
25 containers underneath these load lines. We also place them

1 under our bleeder valves to where we can check the
2 operations and see that our equipment is functioning
3 correctly. We use those to collect these fluids.

4 Now, the second application for these is
5 primarily for secondary containment of rotating equipment.
6 These you will find predominantly in saltwater disposal
7 areas or where you have water-transfer pumps. The main
8 reason for these are -- is, these pumps have a primary
9 containment. It's usually the casing or a housing or a pen
10 underneath, directly under the pump. In the event you have
11 a packing leak, you have a seal leak or you should have a
12 major malfunction, break a plunger, then that primary
13 containment is going to fill up, and it needs to gravity
14 drain. If we don't have these larger sumps in place as
15 secondary containment, then the contents will spill on the
16 ground.

17 So in an effort to reduce the spill that contact
18 the ground, many of the places where we have disposal
19 facilities have set larger sumps. Now, these sumps are
20 typically installed with an excavation pump that is set
21 with a level to keep them pumped empty when the fluid
22 starts coming in, because it's usually at a great rate.

23 If you have a saltwater disposal facility, in
24 some areas I've seen our operations where we have 20,000 to
25 30,000 barrels a day running through that operation, and

1 you need a sump that can contain this in the event you have
2 a leak, that can be excavated, pumped back into the system,
3 until you can arrive and correct the problem.

4 Q. Now, when you talk about these sumps that are
5 used for load lines and bleeder valves, what size
6 containers are you talking about?

7 A. There are several applications out there. I've
8 seen those containers run from a size of six gallons up to
9 55 gallons. If you'll take an average deep, double-
10 compartment kitchen sink that's cast iron, that sink is
11 going to hold almost 20 gallons. If you take a standard
12 household bathtub, that's going to hold about 110 gallons.

13 What we do is, we place these containers
14 underneath the load lines. And the problem that's
15 presented is, the height of the container is higher than 12
16 inches. Your connection on the tank is always standard at
17 12 inches, and so your vessel to contain these drips
18 usually has to be deeper than 12 inches, and the only way
19 to get that under the load line is to dig down underneath
20 it and place it underneath the load line.

21 Q. Okay. Now, when you talk about the sumps that
22 are used for the rotating equipment, what sizes are we
23 talking about there?

24 A. Those are sized based on the throughput of the
25 equipment you're trying to protect. If it's a circulating

1 pump at a facility or a small water-transfer pump that's
2 probably transferring less than 100 barrels a day, you can
3 conceivably get by with a small container of 55 to 110
4 gallons.

5 Now, if you have a saltwater disposal facility
6 where you're handling 1000 to 2000 barrels a day, you would
7 certainly want something larger than that, probably 250,
8 300 gallons.

9 If you'll look at the average bed on a Chevrolet
10 longbed pickup, it's going to hold somewhere in the
11 neighborhood of 360 gallons. Now, if you have a facility
12 like we operated where you have a throughput of 20,000 to
13 30,000 barrels a day, you're going to want a sump bigger
14 than that, probably in the range of about 50 barrels.
15 Those tanks are readily available. They're easy, and
16 they're very well constructed. That will give you enough
17 time to respond to an alarm or callout or an incident, to
18 get out and correct the problem and prevent it from
19 spilling over onto the ground.

20 Q. Okay, now these -- if they are truly sumps, okay,
21 no matter what the size, are they kept predominantly empty?

22 A. Yes, they are. Typically it serves the same
23 function as a rain gauge. When you see you've got fluid in
24 it, you look at it, you measure it, you empty it, and then
25 you put it back for the next time. And that's typically

1 what we try to do on these sumps. When we get an amount of
2 fluid in there that can be recovered, we recover it off and
3 leave them empty.

4 Q. And if you have a bigger device, I think you --
5 what, do you have a pump that's --

6 A. On the larger applications where you do not have
7 capacity for overnight event, then they'll be installed
8 with an excavation pump, and this pump is set up with a
9 float, and it's designed to where you can empty the vessel.
10 And if the rate coming in is greater than what could be
11 contained overnight, then that pump will pump that fluid
12 back into the system to prevent it from getting on the
13 ground.

14 Q. Okay. Now, Commissioner Wrotenbery yesterday
15 raised a good point. She's concerned that we don't want
16 sumps becoming unpermitted emergency pits?

17 A. That's correct.

18 Q. Okay. Now, when you talk about sumps, true
19 sumps, are these constructed -- are these earthen pits or
20 are they vessels?

21 A. No, they're constructed out of manmade materials.

22 Q. Okay, so they're not -- When we have sumps out,
23 and we're talking about sumps that are kept predominantly
24 empty, we're not talking about earthen pits that might be
25 confused with emergency pits?

1 A. No, we're talking about sumps that are vessels
2 that are constructed predominantly out of either plastic,
3 poly, or steel.

4 Q. Now, I want to turn to the definition of "sump"
5 if we can, because I think part of the concern that the
6 Commission has expressed may be the language that is used
7 to define a sump. And when we look at that definition it
8 says a "Sump shall mean any impermeable single wall
9 reservoir..." Do you see that?

10 Mr. Manthei, would a better term that could be
11 used to describe a true sump -- would a better term be a
12 vessel?

13 A. In my opinion it would be, because that would
14 eliminate "reservoir", which could be misleading to let you
15 believe that it could be an earthen pit.

16 Q. Okay, because we don't want people out there
17 using this sump definition as a loophole to avoid
18 permitting of emergency pits?

19 A. That's correct.

20 Q. Now, if we keep our finger there and we take a
21 look at the definition of below-grade tanks, now a below-
22 grade tank is defined as "a vessel, excluding sumps and
23 pressurized pipeline drip traps" under this proposed Rule;
24 is that right?

25 A. That's correct.

1 Q. Do you recommend that the term "vessel" as used
2 here in "below-grade tank" -- that it be -- that that term
3 be transported over to "sump" and replace the term
4 "reservoir" to avoid any confusion?

5 A. Yes.

6 Q. Okay. If that's the case, and if that change is
7 made, is there any reason to have a gallon limitation on
8 the definition of "sump"?

9 A. I don't see one.

10 Q. In your experience, do you see any reason to
11 treat -- and I'm talking about true sumps here, devices
12 that are kept predominantly empty and meet the other
13 aspects of this definition. If that's the case, is there
14 any reason to treat a 250-gallon sump any different from a
15 35-gallon sump?

16 A. No.

17 Q. Is there -- And by the same token, we as the
18 industry wouldn't want what is a true sump to be treated as
19 a below-grade tank; is that right?

20 A. That's correct. A true sump will still be
21 documented. It's still authorized by this Rule. It will
22 be reviewed on an annual basis. Documentation as to where
23 it is is going to be maintained by the operator when he
24 does his annual integrity.

25 Q. If -- what is the problem -- If we have a gallon

1 limitation in the definition of "sump", now at some point a
2 sump becomes a below-grade -- a larger sump will become a
3 below-grade tank?

4 A. That's correct.

5 Q. And in that situation is it subject -- it would
6 then be subject to the requirements for a below-grade tank?

7 A. That is correct.

8 Q. Which includes a leak-detection system, right?

9 A. That's correct.

10 Q. And a secondary-containment system?

11 A. That's correct.

12 Q. So we would end up with a sump that acts as a
13 secondary-containment system, that then itself would have
14 to have its own secondary-containment system?

15 A. That's correct.

16 Q. All right.

17 A. These sumps on the larger saltwater disposal
18 facilities, they serve the same purpose as the berm around
19 the tank.

20 Q. In your opinion, if we change the definition of
21 "sump" to take out the language "reservoir with a capacity
22 of less than 110 gallons" and replace that with the term
23 "vessel", would that accurately describe the true sumps
24 that are used in the oilfield?

25 A. Yes, it would.

1 Q. And would that change eliminate, in your opinion,
2 any confusion or any loophole that would allow someone to
3 use -- characterize an emergency pit, an earthen emergency
4 pit, as a sump when it's really not?

5 A. Yes, it would.

6 Q. Okay. And in your opinion would this change
7 cover all of the true sumps that exist and are used in the
8 oilfield?

9 A. It should, yes.

10 MR. FELDEWERT: Members of the Commission, I
11 think that concludes my examination.

12 CHAIRMAN WROTENBERY: Thank you, Mr. Feldewert.
13 Commissioners, questions for Mr. Manthei?

14 COMMISSIONER BAILEY: No.

15 COMMISSIONER LEE: (Shakes head)

16 CHAIRMAN WROTENBERY: Mr. Larsen?

17 MR. LARSEN: Yeah, I have some questions for Bob.

18 EXAMINATION

19 BY MR. LARSEN:

20 Q. Good morning, Bob. Bob and I worked on the
21 language that -- contained in this document, spent a lot of
22 meetings together.

23 Your attorney is stressing the word "true sump".
24 What is an untrue sump?

25 A. An untrue sump would be one that does not meet

1 the definition as defined --

2 Q. Okay.

3 A. -- that we recommend.

4 Q. I note that you break sumps into two different
5 applications, the one under load lines, which is the one
6 the gentleman from NMOGA and I were discussing yesterday,
7 which tend to be small containers --

8 A. That's correct.

9 Q. -- and that, you know, could represent a half of
10 an oilfield drum in most cases, and for him they did.

11 A. Our applications include containers -- We use the
12 Rubbermaid feed trough, which is rated at 55 gallons, for
13 these as well.

14 Q. Then we've rushed -- come into this thing that's
15 secondary containment and represent larger sumps and
16 contain within them evacuation pumps and other kinds of
17 things. What is it about this -- First of all, it is
18 expected that these kinds of secondary containments might
19 contain hydrocarbons. That's the point of them, is to
20 contain hydrocarbons?

21 A. They can contain hydrocarbons. The vast amount
22 of the fluid that's going to be contained in the larger
23 ones is going to be predominantly produced water.

24 Q. Okay. So -- But the reason to have a secondary
25 containment is to avoid contamination of the ground with

1 hydrocarbons?

2 A. Hydrocarbons, salt water, produced fluids.

3 Q. Okay. In the language from IPA and NMOGA they're
4 suggesting that these kinds of containers can be visually
5 inspected to see if they leak. How do you do that?

6 A. Small containers can easily be visually
7 inspected, and it's exactly as you stated yesterday. Even
8 the 55-gallon feed troughs that we used, it's very easy to
9 pick that up and hold it up to the light and do a light
10 check.

11 Q. Sure.

12 A. The larger ones that you would have on a
13 secondary-containment installation for a pump, those are
14 going to be piped in, they're going to be connected to that
15 piece of equipment through piping, and therefore you're not
16 going to be able to visually pick those up. The API
17 standards for testing storage tanks is, you fill that
18 vessel to the top with water and you gauge it over a period
19 of time, and you note whether there's any loss of fluids.

20 Q. So you would not support the idea that tanks of
21 that size could be visually inspected, as the language of
22 NMOGA?

23 A. That size could not be visually inspected.

24 Q. Now, your attorney has suggested that the reason
25 that these should not be treated as below-grade tanks,

1 although clearly they're a below-grade vessel, is that they
2 are in themselves secondary containment, and that putting a
3 berm around that would be a secondary containment on a
4 secondary containment, and therefore I guess the suggestion
5 is, that's logically inconsistent --

6 A. Redundant.

7 Q. -- but it does not speak to the issue that you
8 have a below-grade vessel that can't be visually inspected,
9 that is intended to hold hydrocarbons or other kinds of
10 contaminants. Why would you not, therefore, support leak
11 detections on vessels of that size?

12 A. Because leak detection for below grade-tanks --
13 typically those tanks are designed for storage.

14 Q. Yes.

15 A. They maintain a head of pressure on them
16 everywhere -- all the way up to being full. These vessels
17 are not intended for that storage. They're intended to
18 capture fluids on a very unlikely incident and are removed
19 and emptied when the incident is corrected.

20 Q. So you're suggesting, then, that the event that
21 -- You said that you have to have these big containers
22 because you might have a big event, yet that big event that
23 would fill these vessels with hydrocarbons would be acted
24 upon so promptly that no matter the condition of the
25 vessel, that it would not leak into the ground. Is that

1 what you're suggesting?

2 A. No, that's not what I'm suggesting. First of
3 all, these containers would not be full of hydrocarbons.
4 They are on saltwater disposal systems. You will probably
5 have a 99.9-percent water cut, which means you'll have less
6 than one-tenth of one -- or you'll have less than one
7 percent, if any, hydrocarbon.

8 The only event would be in extremely rare cases
9 would you ever get oil in this. We're not in the business
10 of disposing of our oil through these systems.
11 Predominantly it's going to be water. Water is not going
12 to be stored in these, it's going to be used to prevent it
13 from getting onto the ground.

14 Q. Water -- by saying "water" --

15 A. Produced water.

16 Q. -- it's potable water? Potable --

17 A. Produced water.

18 Q. -- water, or is it heavily salted water?

19 A. That depends on the water analysis at the
20 facility. I've seen fresh water, almost, at some
21 locations, I've seen 10-pound brine. Water is different.
22 It is produced water from the formation of which we are
23 producing.

24 Q. So it's your testimony that in no cases would
25 leak detection on a 250-gallon underground vessel be a

1 useful thing?

2 A. It would not. These vessels are going to be
3 inspected annually, the integrity is going to be
4 demonstrated, it's going to be documented, it's going to be
5 tracked. And in the event that it does not meet the
6 integrity, then it will be replaced and fixed --

7 Q. Okay.

8 A. -- the problem will be corrected.

9 Q. Thank you. Let's move back to C.2.(f) and
10 C.2.(e) where we have the concept of "reasonably free of
11 oil". Can you visualize a circumstance where reasonable
12 people would disagree about whether something was
13 reasonably free of oil?

14 A. I don't understand your question.

15 Q. Well, let me repeat it. We're looking at a
16 drilling pit, and there is a sheen on the water. Is that
17 reasonably free of oil?

18 A. Can you describe "sheen"?

19 Q. Let's assume that they are round --

20 A. Visible layers?

21 Q. -- round haloes, you know, things that refract
22 light and look like a rainbow, and that they're about three
23 feet in diameter, and there's one here and one over there
24 and something else in the pit. Is that -- and clearly it's
25 hydrocarbon. Is that reasonably free of oil?

1 A. Is it transparent, can you see the water beneath
2 it?

3 Q. Sure.

4 A. Then I would say it's reasonably free.

5 Q. Okay. Now, let's take that same transparent
6 layer and it's virtually over the entire pit. Is that
7 reasonably free?

8 A. Is the water still visible through that?

9 Q. Sure.

10 A. Then yes, I would say it's reasonably free.

11 Q. When you say -- Well, what percent hydrocarbon do
12 you suppose that is?

13 A. That's going to depend on the volume contained
14 within the pit.

15 Q. Okay. So --

16 A. It could be less than two-tenth.

17 Q. So that an oil slick -- I'm not sure how you see
18 an -- you know, what the difference is between an oil
19 slick, with -- how you see water through an oil slick and
20 then what water through an oil slick looks like.

21 A. I don't think you can either.

22 Q. Yeah. But in any case, so you're suggesting that
23 if I looked at an oil slick and I thought I could see the
24 water through it and I'd say, Gee, there's oil there,
25 that's not reasonably free of oil, and I'm kind of a

1 reasonable guy, and you'd look at it and say, No, I think
2 that's reasonably free of oil, we'd have a disagreement
3 among reasonable people at that point, I guess, wouldn't
4 we?

5 A. That could be conceived.

6 Q. Okay. Your equipment is capable of reducing the
7 hydrocarbon level below two-tenths of one percent, is it
8 not, when it's operating properly?

9 A. Absolutely.

10 Q. Okay. The method you use to determine whether
11 something is reasonably free of oil is the appearance of
12 the pit itself, the appearance of the surface of a pit.
13 The phrase that you read would be an okay thing to control
14 with is, "liquids discharged to a pit shall be reasonably
15 free of oil". Okay.

16 You made -- you discussed at some length the
17 difficulty of measuring the oil content of the discharge
18 stream, of whether it's two-tenths or not. How do you
19 determine whether that discharge is reasonably free of oil,
20 assuming you cannot see the pit?

21 A. I'm not aware of a situation where you cannot see
22 the pit.

23 Q. Well, but what you agreed you could do easily was
24 that liquids discharged to a pit shall be reasonably free
25 of oil. It doesn't say the pit's reasonably free of oil,

1 it says the discharge is. So now you have to, in your
2 reasonable way, tell me -- that discharge stream, whether
3 it's reasonably free of oil or not.

4 A. Reasonably free of oil would be an observation
5 that is made based on the contents of the pit.

6 Q. So it's not -- So you can't, then, make any
7 determination against the language that's been proposed?
8 Your language is that the pit has to be reasonably free of
9 oil, not to discharge. Okay. Now --

10 A. No, the discharge needs to be reasonably free as
11 well.

12 Q. Okay, how do you determine the discharge?

13 A. You determine the discharge by the container that
14 stores the discharge in.

15 Q. By the end result. So at the same token, if I
16 said to you that the standard that we're going to set is
17 that it can't be above two-tenths percent of hydrocarbon in
18 the water, this test is the same, you look at the pond --

19 A. That's correct.

20 Q. -- and you say, God, I'm getting a slick there,
21 and then I take a sample of the discharge and measure it.
22 If you don't -- If you look into the pit and you don't see
23 a slick, chances are pretty good, wouldn't you say, that
24 the discharge is okay?

25 A. If I saw what you describe as a slick on the pit,

1 there would be no need to sample the discharge, because
2 it's evident that it's not reasonably free.

3 Q. All right, okay. Whether -- The intent of the
4 Rule is to keep hydrocarbon out of the pit, period?

5 A. That's correct.

6 Q. Right? And if -- So if the Rule read that the
7 pit shall be free of oil --

8 A. Uh-huh.

9 Q. -- I can envision a situation in which an
10 analytical chemist would say there are 100 parts per
11 million hydrocarbon in this, and you'd feel very abused,
12 would you not, by an analytical measure like that?

13 A. Depends on the volume of the pit.

14 Q. A hundred parts per million, it doesn't make any
15 difference what the volume is.

16 A. I've seen applications where that is extremely
17 excessive.

18 Q. Of course it is, of course it is. So the --
19 Would you agree that a unit measure like two-tenths of one
20 percent is more for the protection of the operator against
21 an exuberant analytical chemist than it is anything else?

22 A. When I think about this two-tenths of one percent
23 being measured on a discharge rate, if I was going to
24 sample a water stream for WQCC standards, I can't measure
25 that stream. I've got to capture it, contain it and then

1 evaluate it.

2 And that's where the measurement comes into play.
3 It's on the contents of what is captured. That's where you
4 make your measurement standard. It's not by the flow rate
5 or the stream coming out. You've got to have some way to
6 contain that so you can do your analytical measurement.

7 Q. Do you recall a discussion during our meetings in
8 which the two-tenths of one percent is there principally as
9 a way of saying "free of oil" without being abusive?

10 A. I don't understand that.

11 Q. Well, the two-tenths of one percent -- The task
12 is to keep the pit free of oil, period. But that some
13 standard, some measurable standard has to be there from
14 abusing the operator by the exuberant analytical chemist
15 who says, Oh, it's got ten parts per billion oil in it.

16 What we have done is to -- it would appear, is to
17 segue into that some oil is okay. Is that what you're
18 suggesting?

19 A. Yes.

20 MR. LARSEN: Okay, all right. That's all I have,
21 thank you.

22 CHAIRMAN WROTENBERY: Thank you, Mr. Larsen?

23 Yes, Mr. Boyd?

24 MR. BOYD: I've got a couple questions for Bob,
25 real quick.

EXAMINATION

1
2 BY MR. BOYD:

3 Q. Bob, I'm real concerned about the drilling,
4 workover pits. You stated that the pits contain freshwater
5 and drilling muds.

6 A. Let me -- I'll correct that for you, Irvin.
7 They're water-based. Depending on the drilling
8 application, most drilling reserve pits in the southeast
9 part of New Mexico are two-part pits. You'll have a
10 freshwater compartment that is used to drill through the
11 freshwater zone until that is cased off. Then after that
12 you have a secondary compartment which is used to drill
13 through the salt section. And to drill through that salt
14 section we use 10-pound brine. And that 10-pound brine is
15 to avoid washing out the salt section and creating a
16 cavern.

17 Q. That changes the contents of the pit --

18 A. That's correct.

19 Q. -- that we heard prior. Okay. In my area, Bob,
20 I've never seen a drill pit or workover pit that does not
21 have some amount of sludge or hydrocarbons on top of the
22 salt seams. And there's -- all through these hearings, I
23 haven't heard any mention of different kinds of chemicals
24 used in the drilling processes, rust inhibitors, scale
25 inhibitors and chemicals to preserve the integrity of the

1 drilling fluids, to keep them from clabbering or whatever.
2 And would all these be contained within these pits also?

3 A. Yes.

4 MR. BOYD: Okay. Then I suggest that it wouldn't
5 be free of contaminants, it would have other things than
6 fresh water. Thank you.

7 CHAIRMAN WROTENBERY: Thank you, Mr. Boyd.

8 Anybody else? Yes, Dr. Neeper?

9 EXAMINATION

10 BY DR. NEEPER:

11 Q. I'm Don Neeper, private citizen. I have three
12 questions.

13 The first one is, you have brought up the
14 difficulty in your testimony of testing the discharge, that
15 that's impractical for the operator in the field. In your
16 opinion, would it be suitable to apply the standard to the
17 content of the pit instead of to the discharge?

18 A. If you apply the two-tenths of one percent to the
19 pit, I have seen applications where that could result in a
20 volume of oil that is not reasonable, in my opinion.

21 Q. You mean the volume of oil would be excessive
22 or --

23 A. That is correct. In the definition I described
24 as reasonably free, two-tenths of one percent would allow
25 you to have a volume of oil greater than that.

1 Q. All right, you're saying if the discharge runs at
2 two-tenths of one percent, you will wind up with an amount
3 of oil in your pit that for some reason is unacceptable to
4 the industry?

5 A. Yes.

6 Q. So you're testifying, then, that the standard at
7 two-tenths of one percent is really too high; the standard
8 should be something smaller than two-tenths of one percent?

9 A. Not necessarily, no. There's applications where
10 two-tenths of one percent could be conceivably acceptable,
11 there are applications where it could not be conceivably
12 acceptable, because two-tenths of one percent is a volume-
13 based calculation, and it's going to depend on the volume
14 in the pit.

15 I've seen pits capable of holding a hundred
16 barrels, I've seen pits capable of holding 20,000, 30,000,
17 40,000 barrels. When you do it on a per-volume-based
18 measurement, you can have larger amounts of oil than what
19 we have described as reasonably free.

20 Q. You have in your testimony suggested that
21 "reasonably free" would be the best wording or the proper
22 wording for the standard, rather than a numerical standard.
23 You have said that your way of detecting "reasonably free"
24 would be whether or not you could see through the layer,
25 just visibly by the eye.

1 In the lobby there are three bottles of oil in a
2 display case. Two of those bottles have different weights
3 of crude, the third bottle has condensate. The condensate
4 is clear and I can see through several inches of it. So by
5 your standard, one could have a very thick layer of light
6 petroleum product floating on the pit. Would you care to
7 comment on that?

8 A. If you have the clear condensate that you are
9 referring to, you will have a visible layer. It may be
10 somewhat transparent, but the visibility of that layer will
11 be detectible, and you can see that it is indeed
12 condensate.

13 Q. I don't argue that it's not detectible. What I
14 am questioning is your testimony which said if you can see
15 through a layer, then, that is reasonably free of oil.

16 A. What I said was -- in reference to Cliff's
17 comment was, he was referring to a sheen, not a layer --

18 Q. Yes.

19 A. -- of oil. To me, that is a difference in the
20 appearance of what you see through it.

21 Q. You have established what you mean by a sheen, or
22 it's been established here that it's some coloration on the
23 surface, one can see reflections from the sheen.

24 A. I was interpreting that to mean a spectrum
25 breakdown of the light.

1 Q. Yes. You and I will agree that that's what we
2 mean by a sheen.

3 A. Okay.

4 Q. This goes back to, I believe, a Water Quality
5 Control Commission standard for groundwater which says that
6 oil shall not be floating on the groundwater, as reasonably
7 can be measured. As far as I know, that's the first place
8 where the term "reasonable" is applied as a standard.

9 At the time that was adopted, the citizens
10 understood that to mean a sheen. And there's a reason for
11 that. It's because when oil is on the groundwater and you
12 look down the pipe at the layer -- or you sample in an open
13 well, the thickness of oil that you find in the well is not
14 scientifically related to the thickness of petroleum that's
15 actually on the aquifer in the capillary zone. You can
16 show that if the capillary zone moves back and forth, you
17 can come up with any arbitrary thickness you want. It is
18 almost a random correlation between the two.

19 That thickness, what -- the term "reasonably" is
20 now interpreted by OCD to mean an eighth of an inch. So
21 the citizens have, in fact, lost their handle via that
22 standard for getting petroleum cleaned off of the aquifer.
23 It's surprising, but that's what has happened.

24 So now I'm asking you, in light of that, why the
25 citizens should accept a reasonable-type statement as a

1 standard in terms of oil in a discharge stream.

2 A. The use of the term "reasonable" in the situation
3 you cited is in reference to underground water --

4 Q. That's correct.

5 A. -- in reference to a transient fluid that is
6 moving, that is not contained within a lined pit.

7 Q. That's right.

8 A. And therefore, I would assume that the use of
9 "reasonably" in that situation has a different application
10 than it would to a volume contained in an above-ground pit
11 that is reasonably.

12 Q. What I'm getting at is, why should I accept your
13 judgment of what's reasonable in terms of a pit when I've
14 already lost it in terms of the groundwater, based on that
15 same word in the standard?

16 A. What was that again?

17 Q. What assurance can you give me that the term
18 "reasonable", if applied to discharge to a pit, is going to
19 be maintained in some sense that's acceptable to the
20 citizens, rather than to become misinterpreted to the
21 extent that one actually loses the functionality of the
22 standard? And that's what's happened in groundwater.

23 A. As a private citizen myself, I place that trust
24 in the people who are given the authority to inspect that
25 and to make that determination, who are working for the

1 OCD.

2 Q. In that case, would it be acceptable to you to
3 simply have the standard say "as OCD personnel shall
4 direct"? We take the word "reasonable" out, and you use
5 their judgment, because you're now saying that's what it
6 will mean.

7 A. I have some reservations as to using that,
8 because you have people for alternate reasons or
9 alternative motives that might not abide by that standard.
10 I think "reasonably free" gives you the option to have more
11 than one person make that judgment, and it can be more than
12 one person within the OCD and not just one person. By
13 narrowing it down to that, then you've eliminated some of
14 the other opinions that could come into this equation and
15 maybe give you a better description.

16 Q. Thank you for your testimony.

17 A. You're welcome.

18 CHAIRMAN WROTENBERY: Thank you, Dr. Neeper.

19 Anybody else in the audience? Okay, Mr. Johnson?

20 MR. JOHNSON: Yes, ma'am, my name is Carl Johnson
21 from Lea County. I ranch down there. I've been in the --
22 I get up in the oilfield in the morning and I work in the
23 oilfield all day, and I go to bed in the oilfield.

24 I don't agree with his testimony, in about three-
25 fourths of it, and I know that I did not agree with NMOGA's

1 testimony yesterday afternoon. And if it was like what
2 they say is happening on their terrain, I wouldn't even be
3 here. I don't have any BP stuff on me; I have a thousand,
4 fifteen hundred wells been drilled on me, and I don't know
5 how many disposal wells, but it is not anywhere like what
6 he's describing and what that fellow described yesterday in
7 the northwestern. I just wanted --

8 CHAIRMAN WROTENBERY: Thank you, Mr. Johnson, did
9 you have any --

10 MR. JOHNSON: -- that on the record.

11 CHAIRMAN WROTENBERY: Okay. Did you have any
12 questions of Mr. Manthei?

13 MR. JOHNSON: No, ma'am, I just want that on the
14 record if --

15 CHAIRMAN WROTENBERY: Okay, it's on the record,
16 and we also have you down to speak in --

17 MR. JOHNSON: Yes, ma'am.

18 CHAIRMAN WROTENBERY: -- a little while.
19 Commissioner Lee?

20 COMMISSIONER LEE: I have a question.

21 EXAMINATION

22 BY COMMISSIONER LEE:

23 Q. I usually -- When you see the pit, put a little
24 bit of oil there or you put a lot of oil there, immediately
25 that will cover the surface. Is that a --

1 A. Typically what we see on these pits, because of
2 the wind that we have in this area --

3 Q. No, I'm not talking about wind.

4 A. Uh-huh.

5 Q. Let's talk about, if you put a little bit of oil
6 there or you put a lot of oil there, are they going to
7 cover the whole surface easily?

8 A. It's going to depend on the volume in the pit.

9 Q. Okay, suppose average, in general.

10 A. In general? Typically, from what I've seen, it
11 only covers a fraction of the pit surface. It's not a
12 homogeneous layer that covers the entire pit because of
13 fluid movement.

14 Q. Yeah. Suppose there is no fluid movement. You
15 look at those -- from a physics, you look at it -- people
16 -- I encourage you to go to the oilfield to look at the
17 tank. If the rule of thumb is, if I have a pit that --
18 full of them, you can -- you see oil everywhere on the
19 surface, I pretty much will conclude that the .25 percent
20 of oil on surface is --

21 A. Is --

22 Q. -- is water. This is my -- I just wanted to --
23 correct me, my thinking is wrong. I usually use my
24 experience, I look at the field, I look at the oil is cover
25 everything. I say, Well, this is your .25 percent of the

1 oil, and this is good water, we can retrieve those oil.

2 A. If you have a pit that has a hundred barrels in
3 it, two-tenths of one percent is going to give you about
4 eight gallons of oil.

5 Q. So that would almost cover the whole surface.

6 A. If you have a pit that is capable of holding 1600
7 barrels, which is fairly common, then two-tenths of one
8 percent is going to give you a volume of about three
9 barrels.

10 Q. If I see the water -- If I see the produced
11 water, I look at it, there's no -- there's no wind, and on
12 the surface is discontinuous of the oil on top of it --

13 A. Yes.

14 Q. -- I pretty much conclude, this water cannot --
15 we treat -- you know, the --

16 A. It's not --

17 Q. -- you know, we treat the suspended oil.

18 A. Can you retrieve it?

19 Q. Treat.

20 A. Treat?

21 Q. Yeah, we can make money out of it. Usually I
22 look at the water. If the surface is full of the oil, a
23 little bit of oil, there's no discontinuous of that oil, I
24 pretty much say, what is the .25 percent of the --

25 A. Yes.

1 Q. -- of the oil in this water, and I can make a
2 facility to treat it, to retrieve those oil. If I see on
3 the surface you have a discontinuous everywhere --

4 A. Uh-huh.

5 Q. -- then I pretty much conclude this water only
6 contain less than .25 percent of the oil and it's not worth
7 it to try to make a sedimentation out of this oil. Is that
8 a wrong concept or --

9 A. No, it's not. I understand what you're referring
10 to there, Dr. Lee. What we try to do is, there are
11 facilities that reclaim that sheen oil, the sludge oil or
12 the free oil on these pits, and it's more economically
13 beneficial for them to reclaim this oil. That's why when
14 we have the situation, when we skin the top of this oil, we
15 send it to a reclamation facility. They have the ability
16 to coalesce those small amounts together.

17 Q. Right now, you are the field man. You go into
18 the field, you look at the pit. There's absolutely no oil
19 on top of it, or just a little bit of the oil on top, a
20 little bit here, little bit there. Can you conclude --
21 From your experience can you conclude, this one is much,
22 much less than .25 of the percent of the oil inside of this
23 tank?

24 A. No, I can't.

25 Q. You can't.

1 A. That -- It's very hard to determine that.

2 Q. Okay.

3 A. "Reasonably free" gives the average person the
4 ability to look at that and say it's not.

5 COMMISSIONER LEE: My opinion -- My experience
6 is, .2 percent of the oil, if you have .2 percent of oil,
7 that tank is going to be very dirty, it's going to flow on
8 the surface like -- you look at it, you see this is -- you
9 can make money out of it, you just -- I don't know where
10 you got .2 percent of this one.

11 All right, I've finished my question.

12 COMMISSIONER BAILEY: I have a question.

13 CHAIRMAN WROTENBERY: Thank you, Commissioner.

14 Yes?

15 EXAMINATION

16 BY COMMISSIONER BAILEY:

17 Q. This .2-percent standard has been in effect since
18 the late 1970s; isn't that what --

19 A. That definition has been used to define
20 miscellaneous oil.

21 Q. Right, and miscellaneous oil is that oil that's
22 found on the pits, within separators, those locations,
23 correct? How has industry, since the late 1970s, dealt
24 with that standard? How have you been able to measure 0.2
25 percent in order to comply with OCD requirements for

1 miscellaneous oil?

2 A. You can determine that two-tenths of one percent
3 by doing a volumetric calculation on the container that
4 it's in, whether it's a pit or a tank.

5 Q. I'm talking about practicalities here --

6 A. Practicalities?

7 Q. Yes, how have you been able to comply?

8 A. If it's in a tank it's very simple, you gauge the
9 tank. You have a top gauge, you have a bottom gauge. You
10 can apply what we call Color-Cut, which is a water-finding
11 paste, to the gauge line. And when you gauge the tank
12 you'll have your top gauge, which we indicated by the
13 presence of the oil, and this Color-Cut that we call a
14 water-finding paste, it will change colors from a yellow to
15 a bright pink. And that is the level --

16 Q. Why would that not be --

17 A. -- then, of -- for the interfaces.

18 Q. Why would that not be appropriate for this
19 situation?

20 A. For -- To do that on a pit, to use that
21 calculation, you're not going to have a continuous,
22 homogeneous layer over the entire surface of the pit. And
23 so -- It's going to be isolated to one corner of the pit.
24 And so by doing a measurement sample that way, the sampling
25 is going to be inaccurate and it's not going to be

1 representative of the amount of oil that's present.

2 COMMISSIONER BAILEY: That's what I needed to
3 know.

4 CHAIRMAN WROTENBERY: Thank you. I'd just like
5 to take Mr. Anderson out of order here for just a second,
6 if you could stand up, please, and answer a couple
7 questions.

8 ROGER C. ANDERSON (Recalled),
9 the witness herein, having been previously duly sworn upon
10 his oath, was examined and testified as follows:

11 DIRECT EXAMINATION

12 BY CHAIRMAN WROTENBERY:

13 Q. This .2-percent hydrocarbon content, it's been
14 used to define miscellaneous hydrocarbons. Tell me where
15 that definition is used in our regulatory scheme --

16 A. It is --

17 Q. -- in what context?

18 A. It is not used -- It's not in the regulations.
19 The definition was in a memo from District 1 to define
20 miscellaneous hydrocarbons for those operators who were
21 required to submit and obtain an approved C-117 for
22 transporting miscellaneous hydrocarbons.

23 The basis behind the two-tenths of one percent is
24 the inverse of marketable oil. Marketable oil at that time
25 would not be allowed to have more than two-tenths of one

1 percent water in it. They took the inverse, that two-
2 tenths of one percent oil is miscellaneous -- more than
3 two-tenths of one percent oil is miscellaneous
4 hydrocarbons.

5 Q. Okay, thank you. And do we not also have a Rule
6 that will continue in effect that prohibits the storage of
7 oil --

8 A. That's correct.

9 Q. -- in pits?

10 A. That --

11 Q. What Rule is that?

12 A. That's 313.

13 Q. And what's the purpose of that Rule?

14 A. That's to prevent the waste of oil -- I believe
15 it's 313.

16 Q. Although aren't we -- Are we amending or
17 repealing 313?

18 A. We're amending 313.

19 Q. Okay.

20 MR. OLSON: Exhibit 5.

21 THE WITNESS: No, it's not 313.

22 MR. FELDEWERT: Roger, I've got the Rule book
23 here, do you want to --

24 COMMISSIONER LEE: I believe two-tenths of one
25 percent for environmental people concern is -- you are

1 thinking about putting the Rule -- test it. But I think
2 from the industry point of view, two-tenths of one percent,
3 you are going to have a big layer on top of it. This is my
4 experience, because above two-tenths of one percent, that
5 oil is supposed to go through the separator, I believe,
6 because recoverable produced water volume is the -- only 25
7 percent, to .25 percent of the total water.

8 So I think to have this measurement there, not
9 going to -- good for the environmental concern. I think if
10 they keep it reasonable free, I believe the content will be
11 much less than two-tenths of one percent. That's my
12 belief. But maybe I'm wrong.

13 Many of them -- they maybe never see the pit, and
14 they come out with the conclusion. But I encourage
15 everybody to go see the pit, see how they do the --
16 separate the oil operation.

17 CHAIRMAN WROTENBERY: Thank you, Commissioner
18 Lee.

19 Q. (By Chairman Wrotenbery) Did you find the Rule,
20 Mr. Anderson?

21 A. Yes, madame Chairman, it's Rule 310, and the
22 first sentence is, "Oil shall not be stored or retained in
23 earthen reservoirs or in open receptacles."

24 Q. Okay, we're not proposing to amend that --

25 A. We are not proposing to do anything with that

1 Rule.

2 Q. -- requirement. What was the purpose of that
3 Rule when it was adopted?

4 A. That one dates back to 1950, and I won't say I
5 wasn't around then but I wasn't here then. But it's my
6 understanding it was for prevention of waste of oil at that
7 time.

8 Q. And then the provision that the Division is
9 proposing to incorporate in the new pit rule that applies
10 to disposal and storage pits, what is our purpose there?

11 A. It's a combination of both. It's environmental
12 protection and prevention and prevention of waste, and we
13 don't have any protection of correlative rights in this
14 one, but it's -- all three of our charges from the
15 Legislature, protect the environment and prevent waste.

16 CHAIRMAN WROTENBERY: Okay. Let me ask Mr.
17 Manthei, I'll switch back to the discussion about what a
18 measurable layer of oil is.

19 ROBERT L. MANTHEI (Continued),
20 the witness herein, having been previously duly sworn upon
21 his oath, was examined and testified as follows:

22 EXAMINATION

23 BY CHAIRMAN WROTENBERY:

24 Q. I'm still not clear on how you would be proposing
25 to measure the layer of oil and what measurable amount

1 would be reasonable and what measurable amount would be
2 unreasonable, and I do believe we need some specificity
3 here if we're going to be able to implement the Rule fairly
4 and consistently and enforce the requirements of the Rule
5 fairly and consistently.

6 A. My concept of that is, if you have a visible
7 layer of oil -- and I'm not referring to a rainbow, a light
8 refraction -- but if you have a visible layer, then to me
9 that is a measurable amount. And at that point it's
10 unacceptable, it's not reasonably free.

11 Q. And how extensive would that visible layer need
12 to be in terms of what area of the pit it would cover?
13 Because there may be -- due to wind action or other
14 physical factors, there may be an accumulation in one small
15 part of the pit but not elsewhere. Would you have any
16 concept of how --

17 A. I would say if it's gathered --

18 Q. -- widespread the layer would have to be?

19 A. I would say if it's gathered together in one
20 corner, then that's a visible layer that's measurable.

21 CHAIRMAN WROTENBERY: Okay.

22 EXAMINATION

23 BY COMMISSIONER LEE:

24 Q. But that is not going to represent a whole pit?

25 A. No.

1 Q. So what's the meaning to that? You are only
2 talking about a corner. Right now your rule is 20 foot --
3 two-tenths of the volume of the whole pit. If you want to
4 do that kind of study, the whole OCD budget does not allow
5 you to do that.

6 COMMISSIONER BAILEY: Right now there's -- it
7 says no oil, because the 105 says "must have oil removed
8 from their surface".

9 COMMISSIONER LEE: Right.

10 COMMISSIONER BAILEY: So that means no oil.

11 COMMISSIONER LEE: Yeah.

12 COMMISSIONER BAILEY: So --

13 COMMISSIONER LEE: Reasonable free of oil is much
14 less than two-tenths of a --

15 MR. LARSEN: Yeah, I went through the
16 calculation, just to answer that question, taking the
17 supposition of a pit that's a hundred by a hundred by four
18 feet deep and full. That's 40,000 cubic feet, or roughly
19 320,000 gallons. At two-tenths of one percent you end up
20 with 640 gallons in that pit, spread across that same
21 surface gives you a continuous film one-sixteenth of an
22 inch thick.

23 THE WITNESS: And the volumetric and barrels
24 equivalent of what, 12 barrels of oil?

25 MR. LARSEN: 640 gallons.

1 THE WITNESS: 640 gallons.

2 MR. LARSEN: I mean, that was the answer to the
3 question of how thick a layer of oil you'd get.

4 COMMISSIONER LEE: Okay, but that is how much?

5 MR. LARSEN: Four feet.

6 COMMISSIONER LEE: Four feet.

7 MR. LARSEN: A hundred feet by a hundred feet by
8 four feet deep.

9 COMMISSIONER LEE: Four feet, so it's got to
10 be --

11 MR. LARSEN: It's 40,000 cubic feet --

12 COMMISSIONER LEE: -- .4, .4 feet. .4 feet times
13 -- .4 feet divided by 5. It's .05 feet. .05 feet times 12
14 inches.

15 MR. LARSEN: It's --

16 COMMISSIONER LEE: That will be --

17 MR. LARSEN: No --

18 COMMISSIONER LEE: -- .6 inches.

19 MR. LARSEN: No, it's point --

20 COMMISSIONER LEE: There's no --

21 MR. LARSEN: -- point --

22 COMMISSIONER LEE: There's no concern about the
23 area. The only concern is the depth.

24 MR. LARSEN: Right, okay. Point --

25 COMMISSIONER LEE: So that's calculated four feet

1 divided by a hundred, .004 feet. Right? Then times --

2 MR. LARSEN: It's relative to the surface.

3 COMMISSIONER LEE: -- .02, so it's --

4 MR. LARSEN: And it should be .072 inches.

5 COMMISSIONER LEE: Point 2 --

6 MR. LARSEN: .072 inches.

7 COMMISSIONER LEE: 072 inches.

8 MR. LARSEN: A sixteenth of an inch.

9 COMMISSIONER LEE: So -- Can you measure it?

10 THE WITNESS: (Shakes head)

11 COMMISSIONER LEE: I'm asking you, can you
12 measure it?

13 MR. LARSEN: No, and I think we're well off the
14 track, which is that the intent is not -- The origin may be
15 the two-tenths of one percent out of some other rule or
16 some other thing, but the intention was that the pit is to
17 be free of oil.

18 COMMISSIONER LEE: Right.

19 MR. LARSEN: Free of oil. But we can't impose a
20 zero standard because of the powers of analytical
21 chemistry, so we simply use this arbitrary two-tenths from
22 some other thing as a way of --

23 COMMISSIONER LEE: This is --

24 MR. LARSEN: -- providing an analytical solution
25 to the --

1 COMMISSIONER LEE: This is --

2 MR. LARSEN: -- word "reasonably" that no -- that
3 was in there, in order that there would be a disagreement
4 between, Gee, I thought it was reasonable; Well, don't you
5 think -- No, I don't think it's reasonable. That's just an
6 unacceptable basis for a Rule.

7 COMMISSIONER LEE: This is nothing to do with
8 analytical chemistry. This is a physical separation. This
9 is not a solubility --

10 MR. LARSEN: No, but the Rule is that it should
11 be free of oil. Free, zero, zero.

12 COMMISSIONER LEE: The Rule should be free of
13 suspended oil, it shouldn't be --

14 MR. LARSEN: Yeah, I accept that.

15 COMMISSIONER LEE: -- free of soluble oil.

16 MR. LARSEN: Right, I accept that.

17 COMMISSIONER LEE: You keep on bringing the 100
18 p.p.m. 100 p.p.m. organic inside of a stream, that's
19 reasonable.

20 MR. LARSEN: Yes.

21 COMMISSIONER LEE: If you don't allow the
22 industry to have the 100 p.p.m. of the organic, there's no
23 oil industry.

24 MR. LARSEN: I agree with you, I agree with you.
25 I mean, we're not -- It's not attempting to restrict

1 dissolved oil.

2 COMMISSIONER LEE: But I was thinking about the
3 oil industry, if they clean the oil -- they want to have a
4 reasonable clean -- free of oil, they have to use sponge to
5 clean it all the time.

6 MR. LARSEN: Yes, they say they are capable of
7 meeting the standard with the equipment, except when the
8 equipment fails. The issue then becomes one of requiring
9 the equipment to be maintained well and having an
10 analytical standard by which a non-reasonable person can
11 say, You're out of compliance or you're in compliance, not
12 simply to say, Well, okay, Joe, that looks okay.

13 COMMISSIONER LEE: We have to search for
14 something the OCD really can expect of the field. If that
15 is a layer, two-tenths of a layer, you just cannot measure
16 it.

17 MR. LARSEN: You can see it, though.

18 COMMISSIONER LEE: You can see it, but --

19 MR. LARSEN: If you can see it, it's wrong.

20 COMMISSIONER LEE: Yeah, but I'm arguing is .07
21 inches and .05 inches, .01 inches of the oil on top of
22 surface, you cannot distinguish that.

23 MR. LARSEN: No. No, basically if you can see
24 it, your equipment is not working.

25 COMMISSIONER LEE: So how can you determine that?

1 MR. LARSEN: Yeah, and -- but it's a matter of
2 not having a standard -- an equivocal standard.

3 COMMISSIONER LEE: And also, if you put a
4 measurement into the stream coming out from the drilling,
5 the solubility to the pump is totally difference, because
6 temperature is changing.

7 MR. LARSEN: Sure.

8 CHAIRMAN WROTENBERY: Okay, thank you.

9 Does anybody else have any questions for Mr.
10 Manthei?

11 Thank you. I'm sorry --

12 MR. FELDEWERT: Madame -- I just have --

13 CHAIRMAN WROTENBERY: -- Mr. Feldewert?

14 MR. FELDEWERT: -- one, two things, and I don't
15 -- it might be easier if I just say it.

16 I want to point out the fact that IPANM's
17 recommendation -- recommended changes for sumps does not
18 just say visual inspection, it says visual inspection or
19 other means. And primarily that was put in there to deal
20 with the situation where you can't -- where you have a big
21 sump that you can't pull out and you can't visually inspect
22 it. It's to allow other means such as filling it up with,
23 you know, water, that's not harmful to the environment, and
24 making -- see whether it leaks, and doing that on an annual
25 basis.

1 So I just want to clarify the language and not
2 just say visually inspected, it said visual or other means,
3 which we think will cover the situation out there and
4 provide the protection that everybody wants.

5 CHAIRMAN WROTENBERY: Okay, thank you, Mr.
6 Feldewert. I was just going to say, I think part of the
7 confusion was in the comment section where it said
8 NMOGA/IPANM believe that visual inspections of sumps are
9 sufficient --

10 MR. FELDEWERT: That might -- I mean, that was
11 probably --

12 CHAIRMAN WROTENBERY: -- I think what we've heard
13 is, that would be sufficient in a lot of cases --

14 MR. FELDEWERT: In a lot of those smaller ones --

15 CHAIRMAN WROTENBERY: -- for very small --

16 MR. FELDEWERT: Right --

17 CHAIRMAN WROTENBERY: -- sumps.

18 MR. FELDEWERT: -- that's right.

19 CHAIRMAN WROTENBERY: -- but in some cases with
20 the larger sumps you would need to try other methods.

21 MR. FELDEWERT: Certainly. I appreciate the
22 struggle here with this percentage limitation. I would
23 point out this: You're dealing, with the exception of
24 certain areas where there's -- you know, where there --
25 where we don't have a groundwater issue. We're dealing

1 with storage and disposal pits that are lined, that have
2 secondary containment mechanisms, et cetera, that are
3 subject to the rigorous restrictions of these Rules.

4 So when we're dealing with oil in these pits, it
5 is a waste issue, I would submit to you. It's not a
6 groundwater-concern issue, it is a waste issue. And so the
7 question becomes, okay, what standard should we use as a
8 Division that's enforceable, to make sure that we don't
9 have a waste of oil? That's what these Rules are intended
10 to cover, because we don't have a groundwater issue when
11 you're dealing with these lined disposal pits that have
12 secondary containment and pose no -- as a result, pose no
13 threat to groundwater.

14 So I just wanted to point that out. I think we
15 got a little confused about -- It seemed that there may
16 have been some confusion about --

17 COMMISSIONER LEE: You are telling us we cannot
18 be concerned about groundwater?

19 MR. FELDEWERT: No, I think your concerns about
20 groundwater are addressed in this Rule by virtue of the
21 requirements that are being imposed on these storage and
22 disposal pits. They're rigorous requirements, and they're
23 very good requirements.

24 But in this particular section, as I think Mr.
25 Anderson testified earlier -- and it's my understanding

1 that this percent requirement was something they pull out
2 to try to deal with the waste issue. Nobody wants to be
3 wasting oil, and that's what this was trying to do. And
4 our suggestion --

5 COMMISSIONER LEE: Nobody also -- nobody wanted
6 contaminated well water either.

7 MR. FELDEWERT: That's correct, that's correct.

8 If we don't have any more questions, then our
9 next witness is Mr. Hicks. And we were hoping to have the
10 PowerPoint.

11 CHAIRMAN WROTENBERY: Do we have it set up? Oh,
12 great, we found the key.

13 Thank you, Mr. Manthei, for your testimony.

14 THE WITNESS: You're welcome.

15 CHAIRMAN WROTENBERY: Would you like to take a
16 break? Let's take just a 10-minute break while we get set
17 up.

18 MR. FELDEWERT: Thank you.

19 (Thereupon, a recess was taken at 10:20 a.m.)

20 (The following proceedings had at 10:30 a.m.)

21 CHAIRMAN WROTENBERY: Mr. Starrett, would you
22 like to make your statement?

23 MR. STARRETT: Brief statement, okay.

24 CHAIRMAN WROTENBERY: Mr. Feldewert has agreed to
25 let Mr. Starrett go now because he -- Mr. Starrett has a

1 flight to catch. So go ahead with your statement.

2 MR. STARRETT: Madame Chairman, Commissioners,
3 I'd like to thank you for the opportunity to make a brief
4 statement.

5 My name is Mike Starrett, I'm an environmental
6 engineer with OXY Permian, and I just have a few things to
7 comment on today.

8 I'd like to start with a paraphrase of what
9 Daniel Jurgen, author of *The Prize*, said: "The single
10 greatest threat to the domestic oil industry is the
11 accumulation of incremental regulation."

12 So -- I know you've heard that speech from my
13 cohorts, but what I wanted to point out is, this is
14 incremental regulation, and it would be my contention that,
15 as any new regulation, we should narrowly tailor it to meet
16 the objectives of the State, and we should make it
17 administratively easy to reduce the burden on both the
18 industry and the agency that has to implement this
19 regulation.

20 Along those lines, I'd like to compliment the OCD
21 and the work group, because I think this regulation is
22 relatively narrowly tailored to meet the objectives of the
23 State, and for the most part administratively easy. But
24 I'd like to comment on where I think we could make a couple
25 tweaks to the regulation. Well, actually, I comment on one

1 of the NMOGA issues, and then I'd like to bring up an issue
2 that just affects my company, and I'm not sure any other
3 company was affected by it.

4 The first thing is that the whole issue of the
5 drilling and workover pits and NMOGA's contention that it
6 should be a permit-by-rule system -- I'm a strong advocate
7 of the permit-by-rule system. And the reasoning, from my
8 perspective, is that if you put into the Rule the siting,
9 the construction, the operation, the closure, the cuttings
10 disposal and the restoration requirements to meet what the
11 State needs, then you could standardize this process such
12 that all operators and all inspectors could know, without
13 any administrative approval, what is an acceptable manner
14 to accomplish drilling and workover pits.

15 I think the facts that we've been presented as to
16 the relative threat of drilling and workover pits warrant a
17 permit-by-rule system where individual permit -- pit
18 registrations or group registrations are not necessarily
19 required.

20 I would contend out of the 50,000 to 100,000
21 wells -- I honestly don't know how many wells have been
22 drilled in the State, but I've heard there's 35,000 in the
23 San Juan, so it's pretty large. When you only have two
24 cases of drilling or workover pits that have contaminated
25 -- that have known to have contaminated groundwater, a more

1 administratively easy process would be warranted for that
2 kind of pit, unlike the production and the other disposal
3 pits we've heard that have the higher potential to threaten
4 groundwater.

5 And I think that it would be administratively
6 easier to accomplish this -- and I never want to relate to
7 what other states are doing, but that is a process used in
8 another state that therefore minimizes the amount of time
9 operators spend on these pits and the amount of time that
10 the agency has to have any records of these pits. I think
11 the time could be much better spent on the enforcement
12 side, as we've heard from several of the concerned
13 landowners.

14 The Rule should be administratively easy, the
15 process should be easy, the criteria should be specified at
16 whatever level you decide is protective of State's rights,
17 but yet the paperwork and the burden, the administrative
18 burden, should be removed from the system so that the
19 effort could be spent by operators to comply with those
20 requirements and by the State to enforce them. That's just
21 my opinion.

22 And I'd like to comment on one other issue. I've
23 listened today, and I'm not sure if I have a concern or if
24 I need a modification for the Rule. In our Bravo Dome
25 operation, which is a CO₂ flood in the northeastern

1 quadrant of the state, we drill shallow wells to produce a
2 food-grade CO₂. It's regulated under this same Rule. And
3 when I read those regulations I have to fence, I have to
4 net and I have to line a pit that encounters no hydrocarbon
5 and for the most part, as I'm aware of, has no harmful
6 constituents in the pit.

7 And I'm trying to figure out if I could get a
8 general permit or I need some kind of modification to the
9 fencing and the netting and the lining Rules. I've been in
10 consultation with your OCD representative in the area, and
11 he still approves the current practice, that we don't line
12 or fence or net these pits because we don't encounter
13 harmful constituents, in general.

14 And I'm struggling as to whether I can seek a
15 general permit -- I'd like an opportunity to work with the
16 OCD to figure a solution to this problem. And if it's a
17 rule change, I'd like to come up with one quickly; and if
18 it's not, I'll work through whatever exception process is
19 appropriate for this kind of operation.

20 And with that, I appreciate the opportunity to
21 make a brief statement.

22 CHAIRMAN WROTENBERY: Thank you, Mr. Starrett.
23 Do you have ny questions, Commissioners?

24 COMMISSIONER BAILEY: No.

25 COMMISSIONER LEE: (Shakes head)

1 CHAIRMAN WROTENBERY: Anybody have any questions
2 for Mr. Starrett?

3 Dr. Neeper?

4 DR. NEEPER: I wish to make a correction for the
5 record. This doesn't affect your testimony. Are there
6 other questions first, or just this one?

7 MR. SANDOVAL: I have one quick one.

8 CHAIRMAN WROTENBERY: Certainly.

9 MR. SANDOVAL: If the permit-by-rule system is
10 put into place -- I mean, I certainly agree with you that
11 OCD's efforts should be focused on enforcement. But what
12 part of that process will allow the OCD to know that, in
13 fact, a drilling pit or workover pit is being set up on
14 site so that they know that maybe this is one of the sites
15 we want to take a look at so that we can see whether or not
16 they're in compliance? What notice is given to the OCD in
17 order to be able to make those determinations as to whether
18 or not to even visit the site to begin with?

19 MR. STARRETT: Okay. I think from my perspective
20 you already know when the well is being drilled, so the
21 drilling pit is relatively easy, the concept.

22 If your siting requirements in the Rule are
23 specific enough that if it's sited at an area not allowed
24 by the Rule it has to have an individual permit, and that's
25 how you -- I think you could fix within the siting

1 requirements the areas of interest that you're concerned
2 about, so that if you were drilling in those it would not
3 be a standard permit by rule. You would have to go through
4 the permit process.

5 The whole point of standard permits are to take
6 care of 70, 80 percent of the cases so that you don't
7 individually permit. What I would propose to you is, the
8 State would have already identified the area and determined
9 that that did not meet the siting requirements for a
10 standard permit, and therefore you would go through an
11 individual process.

12 MR. SANDOVAL: What about workover pits?

13 MR. STARRETT: Workover pits is slightly
14 different. I'm not convinced of the threat of workover
15 pits from the type of operations that I'm used to, but I
16 honestly don't know what happens in the Four Corners. But
17 the areas where workover pits are meet the same general
18 siting requirements that any other pit would -- What I'm
19 saying is, we should carve drilling and workover pits out
20 from the rest of the production and disposal pits and set
21 up standard conditions. And if the area is a groundwater
22 concern, then there should be lining requirements or
23 whatever else is suitable for that are.

24 MR. SANDOVAL: Thank you.

25 CHAIRMAN WROTENBERY: Thank you.

1 Mr. Boyd?

2 MR. BOYD: Yes, I'm wondering, in the drilling
3 operation do they have to protect their piping and their
4 equipment with rust inhibitors and scale inhibitors that
5 could be in that pit?

6 MR. STARRETT: I apologize for my lack of
7 knowledge of the drilling operation. The rust and
8 corrosion inhibitors that I am aware of are mostly on the
9 production side that I've worked with in the production
10 chemicals. I do know they had chemicals for the mud
11 properties. I'm assuming that there are no rust or
12 corrosion inhibitors until you put pipe in the ground. So
13 drilling of, you know, the first section, of course, would
14 have nothing.

15 I can't speak -- I will continue -- you asked the
16 previous gentleman, are there additives to the mud and to
17 the drilling system that are not native to the area? And
18 the answer is yes.

19 MR. BOYD: Okay. Well, I -- for myself, I don't
20 think I would want to drink the water in the pit.

21 But also, you're talking about not the needing a
22 fenced pit for that. Are your pits designed in a nature
23 that when animals go down into them to water, that they can
24 get out of them?

25 MR. STARRETT: Well, by not needing to fence the

1 pits I was specifically only referring to the pits in the
2 northeastern quadrant of the State, in the Bravo Dome area.
3 And I asked that question of the OCD inspectors, how were
4 they designed to prevent the wildlife and the native -- to
5 get into it?

6 And more importantly, had they had any incidents
7 of cattle or wildlife in the pits being killed or harmed
8 that they had demonstrated over the course of the years
9 we've been operating out there. And the only thing I got
10 was two animals in the last 20-some years had gotten into a
11 pit, and that the way they were designing the pit was more
12 of a berm-type system to keep the animal out, not in.

13 So the real answer to your question is, a pit
14 designed for getting the animal out once it got in, no,
15 sir, the pit was not designed for that. It's not shallow
16 on one end to allow egress.

17 MR. BOYD: Thank you.

18 MR. STARRETT: Okay.

19 CHAIRMAN WROTENBERY: Thank you, Mr. Starrett,
20 for your testimony -- for your statement.

21 Dr. Neeper?

22 DR. NEEPER: Yes, I wish to make a correction for
23 the record. The eighth-inch interpretation of what is
24 reasonably allowed for on the groundwater is not OCD's
25 interpretation. They have a much thinner interpretation on

1 that. During the break I traced that back, and it was hall
2 banter over at NMED, but they in fact do not enforce on it,
3 they enforce on other regulations because the wording is so
4 diffuse. But it was not OCD's interpretation. I stand
5 corrected. Thank you.

6 CHAIRMAN WROTENBERY: Thank you for the
7 clarification, Dr. Neeper. It sounds like Willie talked to
8 you.

9 DR. NEEPER: I'm eating crow here.

10 CHAIRMAN WROTENBERY: Yes. Okay, Mr. Feldewert,
11 I guess we're ready for Mr. Hicks.

12 RANDALL T. HICKS,
13 the witness herein, after having been first duly sworn upon
14 his oath, was examined and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. FELDEWERT:

17 Q. Mr. Hicks, for the record would you state your
18 full name and where you reside?

19 A. My name is Randall T. Hicks, and I live in
20 Albuquerque, New Mexico.

21 Q. And could you briefly outline your educational
22 background?

23 A. I have a bachelor's of science in geology from
24 Boyd College in Wisconsin and a master's in geology from
25 the University of New Mexico.

1 Q. How would you describe your area of expertise?

2 A. Hydrogeology, geology, geochemistry, contaminant
3 migration issues.

4 Q. Would you outline for the Commission, briefly,
5 your work history, focusing primarily on any work you have
6 done in New Mexico addressing groundwater issues and
7 hydrocarbon migration?

8 A. I've done extensive work in the oilfield, dealing
9 with both hydrocarbon issues of potential contamination and
10 real contamination that has occurred due to releases from
11 the oilfield. I work for a public interest group in
12 Albuquerque, New Mexico, assisting them with their
13 understanding and technical concerns regarding the Fruit
14 Avenue Superfund site. I work for real estate companies in
15 environmental due diligence, and I've also worked for
16 ranches in southern Colorado, both on -- on environmental
17 issues, as a matter of fact.

18 Q. Have you been employed by the New Mexico
19 Environment Department?

20 A. I have. My first job after my master's degree
21 was with NMED.

22 Q. Have you previously testified before the
23 Commission on produced water disposal issues?

24 A. I have.

25 MR. FELDEWERT: At this time I would offer Mr.

1 Hicks as an expert witness in hydrology -- I'm sorry, in
2 hydrogeology, geochemistry, soil and groundwater
3 restoration and hydrocarbon migration.

4 CHAIRMAN WROTENBERY: He is so qualified.

5 Q. (By Mr. Feldewert) Mr. Hicks, I want to focus on
6 these drilling and workover pits that we're talking about,
7 the short-term pits, as opposed to these long-term disposal
8 and storage pits. In your experience in dealing with
9 hydrocarbon migration issues in New Mexico, have you ever
10 observed contamination resulting from drilling or workover
11 pits?

12 A. I have not.

13 Q. Why is that the case?

14 A. The nature of the constituents that go into a
15 reserve pit or workover pit -- it's a lot of fine-grain
16 material, a lot of -- especially in the case of a reserve
17 pit, bentonite gel, bentonite mud, fine-grain material,
18 which has a tendency to retain many of the contaminants
19 that exist -- contaminants which have been described as
20 hydrocarbons, salts -- retain it within this fine-grained
21 material.

22 And the physics of the flow from the surface to
23 the ground where these fine-grained materials are stored is
24 such that here in the arid southwest, New Mexico, the
25 primary movement of fluids, whether it be hydrocarbons or

1 chlorides, is upward. It's near the surface of the ground.
2 Net evaporation exceeds precipitation.

3 And this is especially true when the pits, of
4 course, are lined during the operations themselves. That
5 prevents a barrier from the full pits, when it has fluid in
6 it, from creating a saturated flow from the pit to
7 groundwater. And as a result of evaporation, as a result
8 of the liner and as a result of the materials that are
9 generally contained within these pits, the flow physics is
10 such that it's very, very difficult for constituents to
11 reach groundwater from these pits.

12 And I think that's borne out with the statistics
13 -- or I should say the numbers that were displayed by OCD
14 with respect to reserve pits being a very, very small
15 percentage, smaller than actually has been represented,
16 with respect to problems associated with these pits.

17 Q. All right. Now, let me -- while you're on that
18 subject, let me ask you. The Division has identified in
19 their information presented earlier a total of two
20 incidences where they, at least according to their charts,
21 attribute drilling and reserve pits as impacting
22 groundwater. Have you, Mr. Hicks, had the opportunity to
23 investigate those instances?

24 A. I was retained by Mewbourne Oil to evaluate the
25 environmental situation associated with Conoco Federal

1 Number 2, which was given as an incident on the NMOCD
2 database whereby a windmill exceeded Water Quality Control
3 Commission standards for chloride total dissolved solids.

4 The windmill was drilled on the location of the
5 Conoco Federal Number 2, on the caliche pad itself, within
6 40 to 50 feet of the plugged and abandoned well. And so
7 there was a proximity argument made that the constituents
8 that were in the groundwater associated with the windmill
9 must have come from the activities associated with Conoco
10 Federal Number 2, and I've spent significant time dealing
11 with that issue.

12 And with respect to the other issue, which is the
13 Sullivan Frame A 1, I think it was called, I did spend
14 about three to six minutes with Mr. Olson yesterday,
15 because I've done a considerable amount of work along the
16 San Juan River in the Sullivan -- where there are numerous
17 Sullivan wells, and in fact I've done investigations on
18 several wells, BP wells, named Sullivan. I was curious as
19 to whether it was one of them that I'd actually done in the
20 past. It turns out I don't believe it was, but I'm
21 familiar with the area, and I'm much more familiar with
22 that particular case on the Sullivan well.

23 Q. Let me ask you this. You said you did some work
24 on the first instance, the windmill involving the Conoco
25 Federal Number 2; is that right?

1 A. That's correct.

2 Q. Okay. What did your investigation reveal with
3 respect to whether there was contamination to groundwater
4 as a result of drilling or reserve pit there?

5 A. Our first working hypothesis with respect to our
6 investigation was, in fact, that the drilling pit, the
7 reserve pit, caused the contamination. That was the
8 proximity of the well, the proximity of the windmill, would
9 lead a reasonable person to make that connection.

10 So we devoted significant resources to sampling
11 the area which was part of that reserve pit, former reserve
12 pit, and -- in the presence of OCD, in the presence of the
13 rancher's expert, as well as myself, we took numerous
14 samples throughout the pit area and various other places
15 all around the pad, and we could find absolutely not one
16 iota of evidence, chemical evidence, physical evidence,
17 staining, any kind of evidence that would suggest that a
18 release occurred at that particular site.

19 The reserve pit, for example, over the 15- to 20-
20 year period, had been naturally reclaimed to the point
21 where you could distinguish it from the surrounding
22 landscape if you got up on top of the windmill and looked
23 down; but I mean it was well restored, there was no
24 stressed vegetation, there was no evidence of contamination
25 from the pit itself.

1 But what we did find is that the driller's log
2 associated with that windmill recorded 12 feet of gypsum
3 anhydrite within the water-production zone that it was
4 drawing from. Other wells that were downgradient that we
5 drilled were free of chloride, they met Water Quality
6 Control Commission standards and found no gypsum.

7 Wells that were drilled by the landowner around
8 the windmill, two of them which were upgradient, which
9 detected no gypsum in the column, met Water Quality Control
10 Commission standards. And one well that was directly
11 downgradient from the windmill had significantly lower
12 concentrations of chloride, for example, and showed no
13 gypsum, no anhydrite in the column.

14 And the only evidence that we could -- that
15 evidence -- [cell phone rings] -- Wouldn't you know it?
16 Come on, turn off. That evidence allowed us -- right at
17 the -- you know, I was -- it was a Perry Mason moment here.

18 That evidence allowed us to conclude that we felt
19 that the windmill was drawing water out of a naturally
20 salty formation, one which nature actually provided,
21 because we felt that the windmill must have been drilled
22 into the underlying Dockum group, the redbeds, which does
23 contain gypsum, sometimes, relative to the Ogallala. And
24 through the lack of any evidence associated with the
25 reserve pit we had to conclude it was natural.

1 And so that's the short version of the Conoco
2 Federal.

3 Q. What did you -- Now, in your experience in the
4 San Juan Basin and the Sullivan area and based on your
5 discussions, what can you tell us about the second incident
6 that involved the -- I guess it was an Amoco well, the
7 Sullivan Frame A 1. Was that a typical drilling reserve
8 pit?

9 A. It wouldn't be permitted today under any of the
10 Rules that OCD has implemented. That particular area is
11 down in the -- if I'm thinking of the general area
12 correctly, it's down in the San Juan Riverbed, and it was
13 my understanding that they could not excavate a reserve pit
14 in this area because they would strike groundwater.
15 Groundwater is about two or three feet below the ground
16 surface.

17 And as a result, they created what I understand
18 to be -- and I haven't seen it, but this is my
19 understanding -- a push-up reserve pit where they actually
20 had to blade berms up to raise the pit up enough so that it
21 wouldn't be excavated into the groundwater, in the
22 vulnerable area, unlined pit in the vulnerable area, where
23 they had to actually elevate the pit so that it wouldn't be
24 in groundwater.

25 If you want to create a mechanism for localized

1 impairment of groundwater quality, an unlined pit of any
2 sort in this kind of environment is absolutely the way to
3 do it. And the OCD created a set of rules for pit lining
4 to prevent this kind of thing from happening, and I don't
5 believe that you could create this same kind of scenario
6 under the existing Rules.

7 Q. In your opinion, Mr. Hicks, do these temporary
8 drilling and workover pits today pose a threat to human
9 health and the environment?

10 A. When drilled and operated according to the Rules
11 that OCD has put forward, they are not a threat to human
12 health and the environment.

13 Q. Could you explain to the Commission the basis for
14 this conclusion?

15 A. I've done a lot of work with some excellent
16 experts in the field regarding the flow of constituents
17 from the surface of the ground to groundwater, which is
18 what we're talking about here with respect to specifically
19 reserve pits and workover pits. Disposal pits as well have
20 their application, and we did the work and spent a lot of
21 time and a lot of effort looking at this -- the flow
22 mechanics. And it is that research and that science and
23 the application of that science that allows me to make that
24 conclusion.

25 Q. Do you have a presentation that's fairly short

1 that you could go through with the Commission about that
2 work?

3 A. I do.

4 MR. FELDEWERT: Okay. We have marked, members of
5 the Commission, as IPA New Mexico's Exhibit Number 1 the
6 slides that have been -- that will be reviewed here today.
7 I'd like to move those admission into evidence as Exhibit
8 Number 1 -- as IPA New Mexico's Exhibit Number 1.

9 CHAIRMAN WROTENBERY: And Mr. Hicks is going to
10 walk us through this?

11 MR. FELDEWERT: Yes.

12 CHAIRMAN WROTENBERY: Okay, sounds good, and I'll
13 act on your motion after we go through them.

14 MR. FELDEWERT: Thanks.

15 CHAIRMAN WROTENBERY: Mr. Boyd, I'm sorry?

16 MR. BOYD: Could I ask him a question, before we
17 go on through the slides --

18 CHAIRMAN WROTENBERY: Any objections?

19 MR. BOYD: -- about the Conoco well?

20 MR. PRICE: And I also would like to ask him a
21 question.

22 CHAIRMAN WROTENBERY: Why don't we hold our
23 questions until Mr. Hicks completes his testimony? That
24 would be better, I think.

25 THE WITNESS: The study on the fate and transport

1 of chloride derived from surface releases was conducted by
2 Jan Hendrickx, principal investigator for the project, a
3 professor of unsaturated zone hydrology at New Mexico Tech;
4 myself and Graciela Rodriguez, both of my company; and
5 Jirka Šimunek of the U.S. Salinity Laboratory in Riverside,
6 California. Jan Hendrickx, a PhD from Socorro, so we know
7 we can trust him.

8 COMMISSIONER LEE: I don't think so.

9 THE WITNESS: The research was sponsored by API,
10 American Petroleum Institute, and Rice Operating Company.
11 They wanted us to evaluate chloride migration due to -- or
12 brine -- due to brine releases at the surface of the ground
13 as it moves through the vadose zone to groundwater.

14 And one of the principal results of this study
15 was that computer simulations could be used to justify an
16 environmental response, whether that environmental response
17 be specific site remedies for a particular release, whether
18 it be general closure protocols for any kind of a
19 particular activity, whether it's in the oilfield or not,
20 or even new regulatory initiatives as an environmental
21 response to an action or a situation.

22 We were -- We designed the study to look at
23 groundwater-quality impacts resulting from unplanned,
24 unintentional surface releases, uncontrolled, due to
25 produced water leaks, tank failures, line failures, et

1 cetera.

2 Another element of our purpose was to look at
3 soil flushing as a surficial restorational approach, as
4 opposed to -- and compare and contrast that to excavation
5 removal of impacted soil.

6 Another element of our research was to take the
7 predictions and the findings of the simulation modeling and
8 move them out into the field and take a look at several
9 field sites. And we were able to even conduct controlled
10 experiments in the field regarding the application of brine
11 in order to verify that the model and the simulations and
12 our approach could actually work in the field.

13 Throughout this research project we simulated
14 more than 200 [sic] different scenarios of produced-water
15 releases under many different conditions. Half of them
16 were conducted in a climate equivalent to Hobbs, New
17 Mexico; half of them were conducted in a climate equivalent
18 to Shreveport, Louisiana.

19 What we used was a computer code, computer model,
20 a predictive code called HYDRUS 1D. It's public domain.
21 It was written by Jirka Šimůnek and his compatriots at the
22 U.S. Salinity Laboratory. It's been used throughout the
23 world for many, many years.

24 One of the most important things about HYDRUS 1D,
25 as opposed to other simulation models, is, it uses daily

1 weather data, not monthly weather data. That is critical
2 in the arid southwest because the fact of the matter is, if
3 you use monthly data you will never, ever, ever, have any
4 recharge to the groundwater, because net evaporation
5 exceeds the precipitation every month of the year.

6 But in a given series of days, such as the
7 monsoon season, you can create recharge, you can have
8 movement of water from the ground surface to groundwater.
9 And if you don't employ the daily weather data in these
10 kinds of simulations, you're not going to be getting a true
11 picture of what's going on.

12 It makes it a much more robust model, and
13 somewhat more difficult to control, if you will, especially
14 when you start to employ more realistic conditions into the
15 model such as what I call heterogeneous profiles where we
16 would use mixtures of clay, layers of clay, caliche, sand
17 layers, et cetera, to simulate what's actually happening in
18 the field.

19 That particular simulation model takes the
20 chloride, in this case, which is what we were looking at,
21 and moves it from the ground surface to groundwater.

22 Once it gets to groundwater, what we used was a
23 simple XCEL spreadsheet mixing model which took the input
24 of chloride into the aquifer and mixed it immediately and
25 then evaluated the response at a water well, which was

1 immediately -- that is, feet -- downgradient from the
2 spill. So it was at the edge of the spill. And we also
3 assumed that vegetative cover did not restore the site, and
4 therefore it would be -- evapotranspiration due to
5 vegetation was not considered in these simulations.

6 Q. (By Mr. Feldewert) Mr. Hicks, let me stop you
7 right there. Why did you use chloride?

8 A. We used chloride because the principal concern in
9 the southeast, in the Hobbs area, was that of the release
10 of produced water or brine, saline, high-chloride-content
11 material.

12 However, chloride, as I will explain a little bit
13 later, also serves as a -- what's known in the industry as
14 a conservative tracer. If -- Unlike hydrocarbons, chloride
15 does not degrade, does not biodegrade. It does not easily
16 sorb onto the matrix of the unsaturated zone, as
17 hydrocarbons will often do.

18 And therefore if chloride reaches groundwater --
19 or I should rather say if chloride does not reach
20 groundwater due to the environmental and spill conditions,
21 hydrocarbons will not reach groundwater either. And what
22 I'm talking about here is in a produced water spill where
23 hydrocarbons are both dissolved and in separate phase.

24 So that's why we used -- we used chloride because
25 it was the most important constituent, because it was the

1 constituent of concern with respect to produced water
2 spills. It also serves as a surrogate to allow us to
3 evaluate other kinds of constituents, such as hydrocarbons,
4 for example.

5 And in the -- Did that answer your question?

6 Q. Yeah.

7 A. Okay. And so to continue with this mixing model,
8 we used it because we felt it was simple, quick and
9 conservative.

10 But we also compared the results of this simple
11 mixing model with a more robust model which is called
12 MODFLOW, developed by the United States Geological Survey,
13 and we found that our predictions using this simple XCEL
14 spreadsheet model, under the conditions that we simulated
15 here, tracked very well with the public domain well-
16 verified, well-proven simulations of MODFLOW.

17 This is what we were looking at with respect to
18 the environmental conditions of a site, a tank or a
19 release, unplanned, onto the surface of the ground, two
20 different kinds of climate. We looked at -- there's eight
21 different input parameters to this model, which is why it
22 makes it complex. It makes it robust. It makes it a
23 little difficult to do.

24 So what we were looking at was how much soil
25 moisture existed in the unsaturated zone. Dr. Neeper

1 testified yesterday about how moisture content correlates
2 with the ability of a particular matrix, clay, sand,
3 whatever, to transmit fluid in terms of its pressure head.

4 We looked at the dispersion, how a constituent
5 will spread out and dilute naturally in the unsaturated
6 zone, for example. We looked at the texture of the vadose
7 zone and the texture, how much sand, how much clay was in
8 there. The thickness of the vadose zone, the thickness of
9 the aquifer. The chloride in the groundwater as it entered
10 -- as it flowed underneath a particular release site, eight
11 different input parameters to this.

12 And when you start to look at eight parameters
13 here, as well as three other parameters associated with the
14 release, we're dealing with 11 different parameters that
15 have an impact on whether or not a release -- unplanned
16 release will have an impact on groundwater quality. That's
17 why we needed to do more than 2000 different simulations in
18 order to obtain an understanding of how these substances
19 move from the ground surface to groundwater.

20 We found some conclusions that we expected, which
21 is always a good thing. Where there's more recharge, where
22 there's more water moving through the vadose zone, there's
23 greater chloride movement or constituent movement. So
24 there's more migration of constituents in Shreveport than
25 there was Hobbs, because Shreveport has significantly more

1 precipitation and significantly less evaporation, and
2 therefore the recharge is greater in Shreveport than in
3 Hobbs, so as expected we found more movement in Shreveport
4 than we did in Hobbs.

5 We also find that more clay there is in the
6 unsaturated zone, or the thicker the unsaturated zone, or
7 the thicker the aquifer, it means that there's less impact
8 to the groundwater quality in the imaginary well that we
9 put immediately adjacent to the spill.

10 We also found, as expected, that clay, fine-
11 grained material, clay, which is what we use for our
12 simulations at or near the surface of the ground,
13 effectively prevents groundwater chloride movement.

14 The net -- even on a daily basis, when you have a
15 three- -- a one-meter, two-meter-thick zone of clay, which
16 is what we were looking at, both one-meter and two-meter-
17 thick zones of clay at the surface of the ground, we
18 couldn't get the chloride to move below that layer because
19 of the evaporation and what Dr. Neeley [sic] might have
20 pointed out yesterday a little bit, the net upward flux,
21 the same kinds of things that made that piece of Bandelier
22 tuff in the back of his house have a salt content, there's
23 a net outward, upward flux in this particular case, and we
24 couldn't get the model to show that chloride would move
25 below this fine-grained clay zone.

1 We found some unexpected modeling conclusions.
2 The OCD, in verbal guidance, has made a conservative
3 recommendation to operators, in the spirit of protecting
4 groundwater quality, that chloride concentrations in soil
5 that are less than 250 parts per million will rarely result
6 in groundwater quality impairment. And that is absolutely
7 true. There is nothing wrong with the statement from NMOCD
8 that if you have chloride concentrations less than 250
9 p.p.m. in soil, it does not represent a threat to
10 groundwater quality.

11 What our study found is is that chloride
12 concentrations an order of magnitude greater than 250 parts
13 per million -- 2000, sometimes 5000, sometimes 7000
14 depending on the conditions, sometimes much more than that
15 -- still would not pose a threat to groundwater quality.
16 And I want to emphasize that we're talking about
17 groundwater quality here. There's other environmental
18 considerations that we'll talk about later.

19 One of the other things that we found that was
20 relatively unexpected was that the volume of the release
21 was really not that important. It doesn't matter whether
22 it's 10,000 barrels or 10 barrels, with respect to
23 impairment of groundwater quality. It's the geometry, it's
24 the mass of chloride that's released per unit area. It's
25 how it's spread out.

1 If you have a 10,000-barrel spill and it spreads
2 out over an inch, over many, many acres, that is a lower
3 threat to groundwater quality than the release of 100
4 barrels inside a berm where it piles up two feet thick.
5 Where you have a spill height of two feet, you've got head
6 driving that chloride into the ground surface. And so the
7 volume is much less important than the geometry of the
8 footprint of the release.

9 We found that flushing chloride from the root
10 zone with water can -- our concern was that if you add
11 water to a spill site, that you would result in
12 accelerating the chloride movement to groundwater and
13 create impairment of groundwater quality. And what we
14 found through our simulations is that you would actually --
15 in most cases it would actually improve groundwater quality
16 over doing nothing, or it would stay the same, there would
17 be no material, no measurable difference.

18 And so what we found is is that if a release
19 would not cause groundwater quality impairment -- if that's
20 what our simulation showed, then you can add water to that
21 and rest assured that your addition of water to this
22 particular release would not cause groundwater
23 contamination that would otherwise not occur.

24 And so flushing of the soil with chloride and
25 pushing that chloride below the root zone became an

1 effective method of soil restoration without endangering
2 groundwater quality for those cases where the simulation
3 showed that groundwater would not be impaired under normal,
4 natural conditions.

5 We ran simulations for more than 600 years and
6 found that -- That's where we just quit. I mean, after we
7 -- 600 years and we couldn't find chloride below the
8 surficial clay zones, we quit. So maybe in 100,000 years,
9 maybe in 100 million years, the chloride might move below
10 the clay zones, but we did stop at 600 years. So I do need
11 to put that caveat in there, so when I make a blanket
12 statement that chloride did not move below the clay zone,
13 I'm talking about simulations that went on for 600 years
14 and it didn't move.

15 This answers your question.

16 Q. Yeah, can we skip through this one?

17 A. We can.

18 MR. SANDOVAL: Can we go right back there? I
19 just wanted to read it and see what --

20 THE WITNESS: Oh, man, I hope --

21 MR. SANDOVAL: Okay.

22 THE WITNESS: What we found, also, because we
23 simulated repeated releases -- that is, maybe there's a
24 place on a produced-water line, or maybe there's a tank
25 that gets hit by lightning more than once, where there's

1 periodic discharges from a release at the same place,
2 which, you know, is not too dissimilar to discharges to
3 unlined pits, periodic discharges to unlined pits.

4 And indeed, we found through our research that
5 these kinds of discharges can cause localized impairment of
6 water-table aquifers. They will not cause impairment of
7 confined aquifers, artesian aquifers that are under
8 pressure. But a water table aquifer, indeed, this kind of
9 a discharge to unlined systems, can cause localized
10 impairment of water-table aquifers, which is really the
11 reason for the requirement by OCD to line pits in
12 vulnerable areas, for example, as well as all areas where
13 groundwater may be impaired through periodic long-term
14 discharges.

15 Our computer simulations may be employed to
16 predict a threat of groundwater quality by properly
17 restored reserve and workover pits. And our computer
18 simulations, moreover, can be employed to predict even a
19 threat to surficial soil.

20 We're using HYDRUS 1D here, which is an
21 unsaturated zone model that is employed generally in the
22 agricultural industry. The U.S. Salinity Laboratory that
23 developed the HYDRUS code was not interested in produced-
24 water spills. What they were interested in is the
25 degradation of soil quality due to application of

1 relatively high-saline fluids, water, in Bakersfield and
2 elsewhere in California, that caused the sterilization of
3 the soil due to agricultural practices, and that's really
4 what HYDRUS 1D was developed for, was agricultural
5 purposes.

6 And so we are able to use our simulations to
7 predict a threat to surface soil as well, with respect to
8 oilfield-type releases.

9 And so the application of this research, which
10 was for releases to the surface, is that I can conclude --
11 I can conclude that reserve pits contain fine-grained
12 material, cuttings, bentonite as well as other
13 constituents, indeed, and they're buried close to the
14 surface of the ground.

15 And when we simulated clay horizons, which are
16 similar to this, near the ground surface, they are indeed
17 like a restored reserve pit, workover pit.

18 In arid climates, the chloride, over 600 years,
19 or benzene or any constituent, migrated upward, which
20 created and does create exactly what Dr. Neeper was talking
21 about with the sterilization of the soil. It can migrate
22 upward and create a problem, but not the groundwater. And
23 I think that's an important issue. That's what our
24 simulation showed.

25 Surface restoration -- and it allows me to

1 conclude that surface restoration of these kinds of pits
2 may be indeed quite difficult under the current NMOCD and
3 BLM pit-restoration guidelines.

4 And so in conclusion, my research has -- and my
5 experience, has demonstrated that unlined disposal pits can
6 cause localized environmental impairment under certain
7 conditions, and it certainly justifies the rationale that
8 OCD has for lining, leak detection and other kinds of
9 mandates for these kinds of storage and disposal pits.

10 Properly closed pits, whether they be former
11 disposal pits, reserve pits, any kind of pits -- properly
12 closed pits with the residual material in place, closing
13 them with the residual material in place, posed no threat
14 to human health or the environment. It can occur. The key
15 elements here are properly closed.

16 Temporary drilling/workover pits pose no threat
17 to groundwater quality, but closure guidelines need some
18 revision to hasten surface restoration, and indeed we do
19 need to make certain that these pits are properly closed.

20 I think that that does end it.

21 Q. (By Mr. Feldewert) Mr. Hicks, were these slides
22 based on information that you compiled or that was compiled
23 under your direction and supervision?

24 A. I compiled these slides.

25 Q. And do they accurately reflect your conclusions

1 as a result of your review of the data?

2 A. Yes, they do.

3 MR. FELDEWERT: I would move the admission into
4 evidence of IPANM's Exhibit Number 1.

5 CHAIRMAN WROTENBERY: Thank you. IPANM -- I'm
6 sorry?

7 MR. SANDOVAL: I just had a quick objection I
8 think can be taken care of by the imposition of a
9 condition. This is obviously a summary exhibit based on
10 conclusions by the person who performed the work.

11 Mr. Brooks, as I'm sure you're aware, in court
12 summary exhibits are certainly admissible most of the time.
13 However, there's conditions placed on that that the
14 underlying data have been made available to the other side
15 so that they have an opportunity to take a look at that and
16 confirm for themselves that, in fact, the data that's being
17 relied upon is true and accurate.

18 I know this is not a trial, and I know the Rules
19 of Evidence are a bit more lax in this sort of a situation,
20 but I would ask that the underlying study be made available
21 to the OCD.

22 MR. BROOKS: Well, your observations about the
23 Rules of Evidence, of course, are generally correct, if a
24 summary is what is being admitted. I don't know if this is
25 properly characterized as a summary or is properly

1 characterized as the witness's conclusions, based on the
2 study.

3 But your observation is also correct that the
4 Rules of Evidence are less formally applied in
5 administrative proceedings, so I would say the issue is up
6 to the discretion of the Commission.

7 CHAIRMAN WROTENBERY: And we will admit IPANM
8 Exhibit Number 1 into evidence.

9 It does to some extent summarize, but it really
10 lays out in some detail the testimony that Mr. Hicks gave
11 today with background information as well as conclusions.

12 MR. BROOKS: Right. My point is that it relates,
13 to a great extent, to his conclusions, rather than being a
14 summary of the data that were generated by his experiments.

15 MR. SANDOVAL: One more follow-up, Mr. Brooks.
16 The analysis that you've given is correct, but the analysis
17 is based on him as an expert witness. Similarly under the
18 Rules of Evidence and Rules of Discovery in trial, whenever
19 an expert is tendering their opinions or their conclusions
20 they are obligated to make the underlying data that they
21 have relied on for those conclusions available to the other
22 side and certainly to the fact-finder for considerations --

23 MR. BROOKS: That, of course, is --

24 MR. SANDOVAL: -- further follow-up.

25 MR. BROOKS: -- also correct. I would also point

1 out that this is a rule-making proceeding, which is a
2 somewhat different animal from an adjudicatory proceeding.

3 If this were an adjudicatory proceeding and you
4 were an opposing party, I would suggest that you could
5 request the Commission to order that matters be made
6 available -- additional information be made available that
7 you might need to respond.

8 The Commission -- If you wish to make that
9 request, the Commission can address it. However, I believe
10 it would be discretionary and it might be influenced by the
11 time frame under which we're operating.

12 CHAIRMAN WROTENBERY: The exhibit has been
13 admitted into evidence, and I feel confident that the
14 Commission can request additional information as it
15 determines --

16 MR. BROOKS: Okay.

17 CHAIRMAN WROTENBERY: -- there's a need.

18 MR. FELDEWERT: Let me continue that. I'll try
19 to wrap this up fairly quick.

20 Q. (By Mr. Feldewert) Mr. Hicks, there's been a
21 little -- some discussion about closed-loop systems. In
22 your opinion, is there a need for closed-loop systems in
23 New Mexico?

24 A. I agree with what the Division expert indicated
25 yesterday, that a lined reserve pit is equally as

1 protective of the environment as a closed-loop system. And
2 indeed, I may add that in many instances the -- based on my
3 understanding of how closed-loop systems work, that there
4 may, indeed, be health and environmental benefits to using
5 lined, open, excavated reserve pits over closed-loop
6 systems in many, many instances.

7 Q. Now, one final point. You were discussing with
8 me last night -- and I didn't quite understand it, so I'm
9 going to let you explain it. There appeared to be one
10 concern that you had with the language of the Rule on page
11 2, and I don't think anyone has addressed this yet, big
12 section C -- or big C.2, that -- (a), that deals with the
13 location of pits.

14 A. Yes.

15 Q. Could you please explain to the Commission the
16 problem that you see with this particular language, given
17 some recent developments on the use of produced waters in
18 other parts of the country?

19 A. This has to do -- our -- my concern is -- really
20 comes from a recent working group task force that I headed
21 up in Wyoming on coalbed methane. In Wyoming, for example
22 -- and we don't have these instances here at this time --
23 in Wyoming, produced water associated with coalbed methane
24 is discharged into stream courses pursuant to NPDES
25 permits, federal permitting system, administered by the

1 state, which here in New Mexico is administered by the
2 Environmental Department, not OCD. May be administered by
3 EPA --

4 CHAIRMAN WROTENBERY: EPA.

5 THE WITNESS: -- rather -- Well, ED has some
6 authority, EPA has some authority. I'm not certain who
7 would grab this prize. But, you know, there is an
8 opportunity here for a producer specifically of coalbed
9 methane water, which has quality, where a -- they may wish
10 to discharge it into -- onto the surface of the ground, as
11 they do in Colorado and as they do in Wyoming, oftentimes
12 at the behest of and approval of the surface landowner, to
13 create more water for cattle operations.

14 Some of these pits, you know, stock ponds,
15 they're in the streambed itself, and I was concerned that
16 this pit rule would prevent this same kind of occurrence in
17 New Mexico, which we don't have at this time.

18 And I would move that the Commission consider
19 either flexibility in this Rule or some kind of mechanism
20 to allow for a pit which has already been -- as it does
21 here, if there's a pit that has been approved under Water
22 Quality Control Commission regulations, under a discharge
23 plan, and it refers to the Division -- you know, if we --
24 if the Division has approved it elsewhere, we don't have to
25 deal with it here -- I would move that you might want to

1 extend that to if a pit has been approved by another
2 agency, another -- the EPA or the NMED, that it need not be
3 covered here, because I think that the language is
4 restrictive to the Division, whereas if EPA approves a pit
5 maybe that would be acceptable and we won't have
6 conflicting regulations in this particular case.

7 MR. FELDEWERT: That concludes my examination.
8 Thank you.

9 CHAIRMAN WROTENBERY: Thank you.

10 Mr. Boyd, you had a question?

11 MR. BOYD: Yes, ma'am.

12 EXAMINATION

13 BY MR. BOYD:

14 Q. Mr. Hicks, the Conoco well that you were
15 referring to, you said you suspected that the water was
16 salty because of formation -- is that the way I understood?

17 A. I said -- Well, actually not. I said that the
18 only data that we had, the only data -- the only conclusion
19 that the data can support is that it came from the natural
20 salts in the groundwater.

21 As a hydrologist, you know, familiar with that
22 area, I'm still scratching my head in terms of what the
23 actual cause was. But the fact of the matter is is that we
24 looked really hard and we did a lot of sampling, because
25 our working hypothesis was that that well caused that

1 contamination. And we drilled a dry hole with respect to
2 coming up with the data, and the only data that we had was
3 the well log of Mr. McCathlin himself that recorded this
4 anhydrite in the subsurface.

5 And so if you ask me what my conclusion is, I say
6 I don't know. If you ask me what the data say, it allows
7 me to -- it says that it's natural. But I don't know.

8 I do know that I don't have a lick of evidence
9 that that -- in fact, I've got plenty of evidence that the
10 reserve pit, which is what I want to specifically refer to,
11 I've got plenty of evidence that the reserve pit did not
12 cause environmental impairment of the groundwater there. I
13 can conclude that. You ask me what it's from? I can't
14 make that conclusion. I can conclude that the reserve pit
15 didn't do it.

16 Q. Well, I suspect that -- having knowledge of this
17 particular well and knowing that -- when it was drilled and
18 set up for cattle watering, and the cattle did use it
19 extensively, and then after a period of time they quit
20 using it because of the chlorides in it, and --

21 A. Well, that's not the evidence that was presented
22 in deposition, so I don't remember that with respect to
23 that particular information. It was unclear to us as to
24 when that -- when the impairment occurred, as to whether it
25 was immediately upon drilling or came later.

1 A. It was calcium and sodium chloride.

2 Q. Which one would be predominant?

3 A. Boy. Wayne, do you know the answer to that? Is
4 it calcium? I can't remember.

5 Q. It was calcium.

6 A. Thank you. Now, let me follow that up --

7 Q. No, wait a minute. My next question is, is
8 calcium chloride a naturally occurring substance that you
9 would find in the vadose zone or in the water, or is it
10 manmade?

11 A. Calcium chloride is a mineral.

12 Q. Calcium chloride, as we found in that -- from the
13 trilinear diagram, is it a naturally occurring substance
14 that you would normally find in that area?

15 A. Calcium is, chloride is, sodium is. Calcium
16 chloride-dominated water is highly unusual.

17 Q. That's the point that I wanted to make right
18 there. So we do have some kind of contamination from that
19 site that's predominantly calcium chloride, but we don't
20 know, really, where it came from?

21 A. No, and I want to make clear -- and I think I did
22 -- that I know it's not the reserve pit. I just don't know
23 where it's coming from.

24 Q. It's coming from the site though?

25 A. Well, it's definitely at that windmill.

1 Q. Okay. The next question I have, I want to go to
2 the modeling program, and I know you've done an extensive
3 amount of work, and I've worked with you on it. You've
4 done a lot of really good work in that area. However, have
5 you field-validated that model with a reserve pit?

6 A. Absolutely not.

7 MR. PRICE: Thank you.

8 CHAIRMAN WROTENBERY: Yes, Mr. Larsen?

9 EXAMINATION

10 BY MR. LARSEN:

11 Q. Well, if I understand your testimony, you say
12 that the bentonite generally holds the contaminants. Is it
13 fair to assume that that relationship is a physical
14 relationship, not a chemical bonding?

15 A. It's a physical relationship.

16 Q. Okay. And you've further testified that unlined
17 pits can cause local impairments, and you also testified in
18 your conclusion that -- I would assume -- let me ask it as
19 a question: Would it be fair to assume that an unlined pit
20 can also cause surface impairments, according to your
21 model?

22 A. Yes.

23 Q. Would you then -- how -- What is your feeling
24 about a pit -- the lining creates a barrier that prevents
25 flow from pit to groundwater. You testified to that.

1 What's your feeling about closure of a pit in which the
2 lining then is ripped up as part a of the closure and then
3 filled over? Now, does that then behave as an unlined pit
4 in future years, or is it still behaving as a lined pit?

5 A. In fact, my working hypothesis is that the
6 closure of lined pits with its integrity --

7 Q. Okay.

8 A. -- maintaining the integrity, is probably the
9 worst thing you can do. It basically guarantees that --
10 especially in the southeast part of the state where you
11 have high chloride, high brine mixed with the bentonite, it
12 basically guarantees that you're going to sterilize the
13 soil above it, because of this upward flux.

14 Q. Okay.

15 A. And so it is my working hypothesis that the best
16 thing we could be doing is to have a -- to review those
17 pit-closure guidelines to make sure that we penetrate these
18 liners before we close the pits, in a controlled and
19 appropriate manner, to enhance the drainage from the pit
20 into the vadose zone, and then put a -- allow that pit to
21 dry out quicker, to restore it quicker, and to place an
22 appropriate restoration cap over it that will effectively
23 prevent infiltration below the root zone, thereby isolating
24 this material in the vadose zone, restoring the soil and
25 posing no threat to groundwater quality.

1 Now, that is -- As Wayne mentioned, that's my
2 working hypothesis, and it has not been modeled, it has not
3 been evaluated.

4 But what has been evaluated in the field through
5 walking around and seeing what's going on, and also with
6 the simulations that we conducted with clay, is that the
7 attempt to gift-wrap these cuttings or to maintain the
8 liner in place is pretty much a guarantee that you're going
9 to sterilize the soil above it.

10 Q. Well, I agree with you. And I'm -- at the same
11 time, I'm quite taken with the use of the superlative, that
12 the best way of remediating that would be to puncture it
13 and let it work its way through the soil. It would seem to
14 me -- and correct me if I'm wrong -- that the best way to
15 prevent contamination, either upward or downward, would be
16 to simply dry it out and remove it, liner and everything in
17 it.

18 A. Oh, I disagree.

19 Q. So that -- So how is that, in terms of preventing
20 contamination, inferior to what you're suggesting?

21 A. You have to look at it from a holistic
22 environmental standpoint, and that is, when you have
23 constituents that are in reserve pits, for example,
24 constituents such as hydrocarbons, chloride, as well as
25 bentonite, other material that may exist due to drilling

1 additives, hauling them away, what you're doing is, you're
2 basically transferring the problem from one place to
3 another.

4 You are incurring environmental costs through a
5 wide variety of situations such as transportation -- we're
6 going to create more dust, there's going to be emissions
7 from the diesel, we're going to potentially tear up the
8 ground a little bit more.

9 I have not done the analysis of the environmental
10 cost and benefits, but I'm just saying that -- you know, to
11 indicate that the removal of the cuttings is a cure, there
12 are environmental costs associated with every remedy, and
13 you have to weigh those environmental costs with the
14 overall benefits.

15 And I think that what we have seen, both in terms
16 of a groundwater perspective that leaving these cuttings
17 and the attended materials in place and burying them is not
18 creating a material threat to groundwater quality.

19 But I think what we're also seeing, from our
20 modeling and the testimony of Dr. Neeper and others, is
21 that we have some isolated problems with respect to soil
22 sterilization, due to the upward seepage of chloride. Do
23 these things need to be addressed and do they need to be
24 looked at? I think that the industry is doing that on a
25 regular basis.

1 And so your -- the debate as to which would be
2 the best solution I think is still very active.

3 Q. One last question, or area of questions. How
4 does your model apply to karst regions?

5 A. In a -- Our model is unsaturated zone. Okay?
6 And so in a -- what we're dealing with and what we modeled
7 was layers of sand, clay and mixtures of such, in a zone
8 above an aquifer.

9 Q. So it would not apply to karst regions?

10 A. Well no, if the karst is the aquifer underneath,
11 it applies directly. It applies absolutely directly. But
12 if you're talking about the excavation of a reserve pit
13 into karst limestone, directly on the karst limestone, we
14 could still model that, and it still has application. We
15 did not model it specifically. We did not model the
16 excavation of a -- the dynamiting of a pit into karst
17 limestone.

18 Q. Would you accept that in a karst region, that
19 closed-loop systems are probably -- might be superior to
20 open systems?

21 A. No, I wouldn't accept that at all.

22 Q. That the -- so you -- that the penetration
23 through a karst region would not be hundreds of times
24 faster than any sand model or clay model that you've
25 created?

1 A. Wait a minute, back up. I might have
2 misunderstood your question. Let me clarify to make sure.

3 If there's a vadose zone consisting of sand or
4 clay --

5 Q. No --

6 A. -- or sand or anything --

7 Q. -- there is no -- there is --

8 A. -- so we're talking about dynamiting a pit?

9 Q. Yeah, we're talking about a non-vadose zone, that
10 it's a karst region. We do have -- well, actually
11 substantial numbers of karst regions here.

12 A. Oh, certainly.

13 Q. So your model doesn't apply to that?

14 A. Our model is unsaturated flow. If a spill occurs
15 in a karst area where there's fractures and solution
16 channels, what happens is, it creates saturated flow
17 between the surface of the ground -- just like flow through
18 a pipe. And so our model is an unsaturated-zone model, it
19 doesn't apply.

20 Q. Okay. So you would accept that in karst regions
21 particular care has to be taken, without defining what that
22 care is?

23 A. When you have -- When you don't have the vadose
24 zone to create a -- I'll use the term loosely -- zone of
25 protection --

1 Q. Uh-huh.

2 A. -- between the ground surface and the karst
3 aquifer -- or any aquifer, it doesn't matter, it could be
4 the Ogallala -- the saturated Ogallala itself -- you have
5 to take care, you have to look at lining, you have to look
6 at measures to protect those areas.

7 MR. LARSEN: Yes. Okay, thank you very much.

8 CHAIRMAN WROTENBERY: Thank you.

9 Other questions for Mr. Hicks?

10 Commissioners?

11 I'm sorry, Dr. Neeper?

12 EXAMINATION

13 BY DR. NEEPER:

14 Q. You have concluded, if I've copied the conclusion
15 correctly, that closed pits with material left in place
16 pose no threats to the environment if they are properly
17 closed?

18 A. That's correct.

19 Q. That is a blanket statement, that applies
20 everywhere?

21 A. My feeling is is that for reserve pit --

22 Q. That applies only to reserve pits?

23 A. Well, for reserve pits -- Well, put it this way:
24 I -- we have -- we've done quite a bit of work in closures
25 of certain situations, chloride, hydrocarbons and

1 elsewhere. And in every case that I've come up with, the
2 best solution for the environment has been to create a
3 closure with the residual material in place, and that you
4 can effectively do this for the kinds of materials that
5 we're dealing with in the oilfield. Can you do it with
6 plutonium? I don't know.

7 Q. I won't worry about plutonium. But the example
8 you gave -- You said you had found essentially no downward
9 transport, and the one example you gave was with about six
10 feet of clay. You said one to two meters.

11 A. One to two meters, that's correct.

12 Q. Do you mean also, then, a proper closure has that
13 same thickness of clay on top?

14 A. No, that's what we modeled.

15 Q. That's what you modeled.

16 A. And with respect to -- One of the things we are
17 finding in the research is that the -- if you can isolate
18 -- and we'll use a reserve pit or anything that has high
19 chloride in it, because that's what my experience is, and
20 that's actually what your slide was the other day about
21 sterilization of the soil.

22 If you can create a barrier to keep that chloride
23 from migrating upward into the root zone, what we're
24 finding is, vegetation itself -- a vegetative cap creates a
25 highly effective mechanism to prevent infiltration. You

1 can't have ponding, you know, material amounts of ponding.
2 You need to have a little bit of slope to it, vegetative
3 cover, and you need a mechanism to prevent that chloride
4 from wicking up into the root zone.

5 And you establish that kind of a closure
6 protocol, and you've pretty much isolated it in the vast,
7 vast majority of the cases, all the cases that we
8 simulated. Karst -- You know, there's going to be special
9 cases, there's going to be special cases.

10 Q. That prevention of wicking upward, which was a
11 thing I was concerned, then you achieve that with a clay
12 cap?

13 A. Well, actually a clay cap would enhance the
14 wicking upward.

15 Q. So how do you stop the wicking upward with your
16 proper closure?

17 A. Generally what you'll do is -- what we've been
18 playing with is a mixture of a fine-grained material, which
19 is then overlain by a coarse-grained material.

20 Q. A capillary barrier?

21 A. That's correct.

22 Q. But then you have to use some other cap to
23 prevent infiltration into the capillary barrier?

24 A. That's the soil and vegetative cap on top of
25 that.

1 Q. That's just the soil cap on top.

2 A. That's the -- That's what we would restore the
3 site with, is the --

4 Q. And what then prevents any horizontal migration?

5 COMMISSIONER LEE: It's only 1-D, his model --

6 DR. NEEPER: Precisely.

7 COMMISSIONER LEE: -- is only 1-D.

8 Q. (By Dr. Neeper) Precisely. But the statement is
9 that pits may be closed with any material left in place,
10 pose no threat to the environment, and the pit is a three-
11 dimensional object.

12 A. Our study was to deal with groundwater issues.
13 And so with respect to the migration downward, 1-D was
14 appropriate.

15 Q. Yes.

16 A. I think that what you're -- what you're speaking
17 about with respect to the appropriate restoration
18 techniques at the surface, for example, modeling hasn't
19 been done yet.

20 Q. I'm speaking to your conclusion that closed pits
21 with material left in place pose no threat to the
22 environment if closed properly.

23 A. If closed properly. And what I'm saying is that
24 they're -- Don't ask me what that proper closure is --

25 Q. Excellent, thank you.

1 A. -- because I don't know what it is yet --

2 Q. Thank you.

3 A. -- but I do know that we will create that.

4 DR. NEEPER: Thank you.

5 CHAIRMAN WROTENBERY: Thank you, Dr. Neeper.

6 Anybody else with a question for Mr. Hicks?

7 Thank you for your testimony, Mr. Hicks.

8 MR. HICKS: Does anybody need PowerPoint? Okay,
9 I'm going to disconnect.

10 CHAIRMAN WROTENBERY: Okay, we've still got sign-
11 in sheets from four or five people who are here today to
12 make statements, and we'll get started with those.

13 Mr. Larsen, would you like to make your
14 statement?

15 Excuse me here, I'm just going to make a short
16 phone call.

17 (Off the record)

18 MR. LARSEN: All right, my name is Cliff Larsen.
19 I'm the Mining Co-Chair for the Rio Grande Chapter of the
20 Sierra Club, which is an organization in New Mexico and on
21 through El Paso of some 5000 members. I have a degree in
22 chemical engineering and an MBA and serve on numerous
23 boards, commissions and other things related to issues of
24 mining, principally.

25 And I'm here to provide comment on the proposed

1 Rules. As you know from prior questions, that I worked on
2 the construction of this particular Rule. I attended six
3 of the seven meetings, having missed the second one, and
4 which I'm sorry I did.

5 With two exceptions, we support the draft that
6 has been presented by OCD. We oppose entirely the
7 recommendations that were presented by NMOGA/IPANA [sic] on
8 the nonconsensus language. I've expanded the reasons for
9 this opposition, the items listed below.

10 And I further want to comment that in order to be
11 enforced, quantitative standards should replace such words
12 as "generally", "reasonably" and "predominantly" that have
13 been sprinkled handily by NMOGA throughout their
14 recommended new language. Such words render enforcement
15 open to argument and litigation, and we've had some
16 discussion on the word "reasonably" already.

17 There are six areas of particular concern, and
18 location was mentioned very recently, for the first time,
19 the C.2.(a). Firstly, the Rule as written would permit a
20 drilling or workover pit be located in the middle of a
21 river. If you wanted to put a workover pit in the Pecos
22 River, obviously you can by this language. We recommend
23 that the first sentence read, quote, "No pit shall be
24 located in any watercourse, lakebed, sinkhole or playa
25 lake" and simply delete that phrase, "except where the pit

1 is to be temporarily used in a transient operation such as
2 drilling or workover."

3 I went to talk to Roger about this and he said,
4 Well, the Corps of Engineers wouldn't let such a thing
5 happen. Well, that's kind of a silly reason for -- for
6 him, you know, putting it that way. So I feel pretty
7 strongly that you need to consider that that -- making that
8 revision.

9 Secondly, as we cannot anticipate all the
10 conditions that might be encountered, it is important to
11 require the Division to increase environmental protection
12 if such a need can be demonstrated. Now, the examples that
13 we talked about during negotiations were high groundwater
14 tables, such as the example we heard where they had to
15 build a pit above ground, karst regions that we just talk
16 about. It's clear that in such circumstances closed
17 systems might be necessary. And the sentence in question
18 does not mandate such protections, it simply permits them.
19 We recommend that the last section, Section C.2.(a), be
20 altered to read, "The Division *shall* require additional
21 protective measures for pits located in groundwater
22 sensitive areas", rather than "may".

23 Section 2.(e), Disposal or Storage Pits, and we
24 had a lot of discussion on this. The intent of the
25 sentence was to allow no discharge of hydrocarbons into a

1 pit. But as we talked about, analytical chemistry could
2 create an unintended burden. The amount "two-tenths of one
3 percent" is a placeholder, capturing the essence of the
4 intent without creating a potentially abusive requirement.

5 And frankly, as Dr. Lee has pointed out, two-
6 tenths of one percent is a whole lot of hydrocarbon. So
7 whether it's one-tenth of one percent, one-hundredth of one
8 percent, the intent is for it to be free of hydrocarbons
9 and that a quantitative standard be established.

10 It's clear that in an operational sense what will
11 determine whether equipment is operating or not will be the
12 appearance of what's going on in the pond. And if
13 something is -- there are hydrocarbons there, then that's a
14 matter for the operator to adjust his equipment.

15 But nonetheless, to get into an argument about
16 whether something is reasonably clear or not reasonably
17 clear simply is going to make something percolate up
18 through this building and in through this Commission and
19 God knows where, because reasonable people can reasonably
20 disagree. So I urge you to hold on to that two-tenths of
21 one percent in C.2.(e) and also included in C.2.(f).

22 C.2.(f) is on netting. The intent of netting is
23 to protect waterfowl. Originally as we worked our way
24 through negotiations and through many sessions, we were
25 going to net everything over 16 feet because frankly that's

1 what your Rules say now.

2 And the industry said, Well, you know, if there
3 are people around they can wave their arms and get the --
4 make the birds go away, and so why is it necessary to net
5 while there's a lot of human activity there around the
6 drilling pit and workover pit. And we allowed, Well, that
7 makes -- that's good, common sense.

8 That one, too, is beginning to -- I'm kind of
9 sorry we did that, because this one is sliding down a
10 slippery slope where they're saying, Well, it's a workover
11 pit and it's probably going to be okay, and the birds can
12 probably drink it, although wouldn't drink it myself, and,
13 oh, yeah, it's going to be open for six to 12 months, and
14 therefore the suggestion is, well, we don't need to net it.

15 So I'm suggesting that rather than get into this
16 fuss about whether there's an active human presence or not,
17 let's go back to the old language: Just net all ponds
18 greater than 16 feet in diameter, all the time. Because
19 the intent of what we're trying to do has been obscured in
20 the testimony, and evidence has been presented by other
21 people yesterday that drilling workover pits are often both
22 un-netted and toxic.

23 And as I said, the "two-tenths of one percent"
24 should replace the language in this paragraph, "reasonably
25 free of oil". As the industry has testified, the

1 technology exists to remove hydrocarbons easily. A field
2 operator could use visual inspection to ensure that the
3 separators are working properly.

4 And it's one of the things that this is not a
5 great burden. All this sentence is saying is, keep the
6 hydrocarbon out of the pit and keep your equipment working.
7 And let's put a quantitative standard, and you pick it to
8 determine so that everybody knows that it's doing what it
9 should be doing.

10 Sumps. This is a kind of an unusual one. Sumps
11 is clearly some kind of collective noun that scoops
12 together a lot of barely related things. Sort of like the
13 word "table". That could mean a TV tray, or one of these,
14 or a boardroom table that stretches through this room and
15 into the next one. And something kind of -- we've kind of
16 clarified something sort of like that too. We've had a lot
17 of testimony that a sump can be a little thing, a cut-off
18 barrel, a cut-off drum, or a barrel or a drum, sitting
19 under the ground and it's sitting under joints, and it's
20 collecting stuff that leaks. Hey, that's great, I
21 understand that.

22 But it turns out that there are other practices
23 in which vessels are used that might and do catch saltwater
24 in the southeast and need to be something larger.

25 The word "true sump" was used quite a bit, and I

1 don't know what that means. It's like true fact, I guess.
2 That a sump seems to be a vessel which is intended not to
3 be used very much and, when it is, emptied pretty promptly.
4 And whether it's a big one or a little one has nothing to
5 do with whether it's a sump.

6 So it's an industry kind of collective word
7 meaning a vessel that escapes the Rules. That's sort of
8 what a real definition of a sump is, a vessel that escapes
9 the Rules.

10 It is an underground tank. The way to --
11 frankly, the way to escape a lot of this is, don't put it
12 underground.

13 But I'd like to suggest some different language
14 on "sump" for you to consider, and it's not in what I just
15 presented there, what I've written here, but from listening
16 to the other discussion, is that a sentence that reads
17 something like, "A sump shall either be removed from the
18 ground and visually inspected or equipped with leak-
19 detection systems".

20 What you've done there is that the -- what the
21 industry has said and which I know to be true is, these
22 little kind of cut-off drums and barrels, they do pick up
23 and look at them, and you've got a leak in them, they can
24 sign off and it would be visually inspected. And then
25 these great big guys that they can't visually inspect, they

1 may sometime get around to testing or perhaps not testing,
2 and they are in point of fact, simply below-ground tanks.
3 You don't need to build a berm around them, but if you put
4 a leak detection on them, then it wouldn't make any
5 difference what size they are.

6 So I think what we need to do is to take this
7 word "sump", this kind of collective thing, and take the
8 TV-tray tables and put them over here and set up a little
9 rule around the TV tables, and then another set of rules
10 for the boardroom tables. You may make a distinction on
11 these large guys whether or not these are things that are
12 intended to capture hydrocarbons or whether they're
13 intended to catch saltwater, and make some distinction as
14 to your Rule. But you need to pull this word apart.

15 And I think if we maybe had more time to work
16 with it in our negotiating sessions we might have come up
17 with some better language and talked about the different
18 kinds of below-ground vessels that aren't classified as
19 tanks. So we'd like you to consider that.

20 Surface restoration, I wanted to make one point
21 on F.2. NMOGA in its consensus pit rule, I think, has
22 missed the point entirely about prohibiting pools. The
23 intent here -- it wasn't an erosion issue as much as a
24 percolation issue, that if you want to prevent ponding so
25 that you're not percolating down through the soil -- and I

1 think you -- I'd appreciate it if you'd look at it both as
2 a percolation -- ponding percolation issue as much as an
3 erosion issue.

4 And lastly, on G.3 where the industry and other
5 places that I've been in these kinds of meetings, they
6 really hate notifying people that they're going to do
7 something, because if they notify people they're going to
8 do something, Geez, somebody might complain about it and
9 find some reason why they shouldn't do it. So the easy
10 answer is, don't tell anybody, kind of create these stealth
11 operations.

12 And the Division needs to maintain control of the
13 communication process. The point I'm making here is that
14 environmental contamination, particularly of an aquifer or
15 a small aquifer, has impacts beyond the surface owner, and
16 the Department needs to hold on to the right of who needs
17 to be notified by taking into consideration the ground
18 that's there and the aquifer that's there, rather than
19 saying, Oh, just notify the surface owner, they're the only
20 ones impacted, because in point of fact they are not the
21 only ones impacted.

22 And that concludes my remarks.

23 CHAIRMAN WROTENBERY: Thank you, Mr. Larsen.

24 Any questions of Mr. Larsen?

25 We appreciate your comments.

1 MR. BROOKS: I do have one question.

2 CHAIRMAN WROTENBERY: Oh, I'm sorry.

3 MR. BROOKS: The comment that you made in Number

4 1 --

5 MR. LARSEN: Yes.

6 MR. BROOKS: -- I understand that you believe
7 that -- or your position is that additional protective
8 measures are required in groundwater-sensitive areas, but
9 I'm not sure from a regulatory standpoint -- from the
10 standpoint of regulatory drafting, what the effect is of
11 stating that the Division shall require additional
12 protective measures without stating what those additional
13 protective measures are.

14 Where does this get us? If we put this in the
15 regulation, where does this get us? What does the
16 regulation end up meaning?

17 MR. LARSEN: It means that you have to take into
18 account the individual situation. Some may require double
19 lining, some may be closed loops.

20 You could construct, perhaps, a menu of things
21 that represent additional protective measures, but without
22 applying them to a specific location you'd be hard pressed
23 to say which one of those is appropriate. But there's no
24 question that in groundwater-sensitive areas additional
25 measures need to be taken.

1 Liner pit -- There's been a lot of discussion
2 here that treats a liner as being impermeable and that
3 never rips, never tears, nothing ever goes wrong, that --
4 and all the rules are intended to protect against the
5 weaker operator or the poorer practitioner, and it has to
6 take into account -- well, it's like when you're working on
7 OHV rules: You always have the two percent boneheads that
8 you need to protect yourself on.

9 And if you've got someone working in a karst
10 region or bitter lakes or someplace with a high water
11 table, they need to recognize that in groundwater-sensitive
12 areas there are going to be additional protections demanded
13 of them and that it's up to you and the Department to
14 determine what they are. And I don't mean to create a
15 prescription here --

16 MR. BROOKS: Well, isn't that -- What I'm
17 thinking is, if the Division is authorized to impose
18 additional protections, it seems to me that says
19 essentially the same thing, unless you're saying that they
20 shall impose some kind of specific additional condition.

21 MR. LARSEN: No, I'm not.

22 MR. BROOKS: Okay. If this were a resolution,
23 you know, I would agree with you. But it's a regulatory
24 drafting and I have a little trouble figuring out what the
25 point of putting it in those terms would be. That's the

1 reason for my question.

2 Thank you.

3 CHAIRMAN WROTENBERY: Excuse me, Mr. Larsen --

4 MR. LARSEN: Yes.

5 CHAIRMAN WROTENBERY: -- Commissioner Bailey has
6 a question.

7 COMMISSIONER BAILEY: I thought of one question.
8 You don't mention wellhead protection areas for the
9 location paragraph. Is there a reason why?

10 MR. LARSEN: What is the language that you feel
11 that I would comment on?

12 COMMISSIONER BAILEY: Wellhead protection areas
13 is defined by --

14 MR. LARSEN: Are you talking about the
15 definitions?

16 COMMISSIONER BAILEY: Yes. Is that not an area
17 that should be in this paragraph or not?

18 MR. LARSEN: In which paragraph?

19 COMMISSIONER BAILEY: In this paragraph
20 concerning locations and siting of pits.

21 CHAIRMAN WROTENBERY: C.2.(a)

22 COMMISSIONER BAILEY: C.2.(a)

23 MR. LARSEN: And it's not in C.2.(a) now?

24 COMMISSIONER BAILEY: No, it says nothing about
25 wellhead protection.

1 MR. LARSEN: I see. No, in terms of that
2 wellhead protection, where does wellhead protection areas
3 fall in the Rule now?

4 COMMISSIONER BAILEY: It is mentioned in the 7940
5 rule.

6 MR. LARSEN: So it was just omitted?

7 COMMISSIONER BAILEY: And it's not carried over
8 into these --

9 MR. LARSEN: Then that's our error. It should
10 be. It should be there.

11 COMMISSIONER BAILEY: Thank you.

12 MR. LARSEN: Okay.

13 CHAIRMAN WROTENBERY: Thank you very much, Mr.
14 Larsen.

15 Commissioners, we've got, just based on the sign-
16 in sheets, maybe another 45 minutes of comment. Would you
17 like to break for lunch or press forward?

18 MR. SANDOVAL: Madame Chair, if you're counting
19 my 15, I'm pretty certain I can cut it down to five.

20 CHAIRMAN WROTENBERY: Oh, okay, then make that
21 about 30 minutes.

22 COMMISSIONER BAILEY: Go for it.

23 CHAIRMAN WROTENBERY: Okay. Mr. Boyd?

24 MR. BOYD: I'm Irvin Boyd, and I'm here with the
25 Fee and Public Land Association, and I did sit on the work

1 group committee, and I live south of Eunice.

2 Whenever we started these hearings or the work
3 group meetings, everybody was making comments, and I had
4 some comments that I had made and asked about. And I
5 believe it was the facilitator asked me if I was an expert,
6 and I am not. I told her that I had just lived in this, I
7 was the beneficiary of this stuff that we're talking about
8 and we're trying to prevent. Just like Carl was talking,
9 I've lived there all my life. My dad lived there his life.
10 And it's important to me that we try to preserve what we've
11 got.

12 The Fee and Public Land Association sent a letter
13 to the Commission. I believe you might have it.

14 CHAIRMAN WROTENBERY: Dated August 6th?

15 MR. BOYD: Yes, ma'am.

16 CHAIRMAN WROTENBERY: Yes, we've got it.

17 MR. BOYD: Would you like me to read that or
18 just --

19 CHAIRMAN WROTENBERY: If you would like, but we
20 do have it --

21 MR. BOYD: Okay, that's fine.

22 CHAIRMAN WROTENBERY: -- on the record, and I
23 think we've all read it. Yes.

24 MR. BOYD: I can tell you, starting off, that I'm
25 a big fan of the closed-loop systems, because of the

1 existing pits that are there, the history that's in Lea
2 County. Now I can't comment on the Clayton area or I
3 cannot comment on the San Juan Basin, because I don't know
4 about them. But in Lea County where I live, salt is the
5 big problem. And we've got pits, one which is probably 150
6 yards from my house, that was there when I was born -- and
7 I'll be 50 next month -- and it's still barren, from the
8 chlorides that work up. And I know it wasn't closed
9 according to the matter that maybe Mr. Hicks thinks that
10 they need to be closed.

11 But these pits are evident everywhere, and I'm
12 scared that if we close these pits and put a clay barrier
13 on them, a clay cap, then the migration will be forced
14 downward instead of upward.

15 And also, if we put a clay barrier, or any kind
16 of a barrier, on top of these pits, it's my experience that
17 when service companies come in, they may have a pipeline
18 that they lay right across this old pit area, they cut the
19 ditch right through there. They set power poles wherever
20 is most convenient and most usable for the well location.
21 Sometimes it's in these pit areas. Therefore, the
22 integrity of the liner or cap is gone, they drill holes
23 through it.

24 So I'm just saying that we really need to take a
25 look at what's going on and use history as a lesson.

1 I recently bought a piece of property, a few
2 years back, that hadn't been taken well care of and has
3 lots of production on it, and I immediately started trying
4 to clean this place up a little bit. And one of the
5 foreman for a major oil company told me, he said, Irvin, he
6 says, if you'll bear with us and work with us, we're not
7 used to being watched on this place. Nobody's cared
8 before, so we've got to change our operations here.

9 One of the things that we talked about in here,
10 or several of the items, Roger comment to me, Well, Irvin,
11 there's already rules out there to pertain to this problem.
12 He said, This is an enforcement problem.

13 And it's my feelings that any rule that we adopt
14 pertaining to pits, there's going to be enforcement
15 problems. And in Lea County -- I don't know how many
16 personnel the OCD has. I do know that they cannot cover
17 the area efficiently and keep everybody in compliance.
18 There is a lot of operators that they don't need to be
19 watched, they strive to do what's right. There's others
20 that strive to save every dollar they can, no matter the
21 consequences. So with a new Rule, the OCD needs some help
22 with budget money to be able to enforce it.

23 Last week there was a workover pit dug on my
24 property to plug a well. Whenever I found the pit, it had
25 been lined with plastic. It and the ditch that went up to

1 the wellhead, except for about ten foot from the wellhead
2 to where it started being lined, was lined. The pit was
3 full of oil. I throwed a rock in it, and when it splashed
4 -- usually you can see a skim of oil and water underneath.
5 When it splashed in there, you couldn't see anything but
6 oil.

7 I went over to check it, to see if they had done
8 anything with it after I got in, and it was dark and there
9 was a vacuum truck there and he was vacuuming the contents
10 out. He vacuumed everything you could get. And what would
11 run out of the ditch that got into the pit, he got that.

12 Then there was ponds of oil left on the liner in
13 different places. I needed to put some cattle in this
14 pasture the next day or two, so I called the producer and I
15 asked him, I said, We either need to fence this or we need
16 to clean this well -- or this pit -- up. And Roger had
17 told me at these meetings that if pits contain
18 hydrocarbons, that the contents have to be removed, then.
19 They can't be buried.

20 I asked him to remove the liner and the contents
21 and make sure it was clean underneath the liner before he
22 covered it up.

23 The come in and they removed the liner. And I
24 have not seen it, my wife looked at it. She said they
25 removed the liner, and when they removed the liner, any of

1 the oil and stuff that was on the liner dumped into the
2 bottom of the pit, and that's where it was left. And the
3 pit is now fenced and it's left open, so it's going to have
4 to be cleaned up.

5 I believe that in instances like this the money
6 that was spent to hire a truck, hire a backhoe and an
7 operator to come out and dig this pit, then hire somebody
8 to line it, then having to clean it out and cover it back
9 up -- this money could have been spent for a metal pit set
10 on top of the ground to contain this and eliminate fencing
11 problems and so many problems.

12 And I use gasoline and diesel every day in my
13 work. All of us need the industry. We can't kill it. But
14 we can't let it put us out of business as ranchers and
15 landowners. And it's not necessary, as the operators that
16 try have proved.

17 I believe Bob Manthei was talking about you all
18 had gone to some closed-loop systems.

19 MR. MANTHEI: For workovers, we use steel mud
20 pits.

21 MR. BOYD: Yeah. But I know that they use
22 closed-loop systems in some municipalities, and they work.
23 Now, I know that transporting the contaminants can be a
24 problem, but if we're worried about the contaminants
25 blowing out of a truck and causing problems, then we should

1 be worried about the contaminants being buried. And
2 there's DOT rules for trucks that transport these to be
3 covered. And I know that there's holes and loopholes in
4 it, but as a landowner I would feel much, much safer, much
5 better about the closed-loop system being used on my
6 property.

7 I have three instances where the company -- one
8 company drilled two wells and another one drilled another
9 well. And I asked each one of these companies to remove
10 the pit and the liner when they got done. They really
11 didn't like it, but they did. So far as I can tell, it's
12 wonderful. I planted -- I went in myself after they had
13 removed some, and I planted some rye because it was getting
14 winter. And the rye grew as long as it had moisture, and
15 then the rabbits cut it off flush with the ground and I
16 lost it. But to me that proves that that will work. It
17 may not be convenient, but it will work.

18 And I've got two pits open on my property now
19 that I asked the producer to haul them out, and he won't do
20 it. He said that the OCD doesn't require that, so he won't
21 haul them out. He says their guidelines are to bury them
22 in place, on-site. So here I am, I'll have the pits, I
23 guess, buried on my property.

24 But I have some other pits which a company come
25 in and buried on my property, and they called it deep

1 burying. Looks great. The topsoil was replaced and
2 everything, it looks real good. They moved over to the
3 side of the pit area, they dug some holes -- or a hole,
4 directly adjacent to the pit, 20 to 30 foot deep.

5 One of them, they pushed the 'dozer -- pushed
6 dirt with a 'dozer till it become ineffective. They
7 brought a trackhoe and set it down in there and dug the
8 rest of the way down where they wanted to be, so they'd
9 have cover on top of their contaminants. Then they took
10 the 'dozer and they pushed all the contaminants in this
11 hole and covered it up.

12 And I suspect it has anywhere from five to 10
13 foot of clean topsoil, not being clay, just being sand and
14 caliche and so forth, on top. I don't like that, because
15 the water table in this area, in my place, is from 50 to 60
16 foot deep. So now this contamination is not in any kind of
17 a liner. The liner is destroyed with the materials, and
18 it's 20 to 30 foot closer to the water table. So I don't
19 believe that this is a good way to do it.

20 I've heard of some different cases. I don't have
21 them documented, I don't know anything about it, other than
22 I was told that some pits had been broken while they were
23 still wet and let them run into a hole like this.

24 But whenever you require a liner on a pit and
25 then it's done like I have described, it's cut with a

1 'dozer and containment stuff is left right there, then to
2 me the only thing the liner has effectively done is, it has
3 saved the producer the drilling fluids that would have
4 seeped out the bottom. Because when you cut the liner and
5 you leave all the cuttings, the chemicals and the chlorides
6 there, then there's a big problem, they're there. And as
7 Mr. Hicks said, and Dr. Meeks [sic], they leach up. And
8 it's evidenced by the many historical pit sites that are
9 around. And therefore I like the closed-loop systems.

10 It's like was brought up before, there's people
11 that are licensed, they've got a facility that is approved
12 by the Division to store these materials. I don't have any
13 license to store these materials, and I have no desire to
14 store them on my property. And I wish that we could
15 proceed in a manner that it would be stopped.

16 And I really feel like that we have no earthly
17 ideal of how much contamination, being environmental or
18 water contamination, is out there. As Mr. Hicks said on
19 the Mewbourne side, you know, there's not a lot of water
20 wells now that's drilled on an old, abandoned pad. And I
21 know why that well was drilled on that old, abandoned pad,
22 is because it was kind of a sandy country, you could get up
23 to the well to service, you could -- you wouldn't be
24 destroying other property that wasn't already affected, and
25 it was a good place for a cattle watering facility.

1 Unfortunately, it didn't last like that.

2 And I don't know what contaminated the water, but
3 how many other areas -- I know my place, that I am not
4 aware of any core sampling or monitor well adjacent to any
5 pit or location on my property. Now, I've got a very small
6 place, I don't even have a complete four sections, but
7 there's a tremendous amount of oil production on it. And
8 I'm around the country quite a bit, got neighbors. And you
9 know, unless they go to the effort to drill test holes and
10 stuff around, then there's not any.

11 And the reason that I see that there's going to
12 be test holes drilled is whenever some water source
13 experiences contamination. They they're going to need to
14 start trying to find the source.

15 Now, I realize that probably pits are a very
16 small portion of the contamination problem in Lea County,
17 because I'm aware that there's pipelines, there's casing
18 leaks, there's plants that, you know, have set there years
19 and years and years and have caused contamination. But I
20 think this is a good starting place.

21 You know, I used to always hear a clause or a
22 phrase, "Let's walk a mile for a Camel." Let's walk a mile
23 to try to start saving our environment, our properties.
24 And we don't want to put companies out of business, we
25 don't want to increase the cost to them tremendously,

1 because all of us know whenever their cost goes up, it
2 costs us more.

3 But I appreciate the time that you all have
4 allowed me to speak, and I think that we've got a lot of
5 people in here that really care. I think that some of the
6 people here that really care are working for people in
7 Dallas, Houston, Fort Worth, that are not concerned with
8 our problems, but at least we're trying to solve the
9 problem. So thank you all.

10 CHAIRMAN WROTENBERY: Thank you for your
11 statement, Mr. Boyd. And I'd like to say to Mr. Boyd and
12 Mr. Larsen, Mr. Manthei, Mr. Byrom and Mr. Girand -- I
13 think those are all of the work group members who are in
14 the room still -- we really appreciate all the time and the
15 energy that you devoted to help us work through these
16 issues. I know it took a big chunk out of your life, and
17 just the fact that you've sat here with us for the last day
18 and a half we appreciate as well. I think we'll end up
19 with a much better product out of this whole effort as a
20 result of your contribution, so thank you very much.

21 MR. BOYD: Well, I think that we could all
22 benefit from this, because like -- everybody is going to
23 live in it, it's our home.

24 CHAIRMAN WROTENBERY: Yes, sir. Thank you.

25 Mr. Sandoval?

1 MR. SANDOVAL: Thank you, and I'll try to be
2 brief, because many of the comments that were made by Mr.
3 Larsen and certainly Irvin here, are consistent with the
4 thoughts, impressions and observations that I've come away
5 with.

6 First of all, again like most everyone else, has,
7 I'd like to thank staff and members of the working group
8 for having taken the time. Obviously, it was very, very
9 apparent that there was a lot of work that went into it,
10 and it's certainly greatly appreciated.

11 What I'd like to do today is kind of focus in on
12 two issues, one of them being, as Mr. Larsen said and as
13 we've talked about quite a bit, the use of kind of
14 amorphous language in the regulation that may not be the
15 most beneficial, and the second being the issue of notice,
16 primarily from my standpoint notice to the surface owner,
17 to the landowner.

18 And let me start with the first one -- or the
19 latter one, the issue of notice. It was very, very
20 apparent from Irvin's presentation and the presentation of
21 other landowners here yesterday that there is certainly a
22 lot of concern and a lot of interest on their part and very
23 passionate feelings toward protecting their own land and
24 serving as guardians of that land in terms of how it might
25 impact the public.

1 In that regard I think they are, you know, kind
2 of the ears and eyes of the OCD on site. Many of these
3 locations, most of them, are out in remote areas that are
4 not that accessible to others, that these individuals as
5 landowners frequent on a regular basis. They are the eyes,
6 ears, nose, feet, hands of the OCD, and I think they should
7 be taken advantage of in that regard, for purposes of being
8 perhaps the first line of defense out there. And the only
9 way that that can happen is that they be placed on direct
10 notice of some of these situations that are occurring on
11 their property.

12 My biggest concern, and I'll talk a little bit
13 more in detail about that here in a bit, is kind of the
14 closure guidelines. But I was thinking just earlier that
15 one my last closing arguments in another setting, I used
16 the -- kind of the chicken-or-the-egg thing. And another
17 fowl or bird metaphor came to mind.

18 In terms of the public interest, these landowners
19 are the canary in the coal mine. They are the ones that
20 are on site, they are the ones that are viewing what is
21 there, they are the ones that are directly being impacted
22 by whatever problems are out there, they are the ones that
23 can serve as a warning to the rest of us, that perhaps
24 things need to be addressed that are going unaddressed. As
25 such, notice at every opportunity when these situations

1 might cause some problem or some threat to the environment
2 should be accorded the landowner.

3 In my discussions with the Burlington
4 representative yesterday -- I think his name is Mr. Gantner
5 -- I was inquiring of him about the need to place the
6 landowner on notice prior to the time that the operator
7 actually commenced the closure operations. And he didn't
8 seem to think that it was too unreasonable to expect that,
9 and I don't think there was any testimony that it was too
10 much difficulty in requiring that notice be given to the
11 landowner.

12 And what struck me is that he said -- you know,
13 he testified that prior to the time they close these pits,
14 they as the operators go out there and do some testing.
15 But he did say that they don't make that testing available
16 to the landowners.

17 He also said that it was a good idea, because it
18 was the landowner's own land, that the landowner have the
19 opportunity to conduct some testing him- or herself. Yet,
20 if you don't give the landowner notice of when the closure
21 proceedings -- or procedures, are to start, how does that
22 landowner have the opportunity to conduct testing?

23 And without getting into all the technical
24 issues, because I'm not that familiar with it, I would just
25 --as a matter of practical knowledge, would think that it

1 is a lot less expensive, a lot less tedious, for a
2 landowner to go in there and test the base of a pit before
3 it's covered up, than to be required to go in there and
4 maybe perhaps bore 20, 30 feet down, after it's been
5 covered up with these various materials.

6 So I think that at the very least, the closure
7 provisions in the proposed new Rule should contain a
8 requirement that landowners be put on notice prior to any
9 closure activity being conducted on the site, and to allow
10 them the opportunity to do testing.

11 There may be other sections of the regulations
12 where some direct notice to the landowners would also be
13 helpful, and in that regard I kind of second the request
14 that was made by a gentleman yesterday regarding the
15 ability to provide some written comments, and I'd like to
16 have the opportunity to do so, and I would very definitely
17 try to be as succinct as possible in those comments and
18 would request that we be allowed to do that.

19 Lastly, and this will not take very long, there
20 was a whole lot of interchange on the -- and I think it
21 started with the concept of "reasonably free from oil", as
22 to whether or not that provided sufficient guidance or
23 precision in the regulations to really do anything.

24 And I'm not going to beat that dead horse to the
25 ground here, but let me read something from -- that was

1 written by Circuit Judge Steven Anderson, who sits on the
2 10th Circuit Court of Appeals in Denver, Colorado, in which
3 the case, although it's not analyzing environmental
4 regulations, is analyzing regulations nevertheless. And
5 there was a concern in that case over whether or not the
6 term "reasonable and adequate" provided adequate -- or
7 enough precision and definition in the regulations to serve
8 any purpose. And this is what they say. And they start by
9 recognizing that another circuit, the 7th Circuit, which I
10 believe sits in the Chicago or the Illinois area, also
11 struggled with that point.

12 And I quote -- Let me give you the citation of
13 the case first, just for the record. It is *Kansas Health*
14 *Care, Association, Inc., v. Kansas Department of Social and*
15 *Rehabilitation Services*. That's at 31 F3d 1536. And the
16 Tenth Circuit stated:

17
18 As the Seventh Circuit has acknowledged, the
19 Bourne Amendment's failure to define certain key terms
20 has rendered interpretation of its requirements
21 problematic. Construing the Medicaid Act is made
22 difficult by its failure to define "reasonable and
23 adequate efficiently and economically operated
24 facilities or costs which must be incurred". It comes
25 as no great surprise that this definitional abyss has

1 spawned considerable litigation.

2

3 And I submit to this body that if we retain or if
4 we adopt some of NMOGA's proposed language, this is what is
5 going to happen. There will be continued confusion out in
6 the field, there will be continued contention between the
7 landowner and the operator, between the operator and the
8 OCD, and this thing will just keep going and going and
9 going, and things will never get resolved except after a
10 huge expense of litigation and regulatory cost.

11 To conclude, the term "reasonably free from oil"
12 is not the only one that has those sort of problems that
13 we've just described. I'll just cite a few more examples,
14 and then my written comments can elaborate on them.

15 Again, going back to the closure portion of the
16 regulation -- and Mr. Gantner and I had an exchange on this
17 as well -- the second sentence of that section states, "In
18 appropriate cases, the Division may require the operator to
19 file a detailed closure plan before closure may commence."
20 "Appropriate cases" is left undefined. He defines several
21 cases that he thought might be appropriate.

22 Perhaps a thing to do in this regulation would be
23 to specify a non-exclusive list of potential appropriate
24 cases that would serve as guidance to the operator and the
25 OCD in determining when those cases would require this sort

1 of closure plan.

2 Tying that in with the notice requirement that I
3 asked about earlier -- or requested earlier, if prior to --
4 if notice is given to the landowner prior to closure
5 commencing and the landowner is afforded the opportunity to
6 on his own and independently conduct some testing, and if
7 that testing reveals certain problems out there, then
8 perhaps this will give the landowner the opportunity to
9 come before the board, or prior to -- the Commission -- or
10 prior to coming to the Commission, maybe coming directly
11 the operator and saying, Look, we've got some problems
12 here. And perhaps that will allow a working situation that
13 would achieve some of the goals that these regulations are
14 intended to accomplish.

15 Similarly, and this will be the last point, I
16 believe, the last sentence in that same section starts with
17 -- well, it reads like this: "Where the pit's contents
18 will likely migrate..." and again that's, I think, very
19 similarly along the lines of inappropriate cases or
20 reasonably free of oil. You know, what is a likely -- what
21 is it that constitutes a likely migration?

22 If we believe Mr. Hicks' testimony, then -- may
23 never be a likely migration because of certain sciences
24 that they've got in place that -- or studies that they have
25 in place that lead them to believe that the use of these

1 pits does not, you know, really cause a threat to
2 groundwater and to public health.

3 That puts the operator in a position where he can
4 very easily come before this Commission or before a trial
5 court and try to justify their actions or inactions based
6 on language in a regulation that is not as precise.

7 I'd like to close by acknowledging that -- you
8 know, Dr. Lee was absolutely correct in characterizing kind
9 of a rulemaking proceeding as one in which various
10 interests are involved and compromise is had, and
11 hopefully, you know, things will move forward.

12 The compromise is certainly in my line of work
13 where I litigate, I file lawsuits, I try to settle them
14 prior to having to fight them all the way to court.
15 Compromise means that no one gets everything they want.
16 And that's good and fine, I mean, that's the definition of
17 a settlement.

18 But the benefit to a settlement is that even
19 though no one gets what, they know what they get, and they
20 can move on. Case closed. The dispute has been resolved.
21 Not everyone is happy, but there is happiness, there is
22 closure to the fact that the dispute is done and over with.

23 The lack of notice requirements to the landowner
24 in the proposed regulation and the amorphous language that
25 is still there or that is proposed by NMOGA is such that

1 this is not an effective compromise, because we don't know
2 what we're getting in certain circumstances.

3 Thank you.

4 CHAIRMAN WROTENBERY: Thank you, Mr. Sandoval.

5 Are there any questions?

6 Appreciate your comments.

7 Okay, I also had a sign-in sheet from Mr.

8 Johnson. Did he leave the room? He's gone?

9 MR. LARSEN: Wore him down.

10 CHAIRMAN WROTENBERY: Oh.

11 MR. ANDERSON: He left some written comments with
12 Wayne and a note.

13 CHAIRMAN WROTENBERY: Well, I need those written
14 comments now.

15 MR. ANDERSON: I don't -- I don't know where it
16 is.

17 CHAIRMAN WROTENBERY: Go find them, please.

18 Thank you.

19 And then we also had Oscar Simpson, who I believe
20 was the gentleman who raised the question about the
21 extension of the comment period yesterday, but I don't -- I
22 haven't seen him this morning. Okay.

23 I'll also note that we did receive some written
24 comments from the Department of Fish and Game, or Game and
25 Fish, of the State of New Mexico, and I'll just make a

1 point in the transcript that this is part of the record of
2 this proceeding.

3 Is there anybody else who wants to make a
4 statement at this time? I don't see anybody raising their
5 hands.

6 We will provide some additional time for the
7 submission of written comments. I would ask that we try to
8 come up with a date for which these comments will be due
9 that is far enough in advance of the next Commission
10 meeting that all of the Commissioners will have an
11 opportunity to read through them and that David Brooks and
12 I can try to draft up some material, some proposals for
13 discussion at the next Commission meeting in response to
14 those comments.

15 So I'm thinking perhaps we could look at about
16 the 6th -- I'm sorry, I'm in the wrong month -- the 2nd of
17 December as the possible due date for those comments.
18 That's a Tuesday, it's the Tuesday after Thanksgiving, it's
19 a little more than two weeks from today. Does that sound
20 workable for everybody? And then that would give us just a
21 little bit more than a week, a week and two days, to absorb
22 that information.

23 MR. BROOKS: It will be fairly tight, but I don't
24 see that we have much alternative, given the Thanksgiving
25 weekend coming in the middle of that period.

1 CHAIRMAN WROTENBERY: Okay. Then we will ask
2 that any additional written comments be submitted by
3 Tuesday, the 2nd of December.

4 And there was also a request yesterday that we
5 try to post the comments and evidence that we received at
6 this hearing on our website as soon as possible, so that
7 anybody that wants to take that information into
8 consideration in drafting their additional comments will
9 have that opportunity.

10 We probably won't have the transcript of this
11 proceeding available for a couple of weeks, but we can
12 provide all of the written materials and all of the
13 documents that we received in evidence on our website, so
14 I'll ask the staff to make sure that that information is
15 scanned in and posted on the website.

16 Mr. Larsen?

17 MR. LARSEN: Is it the practice of this body to
18 deliberate in private?

19 CHAIRMAN WROTENBERY: On rulemaking it's in
20 public, yes.

21 And Commissioners, what I'd propose that we do is
22 spend some time at the next Commission meeting reviewing
23 the testimony that we received and the evidence that we
24 received at this hearing, along with the additional
25 comments that will be submitted by the 2nd of December.

1 I will work with -- just a second. I will work
2 with David, and we will try to draft up some materials in
3 the form of a draft order and a draft rule for discussion
4 at the next meeting, and then we can go over the issues in
5 some detail at that meeting and try to make a decision, if
6 that's possible, or we may decide we need to give some
7 additional thought to some parts of the Rule. I don't know
8 at this point, but I would hope that we could try to work
9 our way through the issues and --

10 COMMISSIONER BAILEY: You will --

11 CHAIRMAN WROTENBERY: -- act on the --

12 COMMISSIONER BAILEY: -- distribute the draft
13 before the next hearing --

14 CHAIRMAN WROTENBERY: Yes.

15 COMMISSIONER BAILEY: -- to us? All right.

16 CHAIRMAN WROTENBERY: Yes, we will.

17 COMMISSIONER BAILEY: Okay. We'll have a chance
18 to review it.

19 COMMISSIONER BAILEY: It may not be very far in
20 advance, because we'll be getting some additional --

21 MR. BROOKS: It will be a fairly tight
22 schedule --

23 CHAIRMAN WROTENBERY: -- comments the week
24 before, but we'll --

25 MR. BROOKS: -- Thanksgiving period --

1 CHAIRMAN WROTENBERY: -- we'll do our best to get
2 something out to you --

3 MR. BROOKS: -- period which will interfere with
4 people getting their comments to us and with us getting --

5 CHAIRMAN WROTENBERY: Well, I think -- the
6 comments need to come in by the 2nd of December --

7 MR. BROOKS: Yeah --

8 CHAIRMAN WROTENBERY: -- so --

9 MR. BROOKS: -- right.

10 CHAIRMAN WROTENBERY: -- and we'll do our best to
11 get something out late that week or very early the next
12 week.

13 Yes, Dr. Neeper?

14 DR. NEEPER: Do post-hearing comments need to be
15 mailed out to a service list?

16 CHAIRMAN WROTENBERY: I'm sorry, I didn't
17 understand that question.

18 DR. NEEPER: Do post-hearing -- If I write a
19 post-hearing comment, do I need to send that to a list of
20 other participants?

21 CHAIRMAN WROTENBERY: No, you do not. We will,
22 though, go ahead and post those on the Internet. We can do
23 that to make sure everybody who's interested has the
24 opportunity to see it.

25 MR. BROOKS: That's correct, there's no

1 requirement of service on other parties in rulemaking
2 proceedings.

3 CHAIRMAN WROTENBERY: That's right.

4 Ms. MacQuesten, did you have anything else for us
5 today?

6 MS. MacQUESTEN: No, but we would be interested
7 in submitting some comments, in particular some suggested
8 language.

9 CHAIRMAN WROTENBERY: Okay, and that will be due
10 on the 2nd of December, along with all the other written
11 comments.

12 Okay, I think we've got our marching orders.

13 MR. BROOKS: Yeah.

14 CHAIRMAN WROTENBERY: Anybody else have any other
15 statement they'd like to make in this proceeding today?

16 Then thank you very much for your participation.
17 We really appreciate the testimony and the statements that
18 we received.

19 (Thereupon, these proceedings were concluded at
20 12:48 p.m.)

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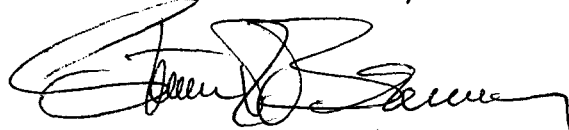
CERTIFICATE OF REPORTER

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 23rd, 2003.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2006