

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. 13,586

APPLICATION OF THE NEW MEXICO OIL)
CONSERVATION DIVISION FOR THE REPEAL)
OF EXISTING RULES 709, 710 AND 711)
CONCERNING SURFACE WASTE MANAGEMENT)
AND THE ADOPTION OF NEW RULES GOVERNING)
SURFACE WASTE MANAGEMENT)

2006 MAY 8 AM 8 48

REPORTER'S TRANSCRIPT OF PROCEEDINGS

COMMISSION HEARING

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

Volume I - April 20th, 2006

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission, MARK E. FESMIRE, Chairman, on April 20th, 2006, 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.

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 CASE NO. 13,586

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A P P E A R A N C E S

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(Continued...)

A P P E A R A N C E S (Continued)

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JORDEN, BISCHOFF & HISER, P.L.C.
7272 E. Indian School Rd., Suite 205
Scottsdale, AZ 85251
By: ERIC L. HISER

* * *

ALSO PRESENT:

ALAN ALEXANDER
Burlington Resources Oil and Gas Company
Industry Committee

BRUCE BAIZEL
Oil and Gas Accountability Project

JOHN BARTLIT, PhD
New Mexico Citizens for Clean Air and Water

DAVID BAYS
Williams Field Service
Industry Committee

DEBBIE BEAVER
Williams Field Service
Industry Committee

KEVIN FOSTER
IPANM

(Continued...)

ALSO PRESENT (Continued):

RAND FRENCH
Marbob Energy Corporation
Industry Committee

DAN GIRAND
Mack Energy Corporation

LINDA GUTHRIE
Devon Energy
Industry Committee

RANDY HICKS
RTHC

SUZANNE P. HOLLAND
ConocoPhillips
Industry Committee

LORRAINE HOLLINGSWORTH
Gandy Marley

FRANK KRUGH
Marathon Oil Company
Industry Committee

MARK LARSON
Midland, TX

ANDREW LIVINGSTON
Loco Hills Landfarm

KEN LIVINGSTON
Sweatt

KENDALL LIVINGSTON
Livingston Land

BILL MARLEY
Gandy Marley

JOHN MATIS
BLM

(Continued...)

ALSO PRESENT (Continued):

MARK MILLER
Daniel B. Stephens and Associates

MICHAEL MOFFETT
Controlled Recovery, Inc.

DONALD A. NEEPER, PhD
New Mexico Citizens for Clean Air and Water, Inc.

DENNIS NEWMAN
OXY
Industry Committee

LISA NORTON
Yates Petroleum Corporation

RON OPSAHL
Mountain States Legal Foundation

YOLANDA PEREZ
ConocoPhillips
Industry Committee

VICTORIA SANCHEZ
Devon Energy
Industry Committee

DEBORAH D. SELIGMAN
NMOGA

DANIEL B. STEPHENS, PhD
Daniel B. Stephens and Associates
Industry Committee

KERRY L. SUBLETTE
Chemical engineer, environmental engineer
Industry Committee

FORREST B. (BEN) THOMAS, PhD
Toxicologist
Industry Committee

GLEN VON GONTEN
Senior Hydrologist, OCD

* * *

1 WHEREUPON, the following proceedings were had at
2 9:08 a.m.:

3 CHAIRMAN FESMIRE: Which brings us back to Case
4 Number 13,586, the Application of the New Mexico Oil
5 Conservation Division for the repeal of existing Rules 709,
6 710 and 711 concerning surface waste management and the
7 adoption of new rules governing surface waste management.

8 At this time we will take appearance from
9 attorneys.

10 MR. BROOKS: Mr. Chairman, honorable
11 Commissioners, I'm David Brooks, assistant general counsel
12 for the Department, and I am representing the Oil
13 Conservation Division. I have five witnesses.

14 CHAIRMAN FESMIRE: Mr. Carr?

15 MR. CARR: May it please the Commission, I'm
16 William F. Carr with the Santa Fe office of Holland and
17 Hart, L.L.P. We have appeared in this case for the New
18 Mexico Oil and Gas Association, the Independent Petroleum
19 Association of New Mexico, John Hendrix Corporation, and
20 also an industry committee. The members of that committee,
21 if I could read their names for the record --

22 CHAIRMAN FESMIRE: Please, sir.

23 MR. CARR: -- are Burlington Resources Oil and
24 Gas; BP America Production Company; Chesapeake Operating,
25 Inc.; ChevronTexaco; ConocoPhillips; Devon Energy

1 Corporation; Dugan Production Corporation, Energen
2 Resources Corporation; Marathon Oil Company; Marbob Energy
3 Corporation; OXY USA, Inc.; Occidental Permian, LTD; and
4 OXY USA WTP Limited Partnership; J.D. Simmons, Inc.;
5 Williams Production Company; XTO Energy; and Yates
6 Petroleum Corporation.

7 I will call one witness for the New Mexico Oil
8 and Gas Association, and the Industry Committee will
9 present three witnesses.

10 CHAIRMAN FESMIRE: Mr. Huffaker?

11 MR. HUFFAKER: Mr. Commissioner, members of the
12 Commission, I'm Gregory Huffaker of Huffaker and Moffett,
13 LLC. I'm here today representing Controlled Recovery,
14 Inc., and I have with me at the table the president of
15 Controlled Recovery, Inc., Mr. Ken Marsh.

16 We'll present one witness.

17 CHAIRMAN FESMIRE: Okay. Dr. Neeper, are you
18 present?

19 MR. SUGARMAN: Good morning Chairman Fesmire,
20 Commissioners. My name is Steve Sugarman. I'm from the
21 law firm of Belin and Sugarman. I'm here representing the
22 New Mexico Citizens for Clean Air and Water, which has one
23 technical witness that will be presented, Dr. Don Neeper.

24 As I indicated in my prehearing statement, Dr.
25 Neeper will also be handling cross-examination to the

1 extent that they raise technical issues in this case.

2 Thank you.

3 CHAIRMAN FESMIRE: Are there any other
4 appearances?

5 MR. HISER: Mr. Chairman, members of the
6 Commission, I'm Eric Hiser. I'm appearing for Yates
7 Petroleum Corporation and assisting Mr. Carr with the
8 presentation of the industry committee, and I'm working
9 with him on the same witnesses that he's called. And I'm
10 with the firm of Jordan, Bischoff and Hiser.

11 CHAIRMAN FESMIRE: Okay. Are there any other
12 appearances?

13 Okay, the first housekeeping matter we should
14 probably take is the order. It's my thinking right now
15 that the Applicant, the Oil Conservation Division, will
16 present their case first. And we've had some discussions
17 with attorneys concerning the order after that. I think
18 it's been determined that CRI will go second. Is that
19 satisfactory with all counsel? Especially CRI's?

20 MR. HUFFAKER: Yeah, as long as it's not --
21 (Laughter)

22 CHAIRMAN FESMIRE: I think there's very little
23 chance of that.

24 After CRI, the industry, et al.?

25 MR. CARR: Yes. Yes, sir.

1 CHAIRMAN FESMIRE: And battling cleanup, the New
2 Mexico Citizens for Clean Air and Water volunteered?

3 DR. NEEPER: That's correct.

4 MR. CARR: Mr. Chairman, maybe before Dr. Neeper
5 the NMOGA presentation might be made, because it covers
6 sort of the nontechnical part, where the industry
7 committee's looking at the more technical issues that put
8 the whole case on the table before Dr. Neeper testifies.

9 CHAIRMAN FESMIRE: Okay, would there be any
10 objection to that from any party?

11 MR. SUGARMAN: I'm sorry, what was the proposal,
12 Mr. Carr?

13 MR. CARR: That Dr. Neeper go last, that we put
14 the short NMOGA presentation on before Dr. Neeper so that
15 all the industry presentation is put out at one time.

16 MR. SUGARMAN: We have no objection.

17 MR. BROOKS: No objection from the Division, Mr.
18 Chairman.

19 CHAIRMAN FESMIRE: Okay. The order, then, will
20 be OCD, CRI, the industry presentation, the NMOGA
21 presentation, and the New Mexico Citizens for Clean Air and
22 Water.

23 Okay, with that, the first issue -- We're going
24 to call a short recess because I think we need Commissioner
25 Olson to be here, and he received a phone call. But the

1 first thing we're going to do is take up the motion for
2 leave to submit late exhibit filed by the Oil Conservation
3 Commission.

4 I'm inclined to adopt this, as long as there's no
5 objection. But if there is an objection, I'd like to hear
6 it now. Is there any party that would have an objection?

7 MR. CARR: No objection.

8 MR. HUFFAKER: No objection.

9 MR. HISER: (Shakes head)

10 MR. SUGARMAN: No objection.

11 CHAIRMAN FESMIRE: Okay. Let the record reflect
12 that there was no objection.

13 Commissioner Bailey, would you --

14 COMMISSIONER BAILEY: No objection.

15 CHAIRMAN FESMIRE: Okay, and I would have no
16 objection. So we'll go ahead and allow the Oil
17 Conservation Division to submit their late exhibit.

18 Mr. Brooks, has everybody gotten a copy of it?

19 MR. BROOKS: Copies were sent to all the counsel.
20 I'm not sure if -- We can make additional copies at a
21 break, if there are other people in the audience who would
22 like copies. Copies have been supplied to counsel.

23 CHAIRMAN FESMIRE: Okay. Is there anybody who
24 would need a copy before we proceed?

25 Okay. If during the proceedings you do decide a

1 copy, please contact Mr. Brooks and he'll make arrangements
2 to get a copy for you.

3 The parties -- At this time we'll ask for opening
4 statements, or they can waive their opening statements to
5 the beginning of their presentation. Is there any
6 preference from any party right now to go and give an
7 initial statement, or would you like to wait until the
8 beginning of your presentation?

9 MR. BROOKS: Doesn't make any difference to us
10 because we're first anyway.

11 CHAIRMAN FESMIRE: Right.

12 MR. CARR: May it please the Commission, I have
13 an initial statement that I would like to make.

14 CHAIRMAN FESMIRE: Okay. Mr. Huffaker?

15 MR. HUFFAKER: We'll wait.

16 CHAIRMAN FESMIRE: Okay. Mr. Sugarman?

17 MR. SUGARMAN: Mr. Neeper will make a very brief
18 opening statement. Dr. Neeper.

19 CHAIRMAN FESMIRE: And Mr. Hiser?

20 MR. HISER: (Shakes head).

21 CHAIRMAN FESMIRE: Okay. So we'll have an
22 opening statement from the Division, from Mr. Carr and from
23 Mr. Neeper, in that order.

24 Mr. Brooks, are you ready?

25 MR. BROOKS: Well, Mr. Chairman, before I start

1 my opening statement, I would like to raise a point of
2 order, which may not -- you may already know that it's not
3 relevant, and that may be why it was raised, but the Rules
4 do call for arranging the order of public comment, if there
5 are members of the public that would like to comment, so it
6 might be appropriate at this time to find out if that is
7 the case, so we can establish the timing on that.

8 CHAIRMAN FESMIRE: Okay. Are there any members
9 of the public who would have a statement that they would
10 like to make?

11 MR. BROOKS: Okay.

12 CHAIRMAN FESMIRE: Sir?

13 MR. BAIZEL: Bruce Baizel from the Oil and Gas
14 Accountability Project. I'm a staff attorney there, and
15 we've submitted comments throughout the process. At some
16 point later on I'd be happy to make a statement.

17 CHAIRMAN FESMIRE: Okay. Might I suggest you
18 make your statement during these opening statements?

19 MR. BAIZEL: I think there's some developments in
20 terms of some discussions that -- side discussions, so
21 that's why I prefer to wait and see how that plays out. It
22 may -- I may not need to make a statement.

23 CHAIRMAN FESMIRE: Okay. Mr. Brooks, would that
24 be satisfactory?

25 MR. BROOKS: That's fine with us.

1 CHAIRMAN FESMIRE: You may begin if you're --

2 MR. BROOKS: Very good.

3 CHAIRMAN FESMIRE: -- prepared.

4 MR. BROOKS: Mr. Chairman, honorable
5 Commissioners, Polonius in the play *Hamlet* starts out by
6 saying, Since brevity is the soul of wit, I will be brief.
7 And then he proceeds to discuss matters at great length.

8 (Laughter)

9 MR. BROOKS: I shall indeed be brief.

10 I had -- earlier in the preparation of this
11 proceeding, I was planning not to make an opening
12 statement, but some things have come up that have caused --
13 and the -- when I have reviewed the materials that have
14 been submitted, I believe there is a reason for doing so.

15 I'm not going to describe the Rule or the
16 process; the witnesses will do that. And I believe
17 probably everyone here is familiar with it to some extent.

18 I do want to point out that we have up here
19 copies of the Rule as it was published on February 27th,
20 proposed Rule, and also the change sheet that we published
21 on March 31st, if anyone wants hard copies.

22 I will point out with regard to the Rule that the
23 copies up here, like the copies in your notebooks, have
24 headers on the pages showing what portions of the Rule are
25 on that page. And while the pagination is the same as the

1 ones printed off the web, the ones on the web do not have
2 those headers. So that might be somewhat convenient for
3 people who want to follow along with the presentation.

4 That's the only housekeeping matter.

5 Now getting to the merits of this case, there are
6 two points I want to make in this opening statement. One
7 is that a material portion of the Division's proposal has,
8 I believe, been misunderstood. This is reflected
9 principally in the comments filed by the New Mexico Oil and
10 Gas Association and the comments filed by Independent
11 Producers Association of New Mexico, if I'm giving their
12 name correctly, since I know only their acronym for sure.
13 That has to do with small landfarms, and I will discuss
14 that first.

15 Second, I believe that many of the issues that
16 are before us today have to do with a difference in
17 philosophy rather than with technicalities. And most of
18 the testimony is going to be technical, it's going to be
19 highly technical. In fact, as I've quipped to Bill Carr on
20 this case, it reminded me of a dialogue in Lewis Carroll,
21 one of Lewis Carroll's works, between the narrator and a
22 foreign professor who was speaking of some great
23 technological innovation they had in his country. And the
24 narrator asked that it be explained, and the professor
25 said, I can't do that. And Lewis Carroll, the narrator,

1 asked why? And the professor said, Because there are no
2 words in your language sufficient to describe the necessary
3 concepts.

4 (Laughter)

5 MR. BROOKS: And I admit to having felt that way
6 a great deal during the preparation for this case.

7 (Laughter)

8 MR. BROOKS: But -- So I won't address the
9 technical issues, I'll let the witnesses do that.

10 But I do want to emphasize the difference in
11 philosophy between the Division, on the one hand, and the
12 industry committee on the other, because I think that
13 reflects a large part of our difference, that explains a
14 large part of our differences.

15 First of all to the misunderstanding.

16 NMOGA and IPANM have suggested in their comments
17 that they understand that any onsite remediation conducted
18 of an oilfield spill will be a small landfarm.

19 That was not the intention. We're going to ask
20 for a couple of very minor changes, trial amendments, we're
21 going to ask for a couple of minor changes to make that
22 clear. But this does not change the intent. The intent
23 was, all along, and still is, that such remediations are
24 not surface waste management facilities and therefore are
25 not governed by proposed Rule 53 at all.

1 If you will look on page 2 of the proposed Rule,
2 the definition of surface waste management facility in
3 Section 7.W.(10).(f) -- well, the beginning of the opening
4 sentence of 10, Surface waste management facility shall
5 mean any facility that receives any oil field waste for
6 collection, etc., except:

7 And then there's a list. And you go down to (f),
8 an onsite remediation conducted in accordance with a
9 division-approved abatement plan pursuant to 19.15.19 [sic]
10 NMAC, which is Rule 19, or corrective action pursuant to
11 19.15.3.116 NMAC, which we uneducated people call Rule 116.

12 Now, I recognized when I re-read things -- after
13 reading NMOGA and IPANM comments, that -- it could be read
14 the way they read it, because the definition of small
15 landfarm, which appears in Rule 53.A.(1) on page 6 of the
16 proposed Rule, says a small landfarm is a centralized
17 landfarm. To us that means it's a centralized facility,
18 and a centralized facility is defined as a surface waste
19 management facility. But the Rule doesn't exactly say
20 that, it just says a centralized landfarm. It doesn't say
21 a landfarm that is a centralized surface waste management
22 facility, which essentially was the intent.

23 To correct that, we're going to propose at this
24 hearing that you change the title of paragraph A.(1) of
25 Rule 53, which now reads, Definitions reading to types of

1 facilities, to read, Definitions relating to types of
2 surface waste management facilities. In my opinion, that
3 will make clear that a small landfarm is a surface waste
4 management facility, but an onsite remediation conducted
5 pursuant to Rule 116 is not a surface waste management
6 facility and therefore not a small landfarm.

7 The Division believes that the regulations of
8 Rule 53 are not necessary for onsite remediations conducted
9 under those other rules, because those remediations have to
10 be done pursuant to a plan approved by the Division, and
11 the Division can impose site-specific restrictions that it
12 feels are necessary on that activity in the remediation
13 planning process.

14 We are also going to ask you to amplify that
15 exclusion a little bit more, because we realize we did not
16 address the issue of less than five-barrel spills, and so
17 we're going to ask you to amplify the exclusion in (f) to
18 say a remediation conducted under Rule 91 or Rule 116 or a
19 remediation of a nonreportable spill.

20 And there's one other change, but this one is the
21 substantive change, so I'll let Mr. Price, who's sponsoring
22 it, tell us about that in his testimony.

23 That, I believe, will obviate some of the most
24 emotional comments that we received in the course of the
25 comment process.

1 Second, let's talk about philosophy of waste
2 management. The Division wants to emphasize that we are
3 not here talking about environmental remediations. This
4 goes along with what I just talked about.

5 When you ask someone -- when the government
6 demands that someone clean up a spill, whether it be a
7 historical or a current spill, a certain level of
8 practicality suggests that at some point you quit cleaning
9 house and you say, This is something we can't deal with,
10 we'll just leave it there. We'll try to go as far as we
11 think is necessary in those situations, but we don't
12 necessarily go the full nine yards.

13 In this proceeding, we are talking about
14 dedicating potentially large areas of land, up to 500
15 acres, intentionally dedicating virgin land to the purpose
16 of waste management. And we believe that that calls for
17 not a risk-based approach in the sense that industry
18 proposes but a best available technology approach that will
19 keep things as clean as possible and manage our oil and gas
20 industry with no more environmental degradation than is
21 absolutely essential. And that is the philosophy which
22 we've used in developing these rules. We're not saying as
23 dirty as it can be and still be safe, we're saying as clean
24 as it can be and still be practical. And that's basically,
25 as I see it, the difference between our position and the

1 position of some of the Respondents.

2 And I would like to add for the record that the
3 New Mexico Oil Conservation Division filed its exhibits in
4 a white binder, and the industry and the other parties have
5 filed theirs in black binders.

6 (Laughter)

7 CHAIRMAN FESMIRE: Mr. Carr, you had an opening
8 statement. I hope it will be as entertaining.

9 MR. CARR: I doubt that, but Mr. Commissioner, I
10 would hope that there's more merit to our presentation than
11 just -- and that we will be judged on more than just the
12 color of our binder.

13 (Laughter)

14 MR. CARR: And if we're not going to be, could I
15 have a half an hour?

16 (Laughter)

17 CHAIRMAN FESMIRE: The price of white binders
18 within a half-mile radius --

19 (Laughter)

20 MR. CARR: May it please the Commission, as you
21 know, since the time the surface waste management rules
22 were first proposed, the industry got together and formed
23 an industry committee. And on our part the effort has been
24 directed, really, at bringing what we feel is the best
25 science to this effort.

1 When we get to our presentation, we have a number
2 of these witnesses with scientific expertise that we're
3 going to call. We're not going to go through the Rule from
4 beginning to end, and so when we get to our portion of the
5 case Mr. Hiser and I are going to try and sort of frame the
6 testimony with some general introductory comments for each
7 witness, so you understand the context for their testimony
8 and the portion of the overall rules into which these
9 comments fit.

10 In addition to the effort to try and bring what
11 we think is best science to the effort, we've also been
12 doing some other things, and I think the reason I really
13 need to talk with you here at this time is that there is a
14 matter which I need to tell you about.

15 As you will recall through numerous stakeholder
16 meetings and hearings, Dr. Neeper and Dr. Bartlit have
17 offered to other stakeholders and suggested that we get
18 together and that we meet and that we try and resolve some
19 of the issues and discuss the issues, other than just in
20 formal meetings and hearings called by the Oil Conservation
21 Division and Commission where frankly some of them think
22 attorneys seem to get in the way.

23 Recently, Dr. Sublette, one of our experts,
24 Dennis Miller, and others have been talking with Dr. Neeper
25 and Dr. Bartlit, working kind of like a small independent

1 work group, and have agreed to certain recommendations.
2 This agreement was reached late yesterday. I want to make
3 it clear to you that we don't presume that we have the
4 authority or the right to come in and write your rules for
5 you. But it did seem like Dr. Neeper's offer was
6 reasonable, we did take him up on that, and a group of
7 people have been working, trying to develop proposals for
8 you that could result in rules that are both
9 environmentally protective and also workable as a practical
10 matter.

11 And it was late yesterday that they did reach an
12 agreement, "they" being the New Mexico Citizens for Clean
13 Air and Water, represented by Dr. Neeper, and industry
14 committee was represented by Mr. Newman and myself.

15 There still are disagreements on a number of
16 matters between these two groups, but their agreement was
17 memorialized yesterday in a letter -- and I had hoped to be
18 able to present it to you here today -- and the reason for
19 that is that we don't want you to think we're out trying to
20 run our own little show on the side and pop in some sort of
21 an agreement at the last moment. But the agreement was
22 only reached yesterday, and it hasn't been reviewed by the
23 attorney for the New Mexico Citizens for Clean Air and
24 Water, nor by OGAP. We believe they will approve it, and
25 whenever that happens we're going to make copies available

1 to you.

2 Under your Rules it isn't a formal proposed
3 modification, it can't be evidence presented at this late
4 date, although I'm sure Dr. Neeper and the people working
5 on it would have preferred it if we could have recommended
6 some actual language. But it is the work product of a
7 group of people, we've been trying to look at these issues
8 and develop rules that would be environmentally protective
9 and work. And so as soon as I get the okay, I will release
10 that to you. I think it's going to be helpful as you hear
11 our presentations, because we're going to sort of be
12 playing off that, and I think it will help you understand
13 where we're trying to go with the case that we're trying to
14 present.

15 I have one other thing I would like to discuss
16 with you, and it's somewhat in response to comments made by
17 Mr. Brooks, and I think it's just important to tell you how
18 we view this proceeding.

19 We're here today on an Application that was filed
20 by the Oil Conservation Division. They are the Applicant.
21 And in actuality, this is an Application that has been
22 developed and filed for the Division by their Environmental
23 Bureau. And I think we've got an important distinction
24 here between your role as the Commission, their role as a
25 bureau and an agency making a recommendation to you as the

1 Commission.

2 The recommendation that they have developed is
3 designed by the Environmental Bureau to protect fresh
4 water, to protect human health and to protect the
5 environment. And in coming forward with this rule, they're
6 doing their job.

7 We're here today before you as a Commission, and
8 we're asking you to do your job. And I would submit that
9 your job requires looking into much more than just the
10 protection of human health, the protection of fresh water
11 and the protection of the environment, because this
12 Commission is a creature of statute, and your powers are
13 expressly defined by law.

14 And the evidence that we're going to be
15 presenting in this hearing is directed at more than just
16 environmental concerns, because the Oil and Gas Act tells
17 you what you must consider, and the primary jurisdictional
18 basis for your existence is the prevention of the waste of
19 hydrocarbons. And in this regard you are to consider the
20 development of these resources, the maximization of
21 revenues from state lands and taxes on production. And
22 that is one of the things, by statute, you must also
23 consider in this proceeding.

24 You're also required by law to consider the
25 correlative rights of all owners in these properties, and

1 that includes the owners of small businesses in New Mexico.
2 In addition to that, you have the enumerated powers.
3 You're charged with preventing -- or protecting fresh
4 water, public health and the environment.

5 And the point is that you're required, I guess
6 unfortunately, to do all of these things in every matter
7 that comes before you, including the procedures here today.

8 Now these matters come before you with all of
9 these different charges and responsibilities because, as
10 our courts have recognized, you have special expertise and
11 competence in these matters, in the production of oil and
12 gas and the environmental concerns that spring from this
13 kind of activity. And this requires of you an ability to
14 balance technical presentations, and to meet your statutory
15 charge you've got to use this special expertise and
16 competence.

17 And in doing that, you've got to know the
18 difference between what is real science and what is not.
19 You've got to look at varying proposals and varying
20 philosophies and approaches, and you've got to decide, is a
21 risk-based approach or a best demonstrated available
22 technology approach -- does it work better in terms of your
23 statutory charge, in terms of all the component parts of
24 your statutory charge? And you're going to have to
25 evaluate these recommendations in terms of whether or not

1 they help you carry out and meet your statutory mandate, or
2 whether they are just overly burdensome regulations that
3 tend to shut down an industry.

4 And I think that's the core here, and I think
5 that's where we have a philosophical difference. And I
6 think you shouldn't be stampeded into worrying about 500-
7 acre landfarms when the bulk of your Rules look at two-acre
8 landfarms, and you shouldn't let, in this sense, a scare
9 tactic drive you away from the real issue which most of the
10 time, as to landfarms, are small, registered landfarms. So
11 you're to do all of these things, and that's why we have an
12 Oil Conservation Commission.

13 We've recommended particular modifications and
14 changes to the Rules, we've identified three witnesses, and
15 we're going to call those witnesses and present them in
16 support of our recommendations.

17 We've tried to make a good guess as to how long
18 our case will take, and we think we have about six hours of
19 testimony, and there will be cross in addition to that.
20 And since we're not going to march from beginning to end
21 through the Rules, it is important, we think, to put this
22 on at one time and do it sort of from beginning to end and
23 kind of tell you where we are as we move through the Rules.
24 And we appreciate the scheduling order which you've already
25 announced, and we're hopeful that we'll be able to do that

1 and have a presentation for you that makes sense and isn't
2 as burdensome, perhaps, as I've already been.

3 Thank you.

4 CHAIRMAN FESMIRE: Thank you, Mr. Carr.

5 Dr. Neeper?

6 DR. NEEPER: Good morning to the Commission. As
7 Mr. Carr has said, we have had some rather lengthy
8 discussions with the industry committee. We have agreed on
9 some technical points. Everything that we have discussed
10 has been restricted to one subject, and that is to the
11 bioremediation endpoint. This is a new concept for New
12 Mexico. Things have not been operated out here before in
13 New Mexico. Therefore it's crucial, if we do it, that we
14 do it right. So we have had extensive discussions.

15 Finally, with a detailed meeting yesterday, we
16 have come up with some points that we feel we agree on well
17 enough that they could be included in regulatory language,
18 that is, numbers that might somewhere appear in a
19 regulation.

20 There are other points on which we might have
21 shared philosophical agreement, but we could not come to a
22 common understanding of how you would implement this in
23 regulatory language. So we have some philosophical ideas
24 we share, but we don't have agreement on that.

25 Any application that's actually made in a

1 regulation has to embrace both of these situations, namely
2 points that we agree on, but also you would have to address
3 the points that we may not have agreed on, and those will
4 come out, presumably, in testimony. But you have to look
5 at the entire package. If we do bioremediation endpoint
6 circumstances, how will it work in its entirety in New
7 Mexico? Because it's an intriguing possibility and it
8 shouldn't be simply dismissed out of hand. It should be
9 looked at technically with great detail as to how it's
10 implemented.

11 CHAIRMAN FESMIRE: Thank you.

12 Mr. Brooks, are you prepared to call your first
13 witness?

14 MR. BROOKS: We haven't sworn the witnesses, have
15 we?

16 CHAIRMAN FESMIRE: No, we haven't. There are --
17 Are all the witnesses here, except for your expert,
18 correct?

19 MR. HUFFAKER: That's correct, he's not here. I
20 don't know about the other ones.

21 CHAIRMAN FESMIRE: Okay. I'd ask the witnesses
22 who are going to testify in the hearing to please rise.

23 (Thereupon, the witnesses were sworn.)

24 CHAIRMAN FESMIRE: Mr. Huffaker, I would ask that
25 you remind me, when your witness comes up, that he needs to

1 be sworn.

2 Mr. Brooks, proceed.

3 MR. BROOKS: May it please the Commission, at
4 this time we call Theresa Duran-Sanchez -- -Saenz, my
5 apologies.

6 THERESA DURAN-SAENZ,

7 the witness herein, after having been first duly sworn upon
8 her oath, was examined and testified as follows:

9 DIRECT EXAMINATION

10 BY MR. BROOKS:

11 Q. Good morning, Ms. Duran-Saenz.

12 A. Good morning, Mr. Brooks.

13 Q. I believe you have in front of you a notebook, a
14 copy of the notebook with this picture on the front of it.

15 A. Yes.

16 Q. Okay. First off, would you state your name for
17 the record?

18 A. Theresa Duran-Saenz.

19 Q. And by whom are you employed?

20 A. The Oil Conservation Division.

21 Q. And in what capacity?

22 A. Legal assistant.

23 Q. And you're employed in the Santa Fe office?

24 A. Yes, I am.

25 Q. Does your responsibility include giving notices

1 for proceedings in which the Division is a party?

2 A. Yes, I am.

3 Q. Would you open your -- or the witness exhibit
4 folder and turn to page -- or turn to Tab Number 5, and I
5 will ask you to look at what has been marked as OCD Exhibit
6 Number 3, front and back, and tell us if you recognize it.

7 A. Yes, I do.

8 Q. And can you tell us what it is?

9 A. It's a notice of continuance of the surface waste
10 management rules hearing that was sent out to a contact
11 list for individuals who are interested in receiving
12 notice.

13 Q. Okay, and did you send this notice?

14 A. Yes, I did.

15 Q. Did you send it to each of the individuals listed
16 under the 2 column -- the 2 binder -- or designation on
17 page 1?

18 A. Yes, I did.

19 Q. And did you send this by electronic mail?

20 A. Yes, I did.

21 Q. And on what date did you send this?

22 A. It was sent on March 15th, 2006.

23 MR. BROOKS: Okay. I will call the Commission's
24 attention to the fact that this states that the hearing
25 will be on -- Rules 51, 52 and 53 will be postponed till

1 April 20th, 2006.

2 I next ask you to look behind binder number 7,
3 and look at what has been marked as OCD Exhibit Number 6,
4 front and back. And will you identify -- Can you identify
5 that document for us?

6 A. Yes, this is the proof that we received from the
7 Albuquerque Publishing Company for the notice that was
8 published for the April 20th hearing.

9 MR. BROOKS: Okay, and I will call the attention
10 of the Commission to the fact that down in the small print
11 on the proof it says that the hearing will be at 9:00 a.m.
12 on Thursday, April 20th, in Porter Hall at 1220 South Saint
13 Francis and that the ad information in the block in the
14 upper right-hand of page 1 says Start date, March 31st,
15 '06, Stop date, March 31st, '06.

16 Q. (By Mr. Brooks) Ms. Duran-Saenz, do you remember
17 when we were preparing the exhibit folder a week ago on
18 April the 13th?

19 A. Yes.

20 Q. And at that time did you contact the *Albuquerque*
21 *Journal* to see if they could furnish us with a certificate
22 of publication?

23 A. Yes, I did.

24 Q. And what did they advise you?

25 A. They informed me that the document I was

1 requesting had been placed in the mail and that they could
2 not provide me a copy, being that it was in the mail, so
3 they were able to provide me a copy of the proof with start
4 date confirmation.

5 Q. Did they subsequently provide you with a
6 certificate of publication?

7 A. Yes, they did.

8 MR. BROOKS: Mr. Chairman, honorable
9 Commissioners, in my prehearing statement I identified the
10 proof as an exhibit, and I indicated that we would propose
11 to substitute a copy of the certificate of publication when
12 we received it. We've now received it, and subject to the
13 witness identifying it, we'll request permission to
14 substitute a copy of the actual certificate of publication
15 as an exhibit.

16 CHAIRMAN FESMIRE: Any objection?

17 MR. HUFFAKER: No.

18 MR. CARR: No objection.

19 MR. HISER: (Shakes head)

20 MR. SUGARMAN: No.

21 CHAIRMAN FESMIRE: Seeing no objection, we'll
22 make the substitution, counsel.

23 MR. BROOKS: Okay, I'm going to mark this Exhibit
24 6A. May I approach the witness?

25 CHAIRMAN FESMIRE: You may.

1 Q. (By Mr. Brooks) Ms. Duran-Saenz, do you
2 recognize or can you identify OCD Exhibit 6-A?

3 A. Yes, I can. This is the affidavit from the
4 *Albuquerque Journal* regarding the proof that we
5 previously --

6 Q. And does it reflect that the ad was published on
7 March 31st, 2006?

8 A. Yes, it does. The last line on the ad itself
9 indicates the date.

10 CHAIRMAN FESMIRE: Mr. Brooks, a small point of
11 clarification. Shouldn't that be Exhibit 7-A instead of
12 6-A?

13 MR. BROOKS: Well, 6 is the proof. Seven,
14 Exhibit 7, is another notice that we sent. We're behind
15 Tab 7, but behind Tab 7 is Exhibit 6, 7 and 8.

16 CHAIRMAN FESMIRE: Okay. Okay, I'm sorry.

17 MR. BROOKS: Okay?

18 Q. (By Mr. Brooks) Ms. Duran-Saenz, I'll ask you
19 now to look at Exhibit Number 7, front and back. Was that
20 another notice that you sent?

21 A. Yes, it is.

22 Q. And did you send it to all of the individuals
23 identified in the 2 column on page 1?

24 A. Yes, I did.

25 Q. And what date did you send it?

1 A. I sent it on March 28th, 2006.

2 Q. And were the contents that you sent what is
3 reflected on page 2?

4 A. Yes, it is.

5 Q. The record will reflect that page 2 shows that
6 there will be a hearing on the matter of these rules on
7 April 20th, 2006, in Porter Hall, 1220 South Saint Francis,
8 at 9:00 a.m., correct?

9 A. Yes.

10 Q. Okay. I'll ask you to look at what's been marked
11 as OCD Exhibit Number 8, front and back, and ask you to
12 identify it.

13 A. This is the affidavit of publication in the *New*
14 *Mexico Register*.

15 Q. Okay. And does it reflect the date that notice
16 was published in the *New Mexico Register*?

17 A. Yes.

18 Q. And what is that date?

19 A. Date of publication is March 31st, 2006.

20 MR. BROOKS: Thank you very much, Ms. Duran-
21 Saenz.

22 At this time I will tender into evidence OCD
23 Exhibits Numbers 3, 6, 6-A, 7 and 8.

24 CHAIRMAN FESMIRE: Is there any objection?

25 MR. CARR: No objection.

1 MR. HUFFAKER: No objection.

2 MR. HISER: No objection.

3 CHAIRMAN FESMIRE: Mr. Sugarman?

4 MR. SUGARMAN: No objection.

5 CHAIRMAN FESMIRE: Could you give me those
6 numbers one more time, Mr. Brooks?

7 MR. BROOKS: 3, 6, 6-A, 7 and 8.

8 CHAIRMAN FESMIRE: At this time OCD Exhibits
9 Number 3, 6, 6-A, 7 and 8 will be admitted.

10 MR. BROOKS: Okay. And Ms. Saenz, do you have
11 Exhibit 6-A there?

12 THE WITNESS: Yes, sir.

13 MR. BROOKS: Since there's only one copy, would
14 you furnish that -- hand that over to Mr. Brenner?

15 Pass the witness.

16 CHAIRMAN FESMIRE: Mr. Huffaker?

17 MR. HUFFAKER: Nothing, your Honor -- or Mr.
18 Commissioner.

19 CHAIRMAN FESMIRE: Mr. Carr?

20 MR. CARR: Nothing, thank you.

21 CHAIRMAN FESMIRE: Mr. Hiser?

22 MR. HISER: Nothing.

23 CHAIRMAN FESMIRE: Mr. Sugarman?

24 MR. SUGARMAN: Nothing, sir.

25 CHAIRMAN FESMIRE: Okay. With your permission,

1 Mr. Brooks, at this time we'll excuse the witness.

2 MR. BROOKS: That's fine with me.

3 CHAIRMAN FESMIRE: Call your next witness.

4 MR. BROOKS: Call Mr. Wayne Price.

5 CHAIRMAN FESMIRE: Mr. Price, you've been
6 previously sworn?

7 MR. PRICE: Yes, Mr. Chairman, I have.

8 CHAIRMAN FESMIRE: Mr. Brooks?

9 MR. BROOKS: May it please the Commission.

10 WAYNE PRICE,

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

13 DIRECT EXAMINATION

14 BY MR. BROOKS:

15 Q. Good morning, Chief Price.

16 A. Good morning.

17 Q. Chief Price, I'm going to call your attention to
18 -- first off, to the documents behind Tab Number 2 in your
19 binder, the first document behind there. Is that, Mr.
20 Price, a résumé of your experience and qualifications?

21 A. Yes, it is.

22 Q. But there's -- it's out of date, is it not?

23 A. Yes.

24 Q. It states that you are a senior petroleum
25 engineer for the Oil Conservation's Environmental Bureau.

1 Have you received a promotion since this proceeding began?

2 A. I'm the Environmental Bureau Chief.

3 Q. Congratulations, Chief Price.

4 Chief Price, could you -- I know you have
5 testified before the Oil Conservation Commission before,
6 but -- and your credentials have been made a matter of
7 record. But there are quite a lot of people here today,
8 some of whom haven't been here before, so I would ask you
9 to give us a very brief background résumé of your
10 background qualifications and experience as an
11 environmental engineer.

12 A. Sure. I'm a graduate of New Mexico State
13 University, the number-one university in New Mexico.

14 (Laughter)

15 Q. I'm glad you didn't say the southwest, Chief
16 Price.

17 A. I started off a number of years ago, 30-some-odd,
18 at the Goodyear Tire and Rubber Company. My first
19 environmental project was installing a control system to
20 prevent oils from reaching the Cuyahoga River, which had
21 just recently caught on fire, and so they was a level of
22 awareness there that we should not be putting oil in the
23 river anymore. And so that was my very first environmental
24 project.

25 After that, I was a plant superintendent at a

1 power plant. And then after -- and I did air-quality --
2 some preliminary air-quality studies at the power plant.
3 Also after that, of course, I've spent -- I was born and
4 raised in the oil field, been in the oil field all my life,
5 been out on the rigs, roughneck, roustabout, so forth,
6 during high school and college summers, so I have a fairly
7 good working understanding of the oil field. I appreciate
8 the oil field, it's provided me a living for many years.

9 I was an environmental engineering manager,
10 engineering environmental manager, for a large chemical
11 company for a number of years, basically was responsible
12 for all the environmental permitting, implementation of
13 environmental controls and so forth.

14 I've been with this Division for 13 years. I
15 actually started off in the Hobbs office, I've been -- I
16 was a field engineer, worked in the Santa Fe office as a
17 petroleum engineer for five or six years and recently have
18 been promoted to Environmental Bureau Chief.

19 MR. BROOKS: Mr. Chairman, honorable
20 Commissioners, we tender the witness as an expert
21 environmental engineer.

22 CHAIRMAN FESMIRE: Is there any objection from
23 counsel?

24 MR. CARR: No objection.

25 MR. HUFFAKER: No objection.

1 MR. HISER: (Shakes head)

2 MR. SUGARMAN: No objection.

3 CHAIRMAN FESMIRE: Commission?

4 COMMISSIONER BAILEY: No objection.

5 COMMISSIONER OLSON: (Shakes head)

6 CHAIRMAN FESMIRE: Mr. Price is so accepted.

7 Q. (By Mr. Brooks) Okay, Chief Price, I'll call
8 your attention at this time to what's behind Exhibit Number
9 8 in your binder. And before we start it, let me ask you a
10 couple of general questions.

11 First of all, do you have two presentations to
12 make?

13 A. Yes, I do.

14 Q. And could you describe the general nature of each
15 of them?

16 A. Yes. The first presentation is an overview of
17 the new rules that we're proposing, Rule 51, 52, 53. And
18 then I also have a presentation concerning a study for salt
19 concentrations that would be allowed in landfarms.

20 Q. And the former of those two is behind Tab 8 in
21 our booklet?

22 A. No, actually it's behind Tab --

23 Q. No, I said the first of those presentations.

24 A. Oh, I'm sorry, yes, Tab 8 and then Tab 9.

25 Q. The second -- the one -- the presentation dealing

1 with chlorides in the landfarms is behind Tab 9?

2 A. Tab 9, that's correct.

3 Q. Mr. Price, as Chief of the Environmental Bureau,
4 has it been your fundamental task to formulate the
5 proposals -- have you been the point person who had the
6 responsibility to formulate the proposals that are being
7 presented here today?

8 A. Actually, it actually started with the previous
9 bureau chief, Roger Anderson. I took his place, and so I
10 picked up.

11 Q. And there's been substantial development of this
12 Rule since then?

13 A. That's correct.

14 Q. And that has been done under your shepherding and
15 guidance, correct?

16 A. That is correct.

17 Q. So you're going to be responsible for this Rule
18 whether you want to be or not?

19 A. Yes, I will.

20 Q. Thank you. Okay. Would you explain to the
21 Commission very briefly the philosophy with which you and
22 your staff approached the development of this Rule?

23 A. Well, the underlying philosophy is, we recognize
24 that Rule 711, which is the older surface waste management
25 rules, basically had some deficiencies in it. And it was

1 our goal to update -- go to a new rule that basically
2 brings us up to speed with the rest of the industry and
3 also with the rest of sister agencies and federal agencies.
4 And so that was our goal, was to try to normalize our rules
5 with other rules and regulations.

6 Q. And your primary guiding -- while you didn't --
7 Mr. Carr has talked a great deal about the oil and gas
8 industry and the practicalities of the industry. You have
9 some familiarity with those practicalities, do you not?

10 A. Yes, I do.

11 Q. And did you ignore those in this Rule, or did you
12 take them into consideration?

13 A. No, we tried, and we did, implement every
14 possible practicality that we could possibly put in this
15 Rule and still protect the environment.

16 Q. And you're an engineer, are you not?

17 A. Yes, I am.

18 Q. Now, a former member of this Commission, Dr.
19 Robert Lee, one time made the statement from that podium up
20 there that, I am not a scientist; I'm an engineer. But is
21 engineering a discipline based on science?

22 A. Yes, it is.

23 Q. And in formulating these rules, did you and your
24 staff ignore science?

25 A. No, we did not.

1 Q. Did you try to take into consideration what you
2 believe to be proper and sound scientific concepts?

3 A. Yes, we did.

4 Q. Okay. Mr. Price, would you begin your
5 presentation?

6 MR. BROOKS: Let me state at this point, because
7 I don't want to draw an objection and force the Commission
8 to rule on it, it is my intention to allow my witnesses to
9 make their presentation in narrative form with such
10 interruptions for questions as I feel are necessary, but
11 without going through every point on Q and A. Will that be
12 acceptable to counsel? If anybody's going to object, I'll
13 go through everything on Q and A.

14 MR. CARR: Mr. Chairman, that's acceptable, and
15 that is the format we would propose to use when we call our
16 witness.

17 CHAIRMAN FESMIRE: Mr. Huffaker?

18 MR. HUFFAKER: No objection.

19 CHAIRMAN FESMIRE: Mr. Sugarman.

20 MR. SUGARMAN: Same comment that Mr. Carr had.

21 CHAIRMAN FESMIRE: Okay.

22 Q. (By Mr. Brooks) Very good. Price, you may begin
23 your first presentation.

24 A. Okay --

25 CHAIRMAN FESMIRE: Before we go much farther, I

1 want to ask anybody who's wearing a coat or anything, it's
2 going to get hot in here, so if you want to take it off,
3 feel free.

4 (Laughter)

5 CHAIRMAN FESMIRE: I'm surprised I've waited that
6 long.

7 THE WITNESS: I have an infrared pen here, and I
8 see opposing counsel is sitting across from me. Be
9 careful.

10 (Laughter)

11 THE WITNESS: So I'll be extremely careful with
12 it.

13 Okay, I'd like to start off on Slide 1, fairly
14 self-explanatory as OCD Proposed Rulemaking.

15 And one of the things that -- the way we
16 constructed the Rule in the format matter is that we
17 actually decided to put the definitions right up front. In
18 the older 711 Rule, definitions were kind of strung out
19 throughout the Rule, and we thought it would be a little
20 more user-friendly if we could put the information right up
21 front under Definitions.

22 I'm going to touch on some of the definitions
23 that we have changed or have included, and one of those is
24 oilfield waste. We did make a change there, and I'll go
25 through that in another slide.

1 Soils, we basically adopted the standard for ASTM
2 definition. We're trying to get everyone on the same page
3 on that.

4 And then a definition of surface waste management
5 facilities, so where it was in the other rule we have now
6 placed it right up front in the definitions. And one of
7 the things that we have done is, we've exempted drilling
8 and workover pits, and we have exempted remediation
9 projects, as Mr. Brooks had pointed out in his opening
10 statement. And so we want to make sure that people realize
11 that leaks and spills that are not -- that are covered
12 under Rule 116 and 19 will not automatically fall under the
13 surface management rules.

14 Next slide.

15 Q. (By Mr. Brooks) Before you go ahead, Mr. Price,
16 you said you were going to discuss oilfield waste later, so
17 I will postpone discussing that. But in the definition of
18 surface waste management facility which appears on page 2
19 of the Rule, there are a list of exclusions, only one of
20 which I commented on. You have commented on that one and
21 one other.

22 Now let me ask you, there were some -- in the old
23 Rule 711 there were two different sets of exclusions, were
24 there not?

25 A. That is correct.

1 Q. There were some things that the definition of
2 surface waste management facility excluded?

3 A. That's correct.

4 Q. And there were some other things that were called
5 exempt centralized facilities?

6 A. That's correct.

7 Q. Now, one of the categories of exempt centralized
8 facilities was a facility which receives solids of less
9 than 1400 cubic yards -- has a capacity of less than 1400
10 cubic yards, correct?

11 A. That is correct.

12 Q. Now that section is no longer an exemption,
13 right, in that form?

14 A. In that form, that's correct.

15 Q. And those small facilities are now surface waste
16 management facilities, correct?

17 A. That is correct.

18 Q. And they are covered by a special provision in
19 part I -- subsection I of Rule 53?

20 A. Correct.

21 Q. I'm sorry, subsection H of Rule 53.

22 A. We better check.

23 Q. I believe it's H, but check.

24 A. Yes. Yes, it's subsection H, small landfarms.

25 Q. And will Mr. von Gonten discuss the details of

1 that provision?

2 A. Yes, he will.

3 Q. Okay. With that exception, all of the exclusions
4 from the definition of surface waste management facility
5 and all of the category of exempt centralized facilities
6 are carried forward as exclusions from the category of
7 surface waste management facility in the proposed Rule,
8 correct?

9 A. Correct.

10 Q. Thank you, you may proceed.

11 A. Okay. Next slide, please.

12 Okay, definition. I want to talk about oilfield
13 waste shall mean waste generated in conjunction with
14 exploration -- that would include drilling -- production,
15 refining, processing, gathering, transportation of crude
16 oil, natural gas or carbon dioxide; waste generated during
17 the oilfield service company operations; or waste generated
18 from any oilfield remediation or abatement activity,
19 regardless of the date of the release.

20 That -- the date of the release is something new.
21 That basically does not allow grandfathering of older
22 releases, if older releases are out there. And if it is an
23 oilfield waste, then, it would be defined as an oilfield
24 waste.

25 Q. Okay. Mr. Price, is the definition of oilfield

1 waste -- well, there's one respect in which it may be
2 intended to be changed, and I'll go into that in a minute,
3 but basically, is this a change in the substantive
4 definition, or is this rather a re-wording to make the
5 definition clearer for the most part?

6 A. It really is a re-wording to make the definition
7 clearer.

8 Q. Now with regard to waste that is not
9 characteristic of oilfield operations, what does it say
10 about that type of waste?

11 A. You mean that is not intrinsic or --

12 Q. Yeah --

13 A. -- or uniquely --

14 Q. -- yeah, right --

15 A. -- associated?

16 Q. -- right.

17 A. Well then, oilfield waste that does not include
18 certain -- I mean, oilfield waste that does not include
19 certain wastes not generally associated with oil and gas
20 operations, such as tires, appliances, ordinary garbage,
21 refuse, unless it's generated at a Division-regulated
22 facility like an oilfield service company, it it's --

23 Q. Or a well?

24 A. Or a well, or a --

25 Q. Or a refinery?

1 A. -- or a refinery, a drilling rig, gas plant,
2 production site and so forth, if it's not generated at any
3 of those type of facilities which would not be regulated by
4 the Oil Conservation Division, then it would not be
5 considered oilfield waste.

6 Q. But if it is generated in one of those
7 facilities, it's oilfield waste, even though it's not
8 characteristic of oilfield operations?

9 A. That is correct.

10 Q. Now, we did make one substantive change in the
11 sense that our existing Rule permits surface waste
12 management facilities to receive non-oilfield waste under
13 certain circumstances?

14 A. Yes, under emergency situations ordered by the
15 DPS or Department of Public Safety.

16 Q. And that provision that they can do so on orders
17 of the Department of Public Safety is still in the Rule?

18 A. Yes, it is.

19 Q. And that's not oilfield waste?

20 A. That's correct. It could be oilfield waste, but
21 then again it may not be oilfield waste.

22 Q. But Rule 711, as it now exists, purports to
23 authorize such facilities to receive non-oilfield waste
24 under some circumstances other than emergency, correct?

25 A. That's correct.

1 Q. And is that provision being repealed --

2 A. Yes.

3 Q. -- proposed to be repealed?

4 A. Yes.

5 Q. Was that done on the advice of counsel?

6 A. Yes.

7 Q. And when I say the advice of counsel, counsel in
8 that instance was not myself, correct?

9 A. That is correct.

10 Q. Very good. I will address -- With the
11 Commission's permission, since this was done on advice of
12 counsel and since I'm familiar with the reasons why it was
13 advised, I will address that issue at a later date -- at a
14 later time, rather than asking the witness to testify about
15 a matter of law which is really not within his expertise.

16 Go ahead.

17 A. Okay, next slide.

18 Okay, in doing so we felt it would behoove all of
19 us and it would be beneficial and -- to make it a little
20 more user-friendly on how we define different types of
21 waste, our Rules had referred to non-hazardous,
22 hazardous --

23 MR. VON GONTEN: Next page.

24 THE WITNESS: Okay, I'm sorry. Anyway, and so --
25 are exempt or non-exempt waste. And so what we've done is,

1 up front in the definitions we have put a definition for
2 exempt waste. We also have clarified what a non-exempt
3 waste is.

4 Next slide.

5 We have clarified what non-hazardous waste is,
6 and we also have defined what hazardous waste is.

7 There is a special note here. OCD does not have
8 a special RCRA CESQG exemption. Now what that is -- that's
9 a conditionally exempt small quantity generator exemption.
10 What that is, is that -- for example, in municipality
11 landfills people can put small quantities of actual
12 hazardous waste into those type of facilities. We do not
13 nor have we ever allowed any type of hazardous waste to go
14 into any of our facilities.

15 Q. (By Mr. Brooks) And when you say hazardous
16 waste, you're talking about waste that is hazardous as a
17 matter of law. That is, it's defined as hazardous waste by
18 federal statute and is not exempt?

19 A. It is waste that would be defined by RCRA as
20 hazardous waste, but it -- under the CESQG program they
21 actually exempt that, but the waste is still hazardous by
22 characteristics or hazardous by listing.

23 Q. Right, but you're not talking about oilfield
24 waste, which is exempt under another provision.

25 A. We are not talking about oilfield waste.

1 Q. When you say -- Okay. And oilfield waste may be
2 hazardous in fact, in some instances, even though it's not
3 hazardous --

4 A. Well, oilfield waste has hazardous constituents
5 in it, but is not defined as hazardous under the RCRA
6 exemption.

7 Q. So if I say that some oilfield waste is hazardous
8 in fact, even though it's not hazardous in law, that's a
9 correct characterization, is it not?

10 A. That is correct.

11 Q. But under the definition of hazardous here, no
12 oilfield waste would be hazardous waste if it is exempt
13 waste?

14 A. That is correct.

15 Q. Continue.

16 A. Okay.

17 Q. Oh, before you go to the next slide, I want to
18 talk about watercourse.

19 A. Okay.

20 Q. We changed the definition of watercourse.

21 A. We did.

22 Q. And from what source did we adopt the proposed
23 definition?

24 A. We have delegated authority under the Water
25 Quality Control Commission to implement those water quality

1 control regulations, and we're delegated a constituted
2 agency to do that. And under the Water Quality Control
3 Commission, they have a definition in the regulation for
4 watercourse.

5 Q. And this is that definition, correct?

6 A. This is that definition, and so -- and this is
7 one of cases where we tried to normalize our definitions,
8 not only within our own Division but across to other
9 agencies.

10 Q. And is it also the definition that appears in the
11 water code which defines what constitutes the waters in the
12 State of New Mexico?

13 A. Yes, it is.

14 Q. Very good, you may continue.

15 A. Okay, Rule 51, Transportation of Produced Water.
16 We have a form called a C-133 which -- we've had that in
17 existence for some time. And the reason for the 133 was to
18 try to attempt to track and also to have some control on
19 produced water haulers. A number of years ago it was a
20 fairly common practice that water trucks would go up and
21 down and water roads with produced water, and so there was
22 a need to have a control on that. We implemented the C-133
23 some time ago, and so we're going to maintain that.

24 It's still -- It would just clarify what the
25 C-133 is going to be used for. It's for produced water,

1 drilling fluids or any other liquid oilfield waste.

2 We dropped our proposal for including C-133s for
3 solid waste, because we did not feel at this time it was
4 appropriate to implement waste tracking. We felt this was
5 the wrong mechanism for waste tracking, it's the wrong
6 place to put it. Waste tracking starts with the generator,
7 not the receiver. And so therefore our -- one of our early
8 versions of the Rule, we had put in there that this would
9 be the beginning of waste tracking.

10 We realized -- we received comments from
11 industry, and we realized early on that waste tracking
12 starts with the generator, not with the receiver. So we
13 dropped that part of the Rule.

14 Q. And waste tracking is on the Bureau's agenda for
15 some later time, correct?

16 A. Yes, it is.

17 Q. When you say solid waste in this, it doesn't
18 include solid waste; you mean waste that's solid in fact?

19 A. Waste that's solid in fact.

20 Q. It does not have anything to do with the
21 definition of solid waste in federal and state statutes?

22 A. That is correct.

23 Q. Go ahead. Well, I have a couple of other points
24 of clarification on this --

25 A. Okay.

1 Q. -- on the previous slide.

2 The main change that we made in adopting Rule 51
3 was the addition of liquid wastes other than produced
4 water, whereas previously it applied only to produced
5 water?

6 A. Liquid oilfield waste --

7 Q. Yeah, liquid oilfield waste.

8 A. -- that's correct.

9 Q. We also added a provision that an applicant for a
10 C-133 had to be licensed to do business --

11 A. That is correct.

12 Q. -- in New Mexico. We also added what we have
13 called for lack of a better name a, quote, bad-actor
14 provision which would permit people who have had a past
15 history of regulatory violations to be denied permits,
16 right?

17 A. That is correct.

18 Q. And in the enforcement provisions it says
19 something about cancellation or suspension. Did it
20 previously just say cancellation?

21 A. I'm not sure. I'm sorry, I'm not sure --

22 Q. Okay. Well, the Commission can take notice that
23 it did. And when I say -- Yeah, I'm talking about the
24 previous rule. The previous rule is Rule 710 --

25 A. Okay --

1 Q. -- 709, I'm sorry --

2 A. -- I can look --

3 Q. -- Rule 709. But there is one thing that's been
4 the subject of a lot of controversy that is in Rule 51,
5 that actually is in Rule 709, correct? And that is the
6 provision that an operator shall not allow waste to be
7 removed from his lease unless the transporter has a C-133.
8 That provision is in the existing Rules, right?

9 A. That is correct, because the operator is the
10 generator.

11 Q. And there has been no change, that's exactly the
12 same way it's always been?

13 A. It's the same.

14 Q. Okay, thank you. You may continue with the next
15 slide.

16 A. Okay, Waste Disposition, this is Rule 52. This
17 was another clarification of the older Rule, and we
18 specified prohibited and authorized disposal and re-use of
19 produced water, drilling fluids and oilfield waste. Once
20 again, this is just a clarification. It points out what's
21 prohibited and what's authorized. And in doing so, we
22 think we made the Rule a little more user-friendly, and so
23 it flows a little bit better than the older Rule.

24 Q. The older Rule in this case was Rule 710; is that
25 right?

1 A. That's correct.

2 Q. And Rule 710 was somewhat deceptively entitled?

3 A. Yes, it was.

4 Q. It was entitled Disposition of Transported
5 Produced Water?

6 A. That is correct.

7 Q. And we've taken the word Transported out?

8 A. Yes, we have.

9 Q. And do we review that as a substantive change?

10 A. That's a substantive change.

11 Q. Well, we believed it applied to waste whether or
12 not --

13 A. Oh, yes, I'm sorry, I misunderstood your
14 question. That particular change -- the way the Rule
15 actually read, it wasn't just disposal of transported
16 produced water; it was disposal basically of any produced
17 water in a manner that was not protected by the
18 environment. And so therefore we just cleared -- we just
19 basically clarified and cleared the Rule up.

20 Q. Okay, you may continue, Mr. Price.

21 MR. VON GONTEN: Next slide?

22 THE WITNESS: Yes. Okay, Rule 53, Surface Waste
23 Management Facilities. Okay, Rule 53 revamp. Why did we
24 revamp this? I've touched on this a little bit.

25 We were receiving criticism from citizen groups

1 for lack of controls, opposition from industry to
2 regulation by guidelines. There's always -- In some cases
3 people feel that guidelines are a moving target and that
4 everyone needs to be on the same page, and guidelines
5 should be put in the regulation. And so that's what we
6 have -- we've taken the guidelines out -- or we're taking
7 the existing surface waste management guidelines that were
8 issued under Rule 711, or in conjunction with 711, and we
9 basically have put the guidelines in the Rules.

10 Improper use of landfarms. That was brought to
11 our attention approximately a year ago. We realized that
12 the way we were writing our public notices, the way we were
13 writing the permits, it was basically allowing materials to
14 go into landfarms, which in essence would make them
15 permanent landfills. And that's not the intent of a
16 landfarm. A landfarm is to treat hydrocarbon-contaminated
17 soils, and the issue there was chlorides.

18 And then of course landfills and pits have not
19 been used as best -- or BDAT, best demonstrated available
20 technology. We're trying to bring that up to speed with
21 other agencies, with other industries.

22 And so we think BDAT -- EPA recognizes and
23 actually requires BDAT in a lot of their facilities, and so
24 -- also the New Mexico Environment Department does the
25 same, and so it was time for us to bring our Subtitle D-

1 type facilities up to speed, so to speak, to those other
2 agencies and other facilities, other -- industry and so
3 forth.

4 Okay, Rule 53, our revamp goals is, we wanted to
5 establish environmental protection rules that require
6 operators to use BMP, best management practices, and BDAT
7 as I just talked about, at surface waste management
8 facilities. We wanted to normalize OCD Rules with other
9 state and federal regulations. And we wanted to address
10 and balance environmental justice, aesthetics, sensible
11 waste management, sound science and other relevant issues.

12 Now we've heard a lot about sound science, we've
13 heard a lot about sensible waste management. And then we
14 also have an executive order for environmental justice.
15 We've heard people talk about the aesthetic values of these
16 type of facilities when they're no longer in operation.
17 And so this agency has a really tough job in that we were
18 trying to put all this together, and this is our best
19 thinking to date on how to do this.

20 Q. (By Mr. Brooks) And you've got aesthetics in
21 here. In that sense, are you -- is it your philosophy that
22 the disposition of waste should be regulated even if those
23 wastes are not toxic?

24 A. Well, the answer to that question is yes, if --
25 We do that every day in our life. You know, we recycle

1 aluminum cans, plastic bottles and so forth. And just like
2 this bottle here, I could probably toss it out there on the
3 floor, and everybody else could toss theirs out there on
4 the floor, and probably we could demonstrate that there was
5 no real health risk with this bottle being out there, but
6 that is certainly not sensible waste management.

7 Q. We'd still want to get it cleaned up and disposed
8 of in a proper manner?

9 A. Mr. Fesmire would make sure I would pick it up.

10 Q. Continue.

11 A. Okay -- Excuse me, Commissioners.

12 Rule 53 overview. What is Rule 53? Rule 53
13 specifies the requirements that operators of surface waste
14 management facilities must follow to properly collect,
15 store, reclaim, recycle, treat and dispose of oilfield
16 waste.

17 "Treat" is a really key term here, particularly
18 when we talk about landfarms. Landfarms are designed to
19 treat waste, they are not designed to have permanent
20 disposal of waste left behind.

21 Okay, surface waste management facilities
22 addressed by Rule 53 include landfills, commercial and
23 centralized landfarms, small landfarms, oil treatment
24 plants, and then evaporation, storage and treatment ponds
25 and below-grade tanks.

1 Q. Now, another witness is going to address the
2 details of these definitions, correct?

3 A. Yes, that is correct.

4 Q. Go ahead.

5 A. Centralized and commercial surface waste
6 management facilities subject to Rule 53 -- and the word
7 "will" could be changed to "may be" large in size; I mean,
8 we certainly know that a lot of these facilities are going
9 to be very large in size; they can be up to 500 acres --
10 and will handle large volumes of highly contaminated
11 oilfield waste.

12 We know that oilfield waste includes a large
13 number of individual constituents in addition to a very
14 large number of petroleum hydrocarbons. While we all
15 really have fought very hard to get our exemption for the
16 oil and gas industry -- it's still a very essential
17 exemption for the industry, but we have to understand and
18 recognize that oilfield waste does have constituents in it
19 that could be harmful to the environment.

20 Okay, to expand on that statement that I just
21 made, a number of years ago EPA, particularly when they
22 were going out to determine if -- just how toxic -- if
23 oilfield waste should be classified as hazardous waste,
24 they made a number of studies, and it's an ongoing study
25 where basically they go out and they go to several type of

1 facilities and they collect samples, and then they analyze
2 those for different analytes, and what I have included in
3 this packet is probably the most recent information that we
4 have.

5 Now, I wasn't able to get all of the information.
6 For example, when they went out and did their sampling they
7 sampled oil refineries, they sampled production tanks,
8 tankbottoms in tanks, reclamation plants, different type of
9 facilities that were in the oilfield. And what I have for
10 you here today is a rather -- very large list of chemical
11 constituents that were found in various types -- oilfield
12 waste.

13 For example, if you go to D-8 in your packet, you
14 will see -- D-9, I'm sorry, if you go to D-9 in your --
15 this particular waste here was production facility
16 tankbottoms. And production facility tankbottoms is
17 something fairly common that we're going to see in our
18 surface waste management type of facilities. And I'd like
19 to -- if you'll just make note, this is for metals. If
20 you'll make note of the number of metals that was found
21 during this sampling program -- and some of the levels are
22 quite high.

23 And it actually really shocked me, because
24 chromium, for example, was found in eight out of eight
25 tankbottoms in a production tank and was at 71,000

1 micrograms per kilogram. And then there was a minimum
2 value of 1700 micrograms per kilogram. So they have a
3 maximum and a minimum.

4 But I think what is significant is, eight out of
5 eight samples they had chrome in them. And as you all --
6 as most people know, chrome is a -- is considered a toxic
7 pollutant. And then of course they have -- you know, they
8 have nickel, they have -- arsenic was there, antimony and
9 so forth.

10 Going to D-11, now, this -- I know when I worked
11 for an oilfield chemical company -- as you know, a lot of
12 surface companies, for years and years we used chlorinated
13 solvents to treat oil, particularly downhole and in
14 emulsion breakers and so forth. But one of our customers
15 were refineries, and organic chlorides in refineries is
16 really disastrous to refinery equipment.

17 And so it literally -- if you're not familiar
18 with what a distillation unit is, but a distillation unit
19 is the primary first step in distilling oil into different
20 products. And in the very top of the distillation unit,
21 they have some really exotic metals in there in separation
22 trays and so forth. But organic chlorides can literally
23 destroy those trays within days. And so there has always
24 been a big push out there to eliminate organic chlorides.

25 But surprisingly enough, we're still seeing some

1 of this, even as recent as 1992. And we thought we had
2 this problem fixed a number of years ago, but if you'll
3 look at this you'll see acetone, you'll see carbon
4 tetrachloride in two out of the 13 samples. And so, you
5 know, there's still some fairly nasty actors out there.

6 And so I'm not saying that these actors are the
7 end of the world, or these constituents are the end of the
8 world. All I'm saying is that they're in there, and we
9 have to know that they're there and handle and treat them
10 properly.

11 And then of course, if you'll go to D-12 and --
12 D-12, and then -- it shows, you know, like for example,
13 chrysene was found in just one out of 10 samples. But then
14 again you get into the long-chain hydrocarbons, so forth,
15 and then as you know, of course, you're going to find
16 those. Now whether those are hazardous or not, we know
17 that there -- I think there's 200 or 300 identified long-
18 chain hydrocarbons that probably have not been identified
19 as hazardous to human health, but the jury is still out on
20 whether they're an ecological hazard or not. So we have to
21 take that into consideration.

22 Okay, go to page 64 and you'll -- this is
23 workover and completion waste. This is something that you
24 very well could find in a workover pit or a drilling pit.
25 Once again, you'll see that acetone, benzene, ethylbenzene

1 -- methylene chloride was found, methyl ethyl ketone was
2 found, methylene chloride was found, tetrachloroethylene
3 was found and 4-methyl-2-pentanone was found.

4 And so once again, I'm going to say -- and you
5 know, I've been in the oilfield all my life, I've worked
6 with these chemicals, I've worked with these constituents,
7 it's something that we shouldn't be afraid of, but we
8 should be aware of them, that they're there, and we should
9 handle these properly. And tome, that's the biggest thing
10 that I wanted to point out here, is that these chemical
11 constituents are still there, they're still out there. And
12 so we should be aware of that.

13 Q. Chief Price, are many of these constituents
14 constituents that, if they were present in these quantities
15 in non-exempt waste, would cause it to become hazardous
16 waste?

17 A. That is a possibility.

18 Q. Thank you.

19 A. Okay, what does Rule 53 not address? It does not
20 address *in situ* remediation of leaks and spills, and that's
21 what Mr. Brooks had discussed in his opening statement. We
22 wanted to make sure that leaks and spills are covered under
23 -- if they're covered under Rule 116 and 19, that it was
24 not our intent for every leak and spill out there to be
25 classified or covered under Rule 53. I think we've pretty

1 well discussed that.

2 CHAIRMAN FESMIRE: Mr. Brooks, would this be a
3 good place to take a 10-minute break?

4 MR. BROOKS: It would be fine with me, Mr.
5 Chairman.

6 CHAIRMAN FESMIRE: Why don't we take a 10-minute
7 break, and we'll return at 20 till 11:00. It's my
8 intention to go till noon, take a one-hour lunch break,
9 come back at one o'clock, break once in the afternoon, and
10 quit at five o'clock today.

11 So with that, if you'd all please be back about
12 20 till 11:00.

13 (Thereupon, a recess was taken at 10:30 a.m.)

14 (The following proceedings had at 10:43 a.m.)

15 CHAIRMAN FESMIRE: Let's go back on the record.
16 This is the continuation of Case Number 13,586. I believe,
17 Mr. Brooks, your witness, Mr. Price, was in the middle of
18 his presentation.

19 Q. (By Mr. Brooks) Okay, you may continue, Mr.
20 Price.

21 A. Okay, thank you.

22 What is Rule 53? The goal of Rule 53 is to
23 protect human health and the environment by ensuring
24 through sensible waste management, BMPs -- best management
25 practices -- that operators will prevent pollution and by

1 ensuring that no new releases of oilfield waste occur.

2 And so that is a very philosophical point that we
3 need to make here, and it's also a very technical point, is
4 that we certainly have absolutely no objection in certain
5 circumstances, particularly in leaks and spills, one-time
6 leaks and spills, to using risk-based approaches. We do it
7 all the time in our approvals, we've done it a lot. We
8 think it's good, sound science.

9 However, when you purposely take a facility and
10 you put material in there for a reason to treat the
11 material, to make it -- remove the toxicity and to treat it
12 down to levels that this material can be re-used for a
13 beneficial use, that is our goal here. Our goal is not to
14 allow a new release at every one of these type of
15 facilities.

16 And so, to me, that's something that we all need
17 to understand what we're trying to do here, is, we're
18 really trying to provide a place where people can treat
19 their soils and re-use those soils in a beneficial, safe
20 manner. It is not an area for us to put materials in, and
21 the material we know is contaminated but yet we can't
22 decontaminate it, and yet then we choose to do a risk-based
23 approach on it, on these sites. That is not the intention
24 of these sites.

25 And this slide is just taken out of a RCRA

1 guidance, talking about sensible waste management. I think
2 EPA states, IOGCC, API -- I think everyone agrees with
3 sensible waste management, is that that is what we're here
4 for. We're here to have sensible waste management that is
5 practical, economical, that everyone can perform, and we
6 certainly are not in the business of wanting to put the oil
7 and gas industry out of business. I've lived in the oil
8 and gas industry all my life, and it's put the beans on my
9 table for many years. And so that's not our goal here.

10 Next slide.

11 Okay, OCD determined that sensible waste
12 management could be best achieved by requiring industry to
13 follow best management practices, BMPs, and using BDAT.
14 Once again, on these sites, risk-based approach is
15 inappropriate.

16 Next slide.

17 Rule 53 is also designed to strike a balance for
18 the operator's needs for the practical and OCD's needs for
19 enforceability. We have to have a balance there.

20 Q. And while you're talking about that, let me ask
21 you about one specific issue that it seems to me has some
22 relevance there.

23 The industry's presentation has a considerable
24 amount of material about the achievement of bioremediation
25 endpoint as being a criteria for closure of landfarms,

1 correct?

2 A. Correct.

3 Q. Now, is it true that that criterion can only be
4 valid if the landfarm has been properly managed throughout
5 all its existence?

6 A. That is correct, and Dr. Sublette will emphasize
7 that. It's got to be properly managed.

8 Q. And if it is not properly managed, the testing
9 data can show that -- can indicate that it has reached its
10 bioremediation endpoint when, in fact, it has not; is that
11 correct?

12 A. Well, that's possible.

13 Q. Yeah. So does that present something of an
14 enforcement problem if we use that criteria?

15 A. Yes, it does, because then we don't know -- we
16 don't know when we're done. And we don't know, unless it's
17 properly bioremediated, proper controls, proper operation
18 procedures, and if the bioremediation endpoint, we have to
19 have some sort of statistical analysis to show that it is,
20 indeed, at its endpoint.

21 Q. On the other hand, if we use a benchmark testing
22 figure that can be based on what is out there at the
23 landfarm at present and is based on our experience of what
24 landfarms in New Mexico achieve, is that a whole lot more
25 practicable for us to enforce?

1 A. Well, it -- well, of course it is. Not only is
2 it more practicable for us to enforce it, also it's much
3 easier for the operator. It's going to be less expensive
4 for them to be able to go out there and run some generic-
5 type testing, versus having to monitor this from start to
6 finish.

7 Q. So if the operator knows he's got to get down to
8 a particular target level, does he have an incentive to
9 manage it properly?

10 A. Yes, he does.

11 Q. You may continue.

12 A. Okay, OCD based Rule 53 on Rule 711, and I think
13 I've already touched on this. We basically borrowed from
14 sister agencies, solid waste, groundwater, hazardous waste.
15 And you know, they kind of invented the wheel for us, and
16 we weren't here, we didn't have the staff to basically re-
17 invent the wheel, and so it really helped us a lot to have
18 other agencies within New Mexico that have plowed basically
19 the groundwork for us and to use their technology,
20 administrative issues and so forth. And that's what we
21 tried to do here.

22 But I will say that our technical staff has
23 really worked hard to ensure that we're having a good rule
24 that's going to protect the environment.

25 Q. Okay, one other question since that's come up.

1 One of the commenters said something about OCD staff
2 picking numbers out of thin air. Did we pick any numbers
3 out of thin air?

4 A. No, we did not.

5 Q. Continue.

6 A. Okay, Rule 53 BMPs for surface waste management
7 facilities, best management practices, address proper waste
8 management issues, such as waste segregation,
9 characterization, storage, recycling, treatment and
10 disposal. Those are the underlying basics for proper waste
11 management in today's time.

12 Okay, get into the actual overview of the
13 subsections of the Rule. Subsection A is the definitions.
14 I think we've already kind of touched on that. We put
15 those definitions right up front.

16 A permit will be required for landfarms and
17 landfills. There's a special exemption for small
18 landfarms, less than 1400 cubic yards. And then we have
19 the same exemption for small liquid facilities, less than
20 500 barrels, that we carried over from the older 711 Rule.

21 Subsection C talks about permitting requirements,
22 application, public notice and financial assurances. I
23 believe Mr. Martin will probably be touching on a lot of
24 these issues. I'm just going to go through them real
25 quick, but...

1 All new facilities to be covered. When we say
2 all new facilities, we mean surface waste management
3 facilities. I believe we have received some comments
4 concerning that, so I want to clear that up. It's surface
5 waste management facilities.

6 Existing facilities that have major modifications
7 will be covered, applications we made on our form C-137.
8 Engineering designs, certified by a professional engineer,
9 are required.

10 Q. And that's a new requirement?

11 A. That is a new requirement.

12 Q. It's not in the present 711?

13 A. That is a new requirement.

14 And then of course we're going to have closure
15 plans.

16 Public notice will be required.

17 Next slide.

18 Financial assurances will be required. The
19 existing commercial facilities, they have a \$250,000 cap on
20 them, new facilities it's the actual closure cost of the
21 facility.

22 Small centralized facilities, there's a \$25,000
23 or \$50,000 blanket bond.

24 Small landfarms are going to be exempt. And so
25 here's where we're trying our best to accommodate the

1 everyday workings out in the oilfield, is that if people
2 want to have small landfarms, then this is our way of doing
3 that. And you will probably see later on in one of my
4 presentations about modeling and so forth, you know, the
5 larger the size, the more threat there is. The smaller the
6 size, the small landfarms, we feel, is less of a threat
7 than larger ones, and so we've chosen to exempt them.

8 Financial assurances. There are different types
9 of financial assurances: surety bonds, letters of credit,
10 cash accounts. And then financial assurances may be
11 reviewed every five years. We have that option. We can
12 also -- there could be some forfeiting of financial
13 assurances after proper notice and hearing.

14 Subsection D is permitting approval, denial,
15 suspension, modification and transfer. Ten-year terms,
16 we've placed on these facilities. I believe the reason we
17 went so long on these, is my understanding, that in order
18 to get the proper bonding and so forth from underwriters,
19 you have to have a longer period of time than what we
20 normally have on our discharge plan type of facilities.

21 And of course we could revoke or suspend -- for a
22 good cause shown. You know, to me that's extremely
23 important, that you need to understand that for a good
24 cause shown only would we suspend a permit.

25 Q. That good cause is the same standard that's in

1 the existing Rule 711 for revocation?

2 A. That is correct.

3 Q. 711 doesn't expressly provide for suspension,
4 right?

5 A. That is correct.

6 Q. But it does provide for revocation?

7 A. Yes.

8 Q. Now, the 10-year term is a new thing?

9 A. That is a new thing.

10 Q. Does it apply to existing facilities?

11 A. I'm sorry, I can't answer that. Mr. Martin will
12 have to answer that.

13 Q. Okay, we'll refer that to Mr. Martin. Okay, you
14 may continue.

15 A. Oh, and then if the -- operator shall not
16 transfer a permit without Division approval.

17 Okay, subsection E, siting requirements. Where
18 do we put these type of facilities? We know these
19 facilities are going to be rather large, may be large, and
20 so we have made a decision, what we feel is based on logic
21 and sound science, is that these facilities where
22 groundwater is less than 50 feet, this is not the place for
23 these type of facilities.

24 Within 200 feet of a watercourse. We have
25 redefined watercourse, need to talk about that a little

1 bit. There's a lot of fear in the definition, the way that
2 the Water Quality Control Commission looks at watercourse.
3 But I can tell you right now, we're a sensible, logic-
4 driven agency, and we're not going to call a small channel
5 that runs down through your property a watercourse. That's
6 not going to happen. And so we want to make clear that
7 we're going to use common sense in the definition of
8 watercourse, lake bed, sinkhole, playa lake. So you can't
9 locate these facilities within 200 feet of these type of --
10 I don't want to call them facilities -- these type of
11 watercourses, lake bed, sinkhole, playa lakes.

12 Within a wellhead protection area or a 100-year
13 floodplain. I want to talk about wellhead protection area.
14 If you spend -- go out there and build your facility and
15 then someone comes in and puts a wellhead protection area
16 next to you, then if you look at the Rule, the Rule will
17 tell you that you do not have to pack up and move because
18 somebody put a well right next to you.

19 That doesn't mean that we're not going to provide
20 the protection for that particular wellhead, it just --
21 What it means is that if you're there first and then a
22 wellhead protection area moves in around you, then you
23 don't have to pack up your facility and move off.

24 Within 500 feet of any wetland.

25 Within the area overlying any subsurface mine.

1 Within 500 feet to the nearest permanent
2 residence, school, hospital, institution, church in
3 existence at the time of initial application. Here we go
4 again, you know, not in my back yard. If someone -- if you
5 have your facility out there and someone builds a million-
6 dollar home next door, next to your fence, you were there
7 first. That's just common sense.

8 Q. Okay, before you go on to the next subject I want
9 to ask you a couple of questions, what you said about
10 watercourse. Was our adoption of the definition influenced
11 by the fact that we felt like we did not have the authority
12 to abrogate jurisdiction over anything the Legislature has
13 seen fit to call a watercourse? Did we feel like whatever
14 the Legislature has deemed fit to call a watercourse,
15 that's what we ought to call a watercourse?

16 A. That is absolutely correct.

17 Q. And we understand that almost any 500-acre site
18 is going to have some watercourses, like you said, within
19 this definition. There are going to be some channels where
20 there's --

21 A. Well, I hate to -- I hate to approach it in that
22 manner, because then someone could say, well, if you're
23 calling that a watercourse, it's a watercourse. And what
24 I'm saying is that a watercourse has definite banks, has
25 this definite -- like an arroyo or a wash or something

1 that's been there for a number of geological years, it's
2 not an erosional channel that's worked its way down through
3 there.

4 Q. Okay. There are a very wide variety of different
5 things that might be classified as watercourses under the
6 definition that the Legislature has given us, are there
7 not?

8 A. That's true.

9 Q. And we would rather look at that on a case-by-
10 case basis, versus trying to come up with a better
11 definition than the Legislature has done?

12 A. That is true. It makes our job easier if we
13 adopt what the Statutes basically have put in place and --

14 Q. But that does not preclude us from looking at an
15 application and saying, we think this is or this isn't a
16 watercourse, or even if it is a watercourse, we think you
17 can go ahead and use this portion of the land because as a
18 practical matter, it's a reasonable way to do; is that
19 correct?

20 A. That is absolutely correct, we will have that
21 option.

22 Q. And is that the approach that you and your staff
23 intend to implement, this --

24 A. Yes.

25 Q. -- with this particular provision?

1 A. Yes.

2 Q. Continue.

3 A. Okay, 500 acres maximum size. We originally had
4 this at five acres. We received a lot of comments from
5 operators that these facilities need to be a lot larger,
6 and we accommodate that.

7 No free liquids in landfarm or landfills, that's
8 another common-sense approach. You know, you don't put
9 something into a landfarm that's unlined, that's going to
10 have free liquids in it, and that would be the media for
11 that -- the transport media for that to go carry
12 contaminants down into the vadose zone and possibly down
13 into groundwater.

14 And of course, no RCRA hazardous waste allowed.
15 We would lose our Subtitle D status, probably, if -- well,
16 I know we would, and that's one of the things that we don't
17 want to do, is, we want to retain our oil and gas
18 exemption, and we're very protective of that, and we want
19 to make sure that we retain our exemption. And one way of
20 doing that is making sure that we don't accept hazardous
21 waste as defined by RCRA.

22 C-138s will no longer require OCD approval. This
23 is kind of a big paperwork reduction act. We feel that,
24 you know, it's time that we get out of the approval
25 process. And the reason we feel this way is, we feel we

1 have some very, very good, competent operators. They now
2 have people on board that are RCRA experts. They know what
3 they're taking, they know what they're not -- what they
4 can't take. And so it's a burden -- it's a tremendous
5 burden on our small staff, because we have literally
6 hundreds of these things coming in. And so therefore we
7 need to put the burden on the operator for the C-138s.

8 And of course operators have to maintain records.
9 That's an extremely important part of operation, is, we
10 need to maintain records so we know what are in those
11 facilities.

12 Non-oilfield wastes are not allowed except in
13 emergencies. We had talked about that before. Mr. Brooks
14 had indicated that that was -- came from a legal opinion,
15 and so therefore it's put in this particular Rule.

16 Of course, we protect migratory birds, stormwater
17 controls you're going to have in place, and comprehensive
18 contingency plans are required for these facilities.

19 Signs, you know, that's pretty typical. You need
20 to have a sign out there to have emergency contact
21 information, your name on there.

22 Maintenance and inspection plans, spill plan.

23 Gas plan. These landfills do generate gases, and
24 so -- Carl Chavez, our engineer for overseeing the design
25 of landfills, he's got a lot of experience, he comes from

1 Michigan, and he'll address the gas plan issue.

2 Training program. I think this is one of the
3 most important things in this rule, is, train your people,
4 train them what to do, train them to -- what if you have a
5 fire, what if you have -- what if you have a gas release?
6 What if somebody gets hurt? And so being prepared is -- If
7 you're prepared, you protect the environment. That's the
8 bottom line there.

9 Okay, landfills. Fences are required, common
10 sense. Fire safety, control odors and litter. We're not
11 in the air quality business, but we do know that we have to
12 control odors and litter. Active cover, need to have an
13 active cover on these things, that's common sense.
14 Groundwater plan required if applicable. You know, there
15 may not be any groundwater there, so you may not have to
16 have a groundwater plan.

17 Q. Let me interrupt you and ask you about odors,
18 because that's been raised. We realize that's fairly
19 subjective, but has that been a source, historically, of a
20 lot of our citizen complains about waste management
21 facilities?

22 A. We've had some problems with odors.

23 Q. Okay, and that's why we put that in this Rule?

24 A. Yeah. However, I will say that all of the
25 operators who have had problems with it have corrected

1 those problems.

2 Q. Thank you.

3 A. Okay, where did I leave off?

4 CHAIRMAN FESMIRE: Active cover.

5 THE WITNESS: Oh, prescriptive design for
6 landfills. You will see in the Rule a very comprehensive
7 design for landfills. We think it's extremely important
8 that guidelines are put in the Rule, because these are
9 going to be probably rather large facilities, and they're
10 going to be around for a long time, and so there's going to
11 be prescriptive design for these type of landfills. And
12 once again, Mr. Chavez will talk about those particular
13 designs.

14 Triple liner system where groundwater is between
15 50 and 100 feet, double liner system where groundwater is
16 greater than 100 feet. We want to dangle the carrot out
17 here that, you know, if you put your landfill in an area
18 where there's very little groundwater -- you know, we want
19 to encourage that. And so if you have -- if you design --
20 or if you apply for a landfill to be in one of these areas,
21 we're going to work with you on alternative standards. So
22 the triple liner certainly won't be -- you won't have to do
23 that. And so -- We're going to encourage that. And so
24 different types of designs will be allowed.

25 Leachate collection and detection are definitely

1 required. You know, these large landfills are going to
2 collect a lot of leachate. If it rains, there's leachate
3 there. And so those have to be pulled out of there and
4 treated properly.

5 And then of course, below the leachate collection
6 there will be a final safety net, detection, leak detection
7 required. And once again, if you're in an area where
8 there's very little threat to groundwater, then those
9 probably could be combined.

10 Top cover design may be either prescriptive or
11 performance based. Performance based is something that Mr.
12 Carl Chavez will talk about. There are many different ways
13 you can put top covers on this. I see Mr. Hicks is in the
14 audience here, and he's really a good designer of these
15 type of ET-type of covers, he's got a lot of experience in
16 the area. So we've learned a lot from him on ET covers,
17 and so...

18 Liner specifications, 30-mil PVC or 60-mil HDPE.
19 Now, why did we specify a liner type? We met with both PVC
20 -- the PVC industry and the polyethylene industry, we
21 thought it was fair that we mention both of them. By no
22 means are you limited to PVC or HDPE. I want to make sure
23 that that's clear, that other liners can be used.

24 Installation requirements, you know, you're going
25 to have to have certain requirements for any -- or there's

1 going to be requirements on how you install these
2 landfills.

3 Seam requirements. There's one of the things
4 about seams, and I'd like to talk about seams a little bit.
5 I have a show and tell here, if that's allowed.

6 MR. BROOKS: Well, since we didn't designate this
7 as an exhibit in our prehearing statement, it probably
8 wouldn't be if anybody objects to it. But what we have
9 here is an example of a liner seam.

10 We haven't gotten a lot of comments indicating
11 that this will be a controversial issue, so I would just
12 ask if any counsel are going to object to Mr. Price just
13 showing us an illustration -- an illustration of a liner
14 seam, a part of a liner that's seamed.

15 MR. HUFFAKER: No objection.

16 MR. CARR: No objection.

17 MR. SUGARMAN: No objection.

18 MR. BROOKS: Okay, you may proceed.

19 THE WITNESS: For many years, you know, we've
20 been -- I've been in the oilfield working, and we know that
21 drilling pits have liners, we know that large ponds have
22 liners and so forth, but we never really spelled out what
23 kind of seam went in there. And we have discovered that 80
24 percent of the seams that are going into facilities are
25 stitched. They're stitched. In other words, this leaks.

1 Okay?

2 And so I've got to be real honest with you, I
3 don't know how many pits I've gone by and I just didn't
4 pick up on this. But this is what's going in out there.
5 And so these things will leak.

6 And so as operators you probably need to be
7 thinking about what type of seams do I have going in there
8 to reduce reliability? And so that's why we have picked up
9 on seam requirement. We've put them in the Rule, rather
10 than just to imply.

11 So I just want you to look at this. This is a
12 stitched -- This will leak, and does leak.

13 CHAIRMAN FESMIRE: Mr. Price, where did that -- I
14 mean, how do you know that's true?

15 THE WITNESS: We know this is true because the
16 manufacturer of this particular liner and an installer give
17 us this and basically informed us about this.

18 CHAIRMAN FESMIRE: Okay, and you say 80 percent.
19 Why do you say that?

20 THE WITNESS: Because that's what he said. That
21 could be hearsay.

22 (Laughter)

23 THE WITNESS: Nobody's stopping me, though.

24 Anyway, seams is something that we need to be
25 concerned about, more so than me, because it's your

1 liability.

2 Soil base requirements, you know, it's common
3 sense, you go out there and you prepare the soil properly.

4 Okay, landfarms

5 Q. (By Mr. Brooks) Before we go on to landfarms,
6 just one question. Most -- pretty much all of this
7 landfill regulation is new, correct?

8 A. That is correct.

9 Q. We did not have any specifications about
10 landfills in Rule 711 or in the existing guidelines?

11 A. That is correct.

12 Q. And the seaming stuff is all new too?

13 A. That is correct.

14 Q. Correct.

15 A. Okay, subsection F in the Rule is land -- sorry,
16 subsection G is landfarms. Let's talk about landfarms here
17 a little bit, and -- Is it time to -- for us --

18 MR. VON GONTEN: Uh-huh.

19 THE WITNESS: We would like to -- we'll come back
20 to this slide, but we would like to show you -- we kind of
21 have a flyover presentation of landfarms in New Mexico, and
22 just give you an idea of what they look like how big they
23 are, where they're located and so forth, so forth.

24 Now all of the dots are different type of
25 landfarms that are permitted by us. You can see they're

1 rather large. This is a landfarm on the edge of a
2 permitted surface waste management facility. Most of these
3 are in Lea County.

4 Okay, to give you some sort of reference on how
5 large these facilities are, Glen is going -- Glen von
6 Gonten is going to put a scale on this system and to kind
7 of give you an idea -- Okay.

8 MR. VON GONTEN: That's a half a mile.

9 THE WITNESS: Okay, that is a half a mile across
10 there, on that particular landfarm. So you see, these are
11 large facilities, these are big facilities.

12 Okay, now go on back to subsection G.

13 Okay, landfarms. Only soils and drill cuttings
14 predominantly contaminated by --

15 MR. VON GONTEN: Wait a minute, I have to catch
16 up on this.

17 THE WITNESS: Okay, I'm sorry.

18 All right, I think I had mentioned earlier that
19 we did have a problem with the way we were operating
20 landfarms in which basically contaminants were going in
21 there that probably could not be remediated, could be
22 detrimental to the bioremediation aspect of it, and also
23 could be a threat to the environment.

24 And so we knew we had to make some changes. And
25 one of the things is that landfarms are meant to

1 bioremediate or to treat hydrocarbon-contaminated soils.
2 No tankbottoms. We -- under our waste rules, tankbottoms
3 should be recycled because they have recoverable oil in it.

4 Now as industry pointed out, there are some areas
5 in the state that we may not have the ability to find a
6 treating plant, and of course those exceptions are
7 permitted if that's justified. And you know, if you have
8 to haul tankbottoms 300 miles and you get \$50 out of them,
9 well, you know, that's certainly -- you'll spend more money
10 and the gasoline in the transportation trucks -- waste more
11 energy that way than you're going to get out of the
12 hydrocarbons that are in the oil.

13 No liquids, that's common sense. You know, these
14 are not pits, they're landfarms.

15 Chlorides, less than 1000. I'm going to talk
16 about where that number come from.

17 Setback requirements, stormwater controls,
18 operating requirements, treatment and vadose zone
19 monitoring required. Landfarms -- We have not required
20 landfarms to have liners. So if you don't have a liner,
21 and this isn't a pit and this is not a facility where we
22 want contaminants to move into the vadose zone, then we
23 need to monitor the vadose zone to determine if this is
24 going to happen.

25 Now one of the things -- we've relaxed the

1 additional list standards from 100 to 2500 parts per
2 million. 100, we realize, was a very stringent standard.

3 Q. (By Mr. Brooks) Let me interrupt here. 100 is
4 not in Rule 711, right?

5 A. That is correct.

6 Q. But it is in the existing guidelines?

7 A. It is.

8 Q. And it was in the first draft that we published
9 the proposed Rule 53?

10 A. That is correct.

11 Q. Continue.

12 A. And so operators basically said, you know, if you
13 want to provide a place that we can go out there, if we
14 have a leak or a spill, we can immediately pick that up and
15 we can take it to a landfarm where it can be treated --
16 Some of the landfarms are still waiting on the 100 parts
17 per million to happen, to bioremediate, and in that
18 particular case they may not be able to take it. And so
19 therefore the operator doesn't -- he might have to take it
20 somewhere else, or it might be cost-prohibitive for him to
21 do it.

22 So we realize that, knowing that in the long run
23 these facilities are going to get down to some number, but
24 we thought, okay, let's loosen up the regulation a little
25 bit so -- keep these facilities operating. So when we do

1 have a leak or spill, we'd be proactive, we can get it up
2 and put it into a landfarm and start treating it to make it
3 less toxic. And that's the reason we relaxed the
4 standards.

5 No size limit for cells, for individual cells.
6 But the maximum size for any one landfarm would be 500
7 acres.

8 We have new numerical closure standards. Glen
9 von Gonten is going to cover that later on, but I'll just
10 touch on them real quick.

11 We have a closure standard for benzene of .2
12 parts per million or milligrams per kilogram. BTEX is 50.
13 TPH, 1000. It has an asterisk by it, and I'll tell you why
14 that is 1000, is, we want to make sure we capture the long
15 chains, not just the medium or short chains of
16 hydrocarbons. GRO+DRO is 500 now. We were setting on 100.
17 We've raised that limit, we've taken a look at it and we
18 feel that we can do that without hurting the environment in
19 any form or fashion. We also think that's achievable.

20 And then once again, the 418.1 is somewhat
21 controversial because it uses freon. However, all the labs
22 we checked with, we haven't had a problem with 418.1.

23 There are other alternate methods out there. I
24 want to make sure you know that we're not requiring you to
25 do 418.1, but we'll allow you to do another method.

1 And then of course we have metal standards.

2 Next slide.

3 Q. Okay. And Mr. Price, you also have a chloride
4 standard, right?

5 A. That's right, we have a chloride standard of
6 1000.

7 Q. And you're going to discuss the chloride standard
8 in great detail after you finish this presentation and
9 start your second presentation?

10 A. Yes, I will.

11 Q. Continue.

12 A. Now, New "Environmentally Acceptable
13 Bioremediation Endpoint" Allowed. This is, no doubt,
14 cutting-edge technology. We certainly prefer sound
15 science. We just want to make sure that what we're doing
16 here is, we're going to make sure that we're not leaving
17 contaminants behind, and so therefore we've accepted this,
18 but we have put some restrictions on it.

19 TPH closure standards only apply for this.

20 Detailed operations plan required. We want to
21 know -- this is cutting-edge technology so, you know, we're
22 kind of like from Missouri, you're going to have to show us
23 -- the show-me state -- because bioremediation is not
24 appropriate for all oilfield waste. We know that. We know
25 that bioremediation will not work for all oilfield waste,

1 so therefore we want to see an 80-percent reduction in TPH.
2 We don't think that's unfair at all.

3 And then of course statistical determination --
4 or demonstration required to close it.

5 Q. Before we leave the area of landfarms, Mr. Price,
6 we're going to have a witness, are we not, that is going to
7 discuss these provisions in detail?

8 A. That is correct.

9 Q. And is that Mr. von Gonten?

10 A. Yes, it is.

11 Q. And if these other gentlemen have any questions
12 about landfarms, you'd a whole lot rather they save them
13 for Mr. von Gonten?

14 A. He's ready to answer all your questions.

15 Q. Thank you.

16 A. Next slide.

17 Okay, "small landfarms" are centralized
18 facilities. We've talked about that already. This is a
19 new subsection for small landfarms.

20 We got a lot of input that industry wants areas
21 that they can own the lease, that they can quickly go out
22 there, pick their materials up and -- you know, without
23 having to permit each one of them each time. And so we've
24 accommodated that. We think that's great, we think that's
25 proactive, that we have an area where they can pick these

1 soils up, contaminated soils, and get them to their small
2 landfarm and get the treating process going. And we've
3 done that, we've talked about the 1400 cubic yards.

4 However, we've also took their recommendation for
5 remaining inactive for only three years. And so that
6 basically is the criteria for small landfarms, 1400 cubic
7 yards and be active for only three years.

8 These will not be permitted. They will be
9 registered, but they will not be permitted.

10 You will have to provide proof of landowner
11 approval. If you have a landowner out there, you have to
12 get his approval before you go putting a small landfarm on
13 his property.

14 We had some comments about -- concern about
15 hundreds of small landfarms going in everywhere. We
16 actually haven't experienced that in our past -- old Rule.
17 We haven't experienced very many, if any, small landfarms,
18 but we know that the need is out there. And particularly
19 with the new Rule 53, surface waste management facility, we
20 know that there's going to be a need for small landfarms.

21 And so -- But we're going to limit it to one
22 active facility per operator, per lease. That seems to --
23 going to work very well in New Mexico. I've been -- you
24 know, other states it may not. But we think in New Mexico
25 it's going to work, we feel very confident about that.

1 And then of course you have to meet the same
2 siting requirements as any other landfill or landfarm, as
3 in Rule 53.E.(1) and (2).

4 And then of course signs are required.

5 Small landfarms. Since we don't have a lot of
6 controls on them, they're really up to the operator.
7 They're kind of here one day and gone the next. We only
8 want exempted oilfield contaminated soils, excluding
9 drilling cuttings, generated as a result of accidental
10 releases. That's just what I was talking about. We don't
11 want small landfarms to be set up by a drilling pit, on
12 every drilling pit out there. That's not our intent. Our
13 intent is to provide a really quick place for you to do
14 some housekeeping and get your contaminated soils into
15 these type of facilities.

16 And then of course you have to meet certain waste
17 management standards, provide certain application
18 information.

19 And then is less stringent closure performance
20 standards. That's one of the things we backed off of, is
21 closure performance standards. They're going to be much
22 easier to close because they're smaller, there's a direct
23 relationship between size and threat to the environment.

24 Q. It would also be because of the limited nature of
25 the waste that they can accept?

1 A. And the limited nature of the waste, that is
2 correct.

3 Q. Now as to the less stringent closure standards,
4 they're the same, are they not, for hydrocarbons and for
5 chlorides?

6 A. That's correct, the will be the same for
7 hydrocarbons and chlorides.

8 Q. But we do not require they be screened for all
9 the other constituents that we're requiring the larger --

10 A. That was not our intent, right.

11 Q. Okay.

12 A. Okay, let's talk about ponds a little bit. I'm
13 going to go through this real quick.

14 The thing I want to talk about ponds real quick
15 is that these ponds are -- it's not going to be your
16 average small pond. These are going to be very large ponds
17 at landfills that they use for leachate collection and
18 treatment of liquid waste. It's got to be designed by a
19 professional engineer.

20 Double liners with leak-detection.

21 Liner specifications, construction standards.

22 They'll be seam standards. Remember my seam example.

23 Ten acre-feet maximum size. That's a big pond.

24 RCRA non-hazardous waste only.

25 Fencing and netting will be required. There's

1 exceptions to those, so they'll be fenced. And if they're
2 a threat to wildlife they'll have to be netted or some
3 other control device put in to protect migratory birds.

4 And closure required within six months of
5 cessation of operations.

6 Okay --

7 Q. Before you go on past ponds, I want to ask you
8 one question. Several commenters have suggested that we
9 take this subsection out altogether and leave all these
10 ponds to be regulated under our proposed Rule 50, right?

11 A. That's right, right.

12 Q. The existing Rule 50 excludes pits that are at
13 711-permitted facilities, correct?

14 A. Surface waste management facilities, that's
15 correct.

16 Q. Right, and it's not just if they're covered by
17 Rule 711, it's if they're at a facility that's permitted
18 under Rule 711?

19 A. That is correct.

20 Q. So if we took this out, took subsection I out
21 here, between now and the time the new pit rule is enacted
22 one could argue that those pits that are at existing 711
23 facilities or new facilities that would have been under 711
24 are not regulated by anything?

25 A. Well, they would not be.

1 Q. Okay. Now, that's one reason why we don't want
2 to do that, right?

3 A. That is correct.

4 Q. Now there's another reason, is there not?

5 A. I think there is.

6 (Laughter)

7 Q. Does Rule 50, the pit rule, does that require any
8 kind of public notice, opportunity for public comment
9 before a permit is issued, Rule 50?

10 A. No.

11 Q. Now, Rule 53 does though?

12 A. Rule 53 requires a public notice.

13 Q. Now for small pits, particularly your drilling
14 pits and your workover pits, we don't want to require
15 notice for that?

16 A. No, we do not.

17 Q. But for these large pits and permanent treatment
18 facilities, do we think that notice and opportunity for
19 public comment by the neighbors is appropriate?

20 A. Well, that is -- the agency thinks that, and also
21 the comments that we have received from different parties
22 is that they feel -- public notice is a real big issue for
23 these type of facilities.

24 Q. And that's the big difference between regulating
25 them under Rule 50 and regulating them under Rule 711, the

1 way things are presently structured?

2 A. That is correct.

3 Q. Continue.

4 A. Okay, subsection J, closure and post-closure. We
5 have some time lines for -- operators got to notify OCD.

6 And then we also have a constraint on ourselves.
7 Rather than just allow us all the time that we want, if the
8 operator has a constraint, we have placed a constraint on
9 ourselves. So we have changed -- we've changed this to
10 accommodate and make sure that the OCD will be responsive
11 to this.

12 An operator may request a hearing for closure if
13 for some reason there's some sort of discrepancy or if
14 there's some sort of conflict between the closure
15 requirements.

16 Re-vegetation is going to be required. We have a
17 definition for that.

18 Part of the financial assurances can be held for
19 post-closure.

20 Facility closure may be initiated by the
21 Division. Once again, that's only going to be if good
22 cause is shown.

23 And then we'll have closure standards that will
24 be in place. We've kind of adopted the landfill post-
25 closure of 30 years from sister agencies. Landfarms and

1 ponds, we've basically limited that to just three years,
2 and that's primarily to make sure we have vegetation coming
3 back.

4 MR. BROOKS: Okay. Before you move off of
5 closure standards, I would like to point out -- because
6 we're at this point in the Rule, I would like to point out
7 to the Commission and the Commission counsel that there is
8 an error in paragraph J-1 on page 24.

9 As Mr. Price has just testified, we put a time
10 limit on the Division in the processing of closure
11 applications, and in response to comments received in the
12 last round, we changed that to -- from 90 to 60 days. That
13 change is incorporated on our change sheet in the fourth
14 line of paragraph J.(1).

15 However, the 90-day time period appears also in
16 the seventh line of G.(1) [sic], and we did not get -- and
17 the change sheet does not reflect the change from 90 to 60
18 days in the seventh line of G.(1), and the two periods
19 should be the same.

20 Q. (By Mr. Brooks) You may continue, Mr. Price.

21 A. Okay, next slide.

22 Okay, subsection K, exceptions and waivers.

23 Basically an operator for good cause can ask for an
24 exception or waiver to any part of this Rule. You know,
25 there's always an exception to every rule, I was told one

1 time, and so here's your opportunity. And to me, this
2 makes just good logical, common sense.

3 Next slide.

4 And then transitional provisions. I think
5 probably Mr. Martin will be able to talk about this a
6 little bit better than I can. He's our permit writer for
7 most of these type of facilities.

8 And basically grandfathering of existing
9 facilities, except for certain requirements. They're
10 listed on the slide. But once again, I think Mr. Martin
11 would probably be better at testifying as to how that's
12 going to come about, so...

13 Q. And so these gentlemen should save their
14 questions on that portion of the Rule for --

15 A. If you want a good answer, that's --

16 (Laughter)

17 Q. Does that conclude, Mr. Price, your general
18 presentation?

19 A. Yes, it is. Or yes, it does.

20 Q. Now, Chief Price, when you were working on this
21 -- formulating this Rule, when your predecessor was still
22 Bureau Chief, were you instructed to do a study to
23 determine what amount -- Well, I think maybe I need to ask
24 a few preliminary questions.

25 Was there a fairly considerable amount of

1 discussion in the OCD during the year 2005 about chlorides
2 and landfarms?

3 A. Yes, there was.

4 Q. And a complaint was filed about the fact that our
5 existing regulatory regime was allowing chlorides to go
6 into landfarms when they ought not to, correct?

7 A. Correct.

8 Q. And we had several hearings about that subject?

9 A. Correct.

10 Q. Now did your predecessor instruct you to do a
11 study to make a scientific determination, as best you
12 could, of what level of chloride concentration we should
13 allow to be introduced into landfarms?

14 A. Yes.

15 Q. And did you make that study?

16 A. Yes, I did.

17 Q. Now, is the exhibit, which is designated as
18 Exhibit 9, Part 2, and is behind Tab 9 in the notebook --
19 does that reflect the results of your study?

20 A. Yes, it does.

21 Q. Okay, would you -- and this time I'm really not
22 going to interrupt you because I don't understand it. But
23 I will ask you to go through and describe this study in
24 detail, and then I'll have some follow-up questions.

25 A. Okay. As Mr. Brooks said, that we did a

1 performance study to determine allowable salt concentration
2 in permitted landfarms.

3 Next slide.

4 And so we also looked at a salt risk assessment
5 review. From our observations and all the data that we
6 gathered, that we reviewed, that we went through, we looked
7 at, it appeared that human health impacts from salts appear
8 to be a low threat. Groundwater impacts were considered a
9 medium threat. And ironically, ecological impacts were the
10 highest threat of all.

11 So I'm just going to read this here, but proposed
12 Rule 53 for surface waste management facilities (old Rule
13 711) is presently being re-evaluated to determine the
14 effects of salt contaminated soils placed in these type of
15 facilities. Landfarms are facilities designed to remediate
16 hydrocarbon contaminated soils. All oilfield waste has
17 some residual salt content, in particularly drilling
18 cuttings [*sic*] can have extremely high salt contents --
19 100,00 parts per million is not uncommon -- which would
20 basically sterilize the soil and prevent any bioactivity.
21 In addition, these salts may present a future threat to the
22 surface and underlying water.

23 OCD's environmental staff as been given the task
24 to determine what salt levels would be protective of the
25 environment when placed in these type of facilities. OCD

1 has researched other states -- Michigan, Kansas, Texas --
2 to compare regulations and values.

3 OCD researched the issue of salt closure
4 standards that is protective of the environment. OCD
5 approached the problem as follows:

6 OCD modeled the chloride ion since it is
7 generally considered non-adsorbing -- doesn't stick in the
8 soil -- highly soluble in water, and very mobile.

9 OCD used EPA's and ASTM's best thinking to date
10 soil screening guidance for the nation for the protection
11 of groundwater. We didn't invent the wheel here, we just
12 basically used what was invented already.

13 OCD compared the results from the API VADSAT
14 model -- that's American Petroleum Institute model -- with
15 EPA's guidance using New Mexico data. Now, that's one
16 thing we did do, is, we tried to capture New Mexico data.

17 OCD focused on groundwater protection and
18 compared steady-state infinite source models considered to
19 be very conservative to an interactive transient finite
20 source model.

21 OCD also considered information considered by the
22 chloride working group draft proposal a number of years
23 ago.

24 OCD also reviewed information from other state
25 programs.

1 Now, here is -- or here comes the laser beam, so
2 guys, watch out.

3 Okay, here's a typical box model that almost all
4 models use in some form or fashion, in which you have some
5 sort of contaminated source in this area, you have some
6 sort of rainwater or some sort of water that comes through
7 the source, moves down as leachate and gets into the
8 groundwater and then moves -- once it gets in the
9 groundwater, then it moves downgradient into the
10 groundwater. And as it moves through the groundwater, it
11 dilutes. And that term is called DAF, or dilution-
12 attenuation factors. EPA recognizes DAFs, however in all
13 cases DAFs can vary from 1 to several hundred.

14 There are many different factors that control
15 what happens, the amount of -- and I will tell you right
16 now, on almost all these models the amount of infiltrated
17 water is probably one of the most sensitive parameters,
18 because if you stop and think about it, if you don't have
19 any infiltrated water coming through the contaminated soil,
20 then you don't have a problem. So if it gets held up right
21 in this area here, and it doesn't hit the groundwater, then
22 it might not be a problem.

23 And then the other issue, the other sensitive
24 parameter, is the size of the site. Those are the two most
25 sensitive parameters out there. The size of the site, the

1 mass-loading, makes a big difference. The bigger the site,
2 the bigger the threat to groundwater. The smaller the
3 site, the less threat.

4 Next slide.

5 And so I have a chloride model study here, and
6 we'll have to go to a different -- go to the spreadsheet.

7 Okay, yeah, that one, that's the one I want to
8 start on.

9 What I'd like to is start explaining that -- our
10 first attempt is, we used the API's VADSAT -- that's the
11 American Petroleum Institute -- VADSAT model. It's a
12 coupled-source vadose zone and groundwater model. It uses
13 the conventional second order linear differential
14 equations. I'll look at Dr. Thomas, make sure I'm right on
15 that. But it's a standard transport model that just about
16 every model starts with. And then of course input
17 parameters can be changed, and typically are changed, to
18 try to meet the site of the location that you're trying to
19 model.

20 In this particular model what I did is, we went
21 with the cell size of five acres. That was our original
22 instructions, to go with a five-acre site.

23 The depth of the waste was -- or the thickness of
24 the waste was two feet thick, and this simulates what we're
25 allowing in a landfarm.

1 Minimum depth to groundwater is 50 feet.

2 Liners, we have -- we did not model any liners or
3 natural clay barriers in this particular model. In other
4 words, there's no natural liner, or no liners, underneath
5 this site.

6 The waste type is salt contaminated soil-like
7 material at 1000 parts per million. And I can tell you
8 right now that we had a lot of reiterations on -- and we
9 had to go -- you have to go through these things a number
10 of times before you actually get the number to -- not
11 diverge but converge onto the right answer.

12 And then location, we picked Lea County, New
13 Mexico, the Ogallala formation.

14 We used for a hydrologic input, we used a State
15 Engineer's study report, Number 84-4062, and we also looked
16 at groundwater recharge in the southern high plains,
17 another report.

18 I need to talk about the -- one thing about
19 models is that the calibration of models -- when you're
20 trying to calibrate a model within a few days or a few
21 months, or even a year, your percent of error can be
22 enormous.

23 And so one of the reasons that I like to use --
24 the reason I did use this particular report right here, it
25 was a -- the New Mexico State Engineer's office actually

1 studied actual groundwater depths for over a period of
2 about 12 years in -- near Lovington, New Mexico. And in
3 this study, within this study, they knew -- they had decent
4 records on the amount of water that was coming out of the
5 aquifer, and they had good records on the amount of -- they
6 had piezometers on the amount of water and flow that was
7 coming into it and the water leaving, going into Texas.

8 And so what they did is, they set up a study
9 program for over 12 years to try to determine what the
10 infiltration rate was in this area.

11 Now, one thing they did not do, they did not
12 differentiate between a local focus recharge versus diffuse
13 recharge. They didn't do that.

14 But what they did do is, they had a very -- and
15 the longer the period you do this, the more accurate that
16 your data becomes. And so they performed this over about
17 12 years, and so in my mind -- and our technical staff, we
18 looked at this and said, well, you know, this is a long-
19 term study that gives us some real time data.

20 And so -- next slide, please -- so we used that
21 particular study in order to get the parameters that we
22 selected. And we're going to have to make this bigger for
23 you so you can see the parameters.

24 Okay, using the American Petroleum Institute
25 coupled vadose zone model, we selected input parameters

1 that were taken out of the report and very similar to what
2 the Ogallala is. And I'll be glad to go through all of the
3 input parameters if you want. I would rather just move on,
4 but if anyone wants -- if the Commissioners want me to go
5 through each parameter, I can, but I can tell you that
6 we're taking out -- the parameters were taken out of the
7 groundwater -- the New Mexico State Engineer's groundwater
8 study, and I used their same parameters that they used.

9 CHAIRMAN FESMIRE: Are those parameters on your
10 exhibit?

11 THE WITNESS: Yes, they are. They are on the
12 exhibit that we're looking at, on page 77.

13 One of the things I want to point out is, once we
14 modeled it, then -- Glen, can you move it up just one
15 notch, move up, so I can get the -- yeah, right there.

16 The breakthrough curve -- This is called a
17 breakthrough curve right here. The actual infiltration of
18 the salt core water or the contaminated infiltrated water
19 did not break out into the groundwater until about 90
20 years. And this is fairly consistent with all models. It
21 takes a long time for it to get there, but once it gets
22 there, then of course -- then you have this increase in the
23 curve up, and then it peaks out and it comes down until it
24 gets to...

25 Now, the red line that you see here is the

1 groundwater, is approximately 200 parts per million. Now
2 we have a natural background in the Ogallala of about 50
3 parts per million. And so on all of these models you have
4 to add the background to the actual number that you're
5 getting in order to remain protected.

6 And so in this particular model, this curve right
7 here, the top curve, peaks out at about 200-something parts
8 per million, then it starts coming back down. So we're
9 right at the limit. And this was 1000 parts per million on
10 this particular model, and the receptor well that the model
11 simulated was right at the edge of the contaminated source,
12 downgrade the contaminated source.

13 Now the second curve, the lower curve, is another
14 well located 200 feet downgradient. And as you can see,
15 the further you move down from the source that's coming
16 into the groundwater, then you have less of an impact.
17 Now, it doesn't mean that you're not impacting the water;
18 it just means that you're impacting it less than what you
19 normally would.

20 In other words -- and the further you move away
21 from the source, you have dilution, attenuation, and then
22 that's where the DAF the EPA has studied, that they allow a
23 certain amount of dilution in groundwater.

24 Now -- Okay, go to the next slide.

25 Okay, the next model that we used was an EPA

1 steady-state infinite source model, and that's on page --

2 MR. VON GONTEN: Is that the wrong one? That's
3 right.

4 THE WITNESS: It should be EPA -- I have page 78
5 or 79, but it's called EPA steady-state infinite source
6 model.

7 So what we did here is, we basically took EPA's
8 -- right out of their risk-based approach modeling book,
9 and we used EPA's steady-state infinite source model. It's
10 very common, a lot of the states have adopted it for
11 groundwater contam- -- I will say this, it's also very
12 conservative.

13 Once again, the way this model works, it --
14 rather than a top-down, it's a bottom-up model, is --
15 basically what you're doing is, you have a groundwater --
16 the national groundwater standard for chlorides in water is
17 250 parts per million. And what it does, it basically
18 back-calculates and tells you what level of chlorides can
19 be in the soil and be protective of groundwater.

20 In this particular model -- and once again, we
21 used this data right here, we used -- that's Lea County
22 data that we used right out of one of those reports. So we
23 tried to be consistent with our input parameters. But we
24 wanted our input parameters to be the same for every model
25 that we use, so we could -- you're kind of comparing apples

1 to apples.

2 The bottom line on this one is, the DAF turned
3 out to be 23. Now, as I'll show you later, EPA's default
4 number for DAF is 20 for small sites, for sites that are a
5 half acre or less. That is the default number, which is
6 extremely protective, but we'll discuss that later on.

7 This particular model, it turned out that you
8 could have 1183 parts per million, or 1183 parts per
9 million of chloride in the soil, and it would be protective
10 of groundwater.

11 MR. VON GONTEN: Next?

12 THE WITNESS: Next. The next one was the
13 chloride working group, tier 1 evaluation. This was a RBCA
14 approach. This particular slide --

15 CHAIRMAN FESMIRE: What is the RBCA approach?

16 THE WITNESS: I'm sorry, sir?

17 CHAIRMAN FESMIRE: What is the RBCA approach?

18 THE WITNESS: It's an ASTM standard that ASTM
19 come up with a back-calculating model, very similar -- it's
20 a steady-state infinite source model, very similar to
21 EPA's. There's not a lot of difference in them. They --

22 CHAIRMAN FESMIRE: So it's another model?

23 THE WITNESS: It's another model.

24 Q. (By Mr. Brooks) I'm sorry, Mr. Price, what page
25 are you on?

1 A. I'm on page --

2 CHAIRMAN FESMIRE: -- 81.

3 THE WITNESS: -- 81.

4 MR. BROOKS: Thank you.

5 COMMISSIONER BAILEY: While you're defining, what
6 is DAF?

7 THE WITNESS: Dilution-attenuation factor. And
8 DAF, by definition, is the ratio of the core water
9 concentration, which is the contaminant water in the vadose
10 zone, compared to the groundwater. It's a ratio. And so
11 EPA -- their current default number for small sites is 20.
12 In other words, they allow a certain amount of dilution in
13 the water.

14 This particular model -- and I'm going to cut to
15 the chase here. This is a very, very small site. The DAF
16 turned out to be 109 on this one. Now you might say, well,
17 that's extremely high. But you have to understand, this
18 was a very small site that the chloride working group
19 worked on, and so therefore for small sites the DAF will go
20 up.

21 And this particular number -- I don't know if you
22 can see it or not -- is 1938 parts per million. So this
23 particular model said that you could leave 1938 parts per
24 million of chlorides in the soil, and it would be
25 protective of groundwater. But once again, this site was

1 only 50 feet by one foot. It was kind of a hypothetical,
2 very small site, that is presented where it would give the
3 highest chloride number.

4 Okay. Now, the next model I used -- it wasn't
5 actually a model, it was a study. It was the EPA default
6 dilution-attention factor (DAF) study. The EPA composite
7 -- it was formulated using the EPA composite model for
8 leachate migration, with transformation products.

9 Now chlorides don't generally transform into
10 other products. I wish they did. I wish they went to
11 chlorine and -- go in the air, and we'd get rid of them,
12 but -- and there are a lot of magic-bug salesmen out there
13 that are selling some of those products, but I see Dr.
14 Sublette grinning over there, and he probably knows that
15 that may not exist. But anyway, chlorides do not
16 transform, and so therefore the transformation part of this
17 model was left out.

18 And basically what this model did is that it took
19 several hundred sites throughout the United States --
20 several of these were oil and gas sites, several of these
21 were RCRA landfarms, landfills. And so what they did is,
22 they performed a statistical Monte Carlo analysis of all of
23 these sites. And basically what that does, the Monte Carlo
24 analysis attempts to give you some range for every site in
25 the United States.

1 Now once again, with that particular range like
2 that, you would certainly say, well, that should not be
3 used in New Mexico. But it's very ironic, it's how close
4 some of these Monte Carlo simulations can turn out. They
5 can be extremely accurate to on-site or site-specific
6 conditions.

7 Go to the next page. Move up just a little bit.

8 Now, what the EPA did is, with these hundreds of
9 sites they came up with a percentile, 85th percentile, 90th
10 percentile, 95th percentile. I can tell you that their
11 default numbers lie somewhere between 90 and 95th
12 percentile. I could not find any real -- or good
13 documentation on why they selected between 90 and 95th
14 percentile. However, since they ran the 85th, the 90th and
15 the 95th, I chose the median, in the middle.

16 And what I did is, I extrapolated for a five-acre
17 site. You can see the red line there, you can see the red
18 line right there, and that goes right across there. And so
19 the DAF for a five-acre site turns out to have a DAF of 15.
20 In other words, if you're using the 90th percentile, then
21 -- which is fairly protected, if you put that 15 into --
22 that gives you a DAF of 15.

23 And using their model -- push the slide up a
24 little bit -- using their model, nationwide -- can you go
25 up -- I mean, go down. Go down. Yeah, the magic number

1 here is 750 parts per million for a five-acre site.

2 Now go back, the other way.

3 What you need to understand here, or the concept
4 I'm trying to get across here, if you will look, the larger
5 the site, the lower the DAF. And once again, it all
6 matters with how big these facilities are. It's not always
7 necessarily what the chloride content is, it's how large
8 they are. That is what you really need to come out of this
9 with, is how -- the larger the size, the more threat you
10 can have because you have a larger mass there.

11 That would be, if I have a small sugar cube or a
12 small salt cube, versus a salt cube as big as this room,
13 it's common sense which one is going to cause more
14 contamination. Of course the big one is.

15 And anyway, so the number for this is 750 parts
16 per million. And what we did is -- The next slide on page
17 87, this is a mistake. I apologize for it, there's a
18 mistake on this. The number should not be 1027 but the
19 average number -- can you take that "page 1" off of there
20 or not? Good. -- the average number of all the combined
21 studies came out to be 1229 parts per million.

22 Now, the VADSAT number is compensated for
23 chloride background levels. The other one, the other
24 studies, were not compensated for background levels. So
25 therefore that reduces their number. And so over to the

1 right there should be 1183.

2 And if the Commissioners would like to mark this
3 down -- and I apologize, I can give you the corrected
4 slide, but it should be 1153, 1953 and 700. And then if
5 you take the average of that, that is 1209.

6 However, if you take the geometric mean of that
7 -- which is more appropriate for this particular case,
8 because geometric means is a way that you can actually
9 apply a mean to data that changes or occurs in a relative
10 fashion. If data occurs in a relative fashion -- and
11 remember, I said the bigger it is, the smaller the DAF.
12 These are relative. And so therefore the geometric mean
13 would be very appropriate for this particular case, and the
14 geometric mean turns out to be 1120, one thousand one
15 hundred and twenty milligrams per kilogram or parts per
16 million.

17 Now in -- we being a regulatory agency here,
18 that's kind of a weird number, so we just rounded it off to
19 1000. So we're back to 1000 again.

20 So that is how we came up with a number that is
21 protective of groundwater.

22 Next slide.

23 We took a look at other agencies, other states.
24 Michigan has a number of 500, 2500 and 5000. That's a
25 tiered number. Texas has a number of less than 3000 parts

1 per million of chlorides, with an EC less than 4. And
2 Kansas has the number 1000. I don't have a -- there is
3 another number -- another agency had 1000, but since it's
4 not part of my exhibit -- Okay.

5 MR. VON GONTEN: Back to chlorides?

6 THE WITNESS: Yeah, I need to go back to
7 chlorides.

8 CHAIRMAN FESMIRE: Mr. Brooks, how much longer is
9 he going to be?

10 MR. BROOKS: Mr. Price, how much longer will your
11 technical presentation --

12 THE WITNESS: It's going to be probably another
13 hour.

14 MR. BROOKS: Okay, and I probably have maybe 10
15 or -- maybe about 10 minutes more with Mr. Price after he
16 finishes his technical presentation.

17 CHAIRMAN FESMIRE: Okay. So why don't we break
18 for lunch at this time and come back at one o'clock?

19 (Thereupon, a recess was taken at 12:03 p.m.)

20 (The following proceedings had at 1:05 p.m.)

21 CHAIRMAN FESMIRE: Let's go back on the record.
22 This is the continuation of Case Number 13,586. It's
23 Thursday, April 20th. It's 1:05 p.m.

24 I believe, Mr. Brooks, you were leading your --
25 no, you weren't leading -- your witness was --

1 (Laughter)

2 MR. BROOKS: I've done a lot of that and probably
3 will do more, but probably not at this point.

4 CHAIRMAN FESMIRE: -- your witness was going
5 through his presentation.

6 Q. (By Mr. Brooks) Yes, Mr. Price, as soon as
7 you're up and running you may continue.

8 A. Okay. Next slide. Okay, the next portion of my
9 presentation is -- actually, go to the next slide. I'm
10 going to -- We had considered chlorides, since they're a
11 really good tracer of contamination movement in the vadose
12 zone and also whether the groundwater would be contaminated
13 or not, we modeled chlorides to determine the impact on
14 groundwater.

15 The next step that we had to do is, we had to
16 take a look at ecological receptors. And so what we did
17 is, we considered soil invertebrates and plants. We did
18 not consider aquatic species.

19 We based most of our research on the Royal Roads
20 University report concerning matrix soil standards for salt
21 under the British Columbia contaminated sites regulation.
22 There were a number of these sites that were in and around
23 the oilfield up there and other locations.

24 Go back to the pink slide.

25 One of the things that we received a lot of input

1 on is chlorides versus EC or SAR test. Of course, chloride
2 is an anion of sodium chloride or some other salt such as
3 mag chloride or calcium chloride.

4 Then EC is the electrical conductivity -- it can
5 be measured with an instrument -- and SAR is the sodium
6 absorption ratio, which generally has to be run under
7 laboratory conditions.

8 A lot of the approach for the remediation of
9 salt-impacted surfaces has been to utilize SAR and EC in
10 order to determine if acceptable levels are low enough that
11 you could have ecological activity taking place. Now
12 there's been an issue of whether -- is chlorides the best
13 method to use, or is EC the best method to use? And
14 actually the answer to the question is both. Both of them
15 are very good, both of them kind of do the same thing.

16 Now, what EC doesn't really do is, you can't
17 really use EC, to the best of my knowledge, for modeling.
18 So if you're going to use modeling or if you're going to
19 try to make some sort of determination, if the chloride's
20 left in the soil, whether it's going to contaminate
21 groundwater, you pretty well have to use chloride. EC is
22 probably predominantly used to determine if the level is
23 low enough for plant growth.

24 Now what I had found out is that chloride
25 extraction is a very easy test to use. There are many

1 field test kits that you can use. Quality control can bet
2 set very stringent -- you can put stringent quality
3 controls on the methods.

4 And then the EC is run by a saturated method in
5 which you actually go out there and take some soil and you
6 put some water in it. And of course with someone who has
7 not done that very often, then your results could vary all
8 over the place. But then again, one could say that is also
9 true if you've never ran a chloride test and seen the
10 endpoints of where you could also say that. So both of
11 them have their application, both of them are good.

12 Now this Division has chose to go with chloride
13 extraction. Number one, almost all of the industry
14 operators are very familiar, and all their consultants, are
15 very familiar with chloride extractions. They're easy to
16 use, test kits are readily available, and we feel that the
17 quality control in chloride test kits are probably a little
18 bit better than saturated paste.

19 Extractions are more accurate when different
20 types of soils are involved, almost as much as 10 to 1 for
21 chloride. The chloride test, when you have different soils
22 -- clay soils versus sandy soils -- and you have a mix of
23 those, then there's no doubt that chloride levels are
24 considerably more accurate than EC methods.

25 If you have one soil only -- for example, you

1 have a leak or a spill, it's on a location in which your
2 matrix of your soil is fairly consistent from top of the
3 ground and so forth, then EC would possibly maybe even
4 outperform chloride in that particular instance.

5 But when you have a mixture of soils, then it's
6 no doubt that chloride is probably a more accurate and
7 easier test to run, it's probably a little more precise
8 also.

9 Saturated paste is easy and quick to use, it
10 produces good results when used with similar soils, the
11 same type of soils. Chloride extraction field kits
12 produces very similar results as laboratory methods. SARs
13 are generally run in the lab.

14 So I guess the bottom line here is, is that we
15 chose to use the chloride method for both impact to
16 groundwater and also plant viability and invertebrate
17 viability. And there are some methods, and I'll show you
18 in the -- go to the next slide -- next one. Okay -- Can
19 you make that a little bigger or -- Is that it?

20 Okay, this particular graph that you see here --
21 it's on page 95. What you're looking at here is, this
22 basically shows that EC and chloride for similar soils, for
23 the same type of soil, are very linear. In other words, if
24 they are similar soils, then you can predict results either
25 way. You can get a chloride number, and you can pretty

1 well predict what the EC is going to be, and vice-versa.

2 However if you have different soils, then what
3 this particular graph shows is that for different chloride
4 levels with different types of soils, then you can see that
5 you can get numbers that can be as much as 10 to 1 off.
6 And that's the only thing I wanted to point out here, is
7 the difference between chloride and saturated paste.

8 Next slide.

9 This basically more or less table-izes the graph
10 that I just showed you. Now this particular slide, what
11 this is showing, we wanted to take a look at soil
12 invertebrate species and sensitivity to chlorides. And if
13 you will take a look at this, you will see that over here
14 on the left, on the Y axis here, is the percent of species
15 with the sensitivity distribution. This is a percentile
16 distribution range. And on the X axis here, we have sodium
17 chloride numbers.

18 And the first slope is the effects endpoint,
19 nonlethal, EC 50, what they call it, effects concentration.
20 And what it is, they take a number of species and what they
21 do is, they expose them to certain levels of chlorides, or
22 salts in this particular case, salts, and each species
23 which represents a dot here has a test run on it and is
24 exposed to a certain amount of chloride. And when that
25 particular species begins to have a nonlethal effect, but

1 it does impact the species and there's a noted 50-percent
2 change in the species, then that particular species is
3 plotted on this curve. And this is called an EC 50 curve.

4 And so therefore you're plotting chlorides versus
5 how it impacts all these different species where they would
6 have a 50-percent effect on them. And as you can see --
7 I'm not sure what that little guy is, but he's pretty
8 sensitive. And then this one up here, I'm not sure what
9 that is but, you know, he's pretty salt-tolerant.

10 And so there's a whole gamut and a whole range of
11 these type of species. And I'm not a biologist, and so
12 therefore I can't really discuss in detail to you the
13 different species that they used and exactly how these --
14 the lifespan of them or anything else, or their
15 reproduction or anything. But I basically captured this
16 just to show that as chlorides go up in level it affects
17 different species.

18 Now, one of the things that they've done -- and
19 now this line here probably -- and I apologize for this,
20 but when we normalized all of our slides to make them the
21 same size, these -- the annotated lines got moved. And so
22 what the British Columbia folks have done is, they've set a
23 25-percentile protection level.

24 Now, normally as an engineer we like to look at
25 90 to 95 percentile. That seems to be the safe way to go.

1 But in this particular case, the lower the percentile is,
2 then that's more protected. And so in this particular
3 case, if you have a 25 percentile coming out here, you can
4 see that your salt levels are about 1500 parts per million
5 salt levels. And so that is the protection level that this
6 particular study uses, is 25 percent -- the percentile.

7 Basically what that's saying is that 25 percent
8 of these species here were basically impacted -- or below,
9 I'm sorry, below the point, and the rest of them are above,
10 which means that this chloride level right here, which
11 would be about 1500 parts per million, is protective of all
12 of these species out here. So 75 percent of the species
13 are protected with this level right here.

14 Once again, this line that you see here -- I
15 apologize, that's the next slide, the line should be under
16 the 25 percentile. Go back. The line should be drawn
17 under the 25 percentile, comes under 4700 and under 1200.

18 Now what this is, this is the graph -- or this is
19 a table showing LC 20. LC 20 is the lethal concentration
20 for 20 percent of the species at certain levels. And then
21 we have an EC, effects concentration, of 50. So we have
22 the two plotted together here. And once again, the 25
23 percent is bolded here. And if you draw a line underneath
24 that -- and that's where the line is supposed to be -- you
25 will see that 75 percent of the species above here is going

1 to be protected with this level right here.

2 Now, I can't tell you what species these are. I
3 apologize for that, I'm not a biologist. But I just know
4 that in general, that these type of species below here will
5 be protected. I also can't tell you if they're native to
6 New Mexico or not, but I can tell you that those are all
7 listed in that one report, and I can certainly get anybody
8 copies of it.

9 I think the bottom line here is that by setting a
10 low percentile level, that you're setting some pretty low
11 numbers here.

12 For example, the sodium chloride level here would
13 be 1200 parts per million. However at 4700 parts per
14 million it would be lethal for these guys right here, it
15 would be lethal, but for everything above that it would not
16 be lethal.

17 So we know that you can have some chloride levels
18 out there, salt levels out there, that's not going to kill
19 everything, but it certainly will have an impact on some
20 species.

21 This is just a table breaking down measured and
22 saturated paste, EC versus chloride, once again. And also
23 what's neat about this slide, it actually breaks down the
24 sodium chloride into chloride and sodium, and you get a
25 little bit better idea for the EC 50. And that X there --

1 the LC is a lethal concentration -- should be 20. And you
2 can get a little bit better idea of what we're talking
3 about there.

4 There's a number of 728 parts per million
5 chloride, and for the EC measuring paste 630. It's pretty
6 close. And then for the LC_x or the lethal concentration
7 you can see that it takes a 2900-part-per-million chloride
8 that basically would be lethal to 25 percent of the
9 species. And of course anything above that, the remaining
10 75 percent, it would not be lethal. However, it may have
11 -- it may have an impact on them, but it would not be
12 lethal.

13 I'm going to go to plant species. Once again,
14 when we normalized our slides this annotated blue grama
15 grass, which is very common in New Mexico, should be just
16 about right at this point right here. Please re-draw
17 your -- and I apologize for that. It should be just about
18 this area right here. It should be in the neighborhood of
19 about 2000 parts per million of chloride, sodium chloride,
20 salt --

21 CHAIRMAN FESMIRE: Why re-draw it?

22 THE WITNESS: Well, because the blue grama grass
23 is showing up here at this level, and it needs to be down
24 here.

25 CHAIRMAN FESMIRE: Oh, so re-draw the arrow?

1 THE WITNESS: Yes, re-draw the arrow. It's got
2 to come down on the chart, and it needs to come down on the
3 chart to just about right where I'm pointing, right there,
4 the 50 percentile.

5 And I did have an opportunity to discuss this
6 with the Lea County extension agent, and it was confirmed
7 that blue grama grass will certainly grow when you have
8 salt levels, sodium chloride levels, about 1800 parts per
9 million. But there is an impact on it. It just doesn't
10 yield 100 percent, but it will grow.

11 Now from a chloride standpoint, if you break this
12 1800 parts per million down, the chloride is always about
13 60 percent of the sodium chloride, and that equates to
14 about 1200 parts per million, that blue grama would still
15 grow at about 1200 parts per million.

16 Next slide.

17 I took a look at Scots pine, blue spruce. These
18 guys are pretty sensitive to chlorides, notwithstanding the
19 fact that you may plant Scots pine or blue spruce out in
20 Lea County or other parts of New Mexico. We certainly have
21 those in some of the areas of New Mexico, but these guys
22 are pretty sensitive, as you can see. And 1000 parts per
23 million, this is potentially affected. So 35 percent of
24 these guys are potentially affected. They would have a 50-
25 percent loss in yield. Doesn't mean that it's lethal, it

1 just means that it's probably going to slow their growth
2 down.

3 Okay, I went through that pretty quick, and that
4 ends my presentation.

5 MR. BROOKS: Okay, I have some more questions for
6 this witness, some of them about this presentation, but I
7 don't have a lot more, so...

8 MR. VON GONTEN: Do you want the slides back up,
9 David?

10 MR. BROOKS: Yeah, we will -- I would like to go
11 first off to the slide on page 77.

12 MR. VON GONTEN: Is that on salt?

13 MR. BROOKS: Yeah, it's the American Petroleum
14 Institute VADSAT model.

15 THE WITNESS: 77, that one right there.

16 MR. VON GONTEN: Okay. Oh, that's in the XL?

17 THE WITNESS: Yeah, it is.

18 Q. (By Mr. Brooks) Now, you used -- Chief Price,
19 you used several different models in doing this work, did
20 you not?

21 A. That's correct.

22 Q. And one of these was this American Petroleum
23 Institute VADSAT model that is referred to in page 77?

24 A. Yes.

25 Q. Now these models that you referred to, are these

1 accepted in the discipline? These are peer-reviewed models
2 that people accept as appropriate ways to do modeling?

3 A. They are peer-reviewed.

4 Q. And actually, Dr. Stephens, an expert witness for
5 industry, does not really disagree with your methodology,
6 does he?

7 A. I don't believe he does.

8 Q. And the results he --

9 A. I don't believe he does totally.

10 Q. Well, I'll ask him these same questions --

11 (Laughter)

12 Q. -- but you have gone over his materials that were
13 filed in evidence, haven't you?

14 A. Yes, I have.

15 Q. And the results -- Where he makes similar
16 assumptions, he comes to similar results, does he not?

17 A. Yes, he does.

18 Q. Okay. Now one of your assumptions was a five-
19 acre source?

20 A. Yes.

21 Q. And at the time you did this study, we had a
22 five-acre cell limitation for landfarms?

23 A. Yes, we did.

24 Q. Which is not part of this proposed Rule?

25 A. That is correct.

1 Q. They can go up to 500 acres?

2 A. That's correct.

3 Q. And if you used a block of 500 acres, you would
4 get a higher number. You would get a lower number for a
5 tolerable level, would you not?

6 A. That's correct.

7 Q. Now I want to look at some of these other
8 assumptions that you made. What distance to groundwater
9 did you assume?

10 A. I used approximately 50 feet.

11 Q. Okay, and you made some assumptions which I won't
12 go into but some assumptions about the nature of the
13 aquifer, the rate of flow, the amount of water, et cetera?

14 A. My input data came directly off of the New Mexico
15 State Engineer's 10- to 12-year study for infiltration for
16 the Ogallala in Lea County. It came right out of the
17 report.

18 Q. Okay. Now the New Mexico Citizens for Clean Air
19 and Water, and Controlled Recovery, have filed comments and
20 they have indicated that they think your number of 1000
21 milligrams per kilogram for chlorides is too large, right?

22 A. Yes.

23 Q. And in fact, I know New Mexico Citizens has
24 recommended 500 instead?

25 A. I believe that's the number, right.

1 Q. Now, if you went to 500, that would be more
2 protective of the environment, would it not?

3 A. It would be.

4 Q. And you'd have a larger percentage of species
5 that would tolerate 500 than will tolerate 1000?

6 A. That's correct.

7 Q. On the other hand, there's a lot of salt down in
8 southeast New Mexico, is there not?

9 A. Yes, there is.

10 Q. In fact, there's a whole salt section that goes
11 across a large area down there?

12 A. It's a lot of it, right.

13 Q. And a lot of it is above the oil and gas, so they
14 have to drill through it --

15 A. Most of it is.

16 Q. -- they have to drill through it --

17 A. And it outcrops.

18 Q. Yeah. And so you get a lot of waste that's salt-
19 contaminated down there?

20 A. That's true.

21 Q. And it has to go somewhere?

22 A. That's correct.

23 Q. And did you -- in coming to these numbers, was it
24 necessary to come to some balancing of those perspectives?

25 A. Yes.

1 Q. Now, industry has suggested that for the small
2 landfarms with the two-acre limitation, that because two
3 acres is a smaller size and will have less hydrocarbon --
4 or less chloride loading, that it's appropriate to allow
5 higher amounts of chloride in these smaller landfarms. And
6 so far as the statement that the modeling results you'd get
7 for two acres, they would be -- they would lead to the
8 suggestion of a higher tolerance level, right?

9 A. No, not higher tolerance levels --

10 Q. Well --

11 A. -- but it would lead to a suggestion that they
12 may have higher chlorides in the soil that would still be
13 protective of groundwater.

14 Q. Right. But that wouldn't change your results so
15 far as the soils -- the seeds that would germinate in those
16 particular areas where you -- when you attempted to re-
17 vegetate?

18 A. That's correct. That's the limiting factor.

19 Q. Yeah. And then there's another factor, is there
20 not, and we don't know exactly how many small landfarms
21 there will be?

22 A. We do not know that.

23 Q. I heard a quip on -- I guess it was Saturday
24 Night Live or one of those shows a few years ago, where
25 somebody went into a Chinese restaurant with his escort and

1 he ordered two won ton soups. And the waiter said, Why
2 don't you just order one two-ton soup?

3 (Laughter)

4 Q. If you have five one-acre --

5 CHAIRMAN FESMIRE: Mr. Carr, surely you're going
6 to object to that one?

7 (Laughter)

8 MR. CARR: We're letting him testify, and he can
9 do anything he wants.

10 Q. (By Mr. Brooks) If you have five one-acre
11 landfarms and they're pretty close together, would they be
12 likely to produce results similar to one five-acre
13 landfarm?

14 A. It's possible.

15 Q. And like we don't know how many of these small
16 landfarms there'll be, we also don't know how many -- how
17 close together they'll be?

18 A. That is correct.

19 Q. We allow one per lease?

20 A. Right.

21 Q. And in southeast New Mexico there are a lot of
22 pretty small leases, are there not?

23 A. That's correct.

24 Q. This is not a factor, because you don't know the
25 parameters, you don't know how many there are going to be,

1 and you don't know how close together. It would be pretty
2 difficult to model that, would it not?

3 A. It would be.

4 Q. But is this a factor you took into consideration
5 in proposing the same standard for the small landfarms as
6 for the larger landfarms?

7 A. Yes.

8 Q. Okay. Like I said, your second presentation is
9 pretty technical and there's a lot of it I don't
10 understand, so I'm not going to question you on that. I'm
11 sure others will have questions. But there are a couple of
12 things that I would like to ask you about that come from
13 other presentations -- that come from other comments we
14 have received.

15 Going to subsection J in the Rule, Rule 53 J,
16 J.(5) on page 27 --

17 A. Okay.

18 Q. -- we propose that if a facility is abandoned --
19 or is closed, rather, not if it's abandoned -- if it's
20 closed and there is a desire to use that land for some
21 purpose that is incompatible with re-vegetation, that
22 provided there's some diligence in doing that we will
23 excuse the vegetation requirements. Is that a fair summary
24 of J.(5)?

25 A. I believe so.

1 Q. Now in that provision we say if the owner or the
2 tenant contemplates some other use.

3 A. Correct.

4 Q. It's been suggested that whoever is actually
5 going to use it in some other manner, that it's really the
6 owner, it's up to the owner or whatever contracts or
7 agreements the owner has that will control that, and the
8 tenant really doesn't have any control except such as he
9 derives from the owner. Would the Bureau have any
10 objection to deleting the word "tenant" --

11 A. It would not.

12 Q. -- in J.(5)?

13 A. Would not at all.

14 Q. Thank you. I apologize for being a bit
15 disorganized here.

16 On page -- I'm looking at the different book, so
17 I have to correlate between our draft and the other. On
18 page 1 of the Rule, O.(3), definition of oilfield waste,
19 the industry has suggested that we should say exploration
20 for, drilling, and production of, rather than exploration
21 for and production of, in the second line of that
22 definition.

23 A. Okay.

24 Q. Now, there can be maybe some quibbling about
25 whether drilling is exploration or not?

1 A. I think it's appropriate to put in there.

2 Q. You think that change is appropriate?

3 A. Yes.

4 Q. That's what I was going to ask you, thank you.

5 Okay, on page 3 -- well, it's not in our Rules,
6 so I can't ask you to look at it. I don't have it before
7 you. But industry has proposed definitions of diesel-range
8 organics and gasoline-range organics, and my understanding
9 is that -- May I approach the witness, your Honor?

10 CHAIRMAN FESMIRE: You may.

11 Q. (By Mr. Brooks) Show him this. Would you look
12 at those definitions? Now if there's a desire for
13 definitions of those terms, we don't have a problem with
14 defining them, right?

15 A. That's correct.

16 Q. But we don't agree with those definitions?

17 A. That is correct.

18 Q. Tell us why.

19 A. Well, I'd like to refer that to Mr. von Gonten.

20 Q. Okay, very good.

21 Let us go to Rule 52, which appears on page 5.
22 Rule 52 purports to set out the --

23 A. From page 5?

24 Q. Yes, page 5 of the Rule. It purports to set out
25 what are the permitted and the prohibited means of

1 disposing of oilfield waste?

2 A. Correct.

3 Q. Now, the industry committee has filed some
4 comments in which they have proposed some additions that
5 would be to the general tenor that it's a prohibited
6 disposition if somebody disposes of oilfield waste in a
7 facility without the permission of the operator of that
8 facility. Did we discuss that yesterday?

9 A. Yes, we did.

10 Q. Now, so far as it being a prohibited disposition
11 for somebody to dispose of waste without the permission of
12 the operator of the facility, we don't have a problem if
13 the Commission would like to add that as a prohibited
14 disposition; we think it ought to be, right?

15 A. It should be in there.

16 Q. On the other hand, we don't want any language
17 that would leave open the assumption that just because they
18 had the permission of the operator, that's necessarily a
19 permitted disposition?

20 A. That's correct.

21 Q. Because there might be some other reason why it
22 would be a prohibited disposition?

23 A. Right.

24 Q. Okay. So if the Commission would like to make
25 that addition, we think that's probably a good idea but we

1 want them to be very careful about how they express it.

2 Okay, let's see if I have any other things here
3 that I need to take up with you. Most of these will be
4 taken up with the people who are commenting on the
5 particular areas that the suggested changes deal with.

6 Oh, this one I wanted to ask you about because I
7 believe you actually have some experience with it.

8 In our provision concerning contingency plans --
9 and that is -- in our draft it's in C.1 -- no, it's in C --
10 53 -- no, it's in 53.E.(14) on page 13. 53.E.(14).(g), we
11 have required that the contingency plan be filed with local
12 police departments, fire departments, hospitals and
13 emergency response teams. And the industry proposals have
14 limited that to emergency response planning committees.

15 Did you have some occasion to deal with the issue
16 of emergency response planning committees when you were
17 formulating the hydrogen sulfide rule a few years ago?

18 A. Yes, I have, and also I'm the lead emergency
19 responder for major oilfield incidents. I can tell you
20 that there are several small communities that do not have
21 an LEPC, or an emergency planning committee.

22 Q. And among those that do have, is there a
23 considerable variation in how active and --

24 A. Yes.

25 Q. -- effective they are?

1 A. Right. And so therefore our intent here is just
2 to open it up and make sure that whoever is the responding
3 agency, that would be included in --

4 Q. So you would specifically recommend to the
5 Commission that they not limit it to just the local
6 emergency response?

7 A. Yes, I would make that recommendation.

8 Q. Okay. Now, in the same paragraph of the Rule, in
9 dealing with emergency response plans, the industry has
10 suggested we add a subparagraph that reads, the emergency
11 coordinator may amend the plan as necessary to protect
12 fresh water, public health or the environment during an
13 emergency.

14 Now, if the amending is done during an emergency
15 to deal with that particular emergency, do you think that's
16 a good idea?

17 A. I think it's an excellent idea.

18 Q. But you're a little concerned about that language
19 lest during an emergency refer to the protection of fresh
20 water rather than to amending the plan, so it would suggest
21 that it can be amended sometime other than during an
22 emergency?

23 A. That's correct.

24 Q. So with the amendment of moving during an
25 emergency up to where it actually follows the word "plan",

1 would you approve that change?

2 A. I would support that.

3 Q. Thank you. Now -- well, these are things that we
4 talked about, and I am going to ask you about them,
5 although they would really be within Mr. Martin's portion
6 of the Rule, because I'm not sure that he is specifically
7 prepared to respond to them. So with your permission I'll
8 ask you about -- This is on page -- it's in J.(1). Our
9 J.(1) is on page 24 of the Rule.

10 J.(1) provides, with regard to closure, as you've
11 said in your outline, that first the operator will give us
12 notice --

13 A. Right.

14 Q. -- that they propose to close. And then we have
15 a period of time to decide if we want to impose additional
16 requirements.

17 A. Correct.

18 Q. Now industry has proposed that our receipt of the
19 operator's notice be deemed five days after they mailed it.
20 What's wrong with provision, from our point of view?

21 A. Well, it looks like, to me, that they could go
22 ahead and proceed without approval.

23 Q. Yes, if we happened to not get it, then we
24 wouldn't be able to have any input on their closure, right?

25 A. That's correct.

1 Q. And so would we definitely prefer that the rule
2 be written so it's up to them to assure that we get it
3 before our time for review starts?

4 A. Yes.

5 Q. Okay. And do we think that's quite important for
6 protection of the environment?

7 A. We think that's very important.

8 Q. Now, another thing that I've written, we provide
9 for notice and hearing if we impose requirements that are
10 not in their closure plan, correct?

11 A. Yes.

12 Q. And they would like to postpone the closure until
13 that -- if there's a hearing, until it's upheld by appeal
14 to the Commission. Is that -- Do you remember us
15 discussing that?

16 A. Yes, I do.

17 Q. We oppose that, do we not?

18 A. Yes, we do oppose that.

19 Q. And is there a remedy under our present Rules for
20 them if they -- if it's that important in a particular
21 case?

22 A. Yes, under our general Rules anyone could ask for
23 a hearing on that basis.

24 Q. Yeah, and could they not ask the Commission to
25 stay the proceeding until they had --

1 A. They could ask the Commission to stay, yes, they
2 could.

3 Q. Thank you. There is a provision in J.(3).(b),
4 and J.(3).(b) deals with the situations under which the
5 Division can close a facility.

6 A. Right.

7 Q. And it reads -- one of the provisions, which is
8 on the second and third from the last line before the start
9 of (i), reads, or if disposal operations have ceased and
10 there has been no significant activity at the facility for
11 six months?

12 A. Right.

13 Q. Now that says both -- two things, disposal
14 operations have ceased, and there is no significant
15 activity for six months?

16 A. Right.

17 Q. Now if a disposal facility were being properly
18 operated, even if there was no disposal going on, there
19 would ordinarily be some activity at that site within a
20 six-month period, would there not?

21 A. Yes, there would be.

22 Q. Particularly with a landfarm, because you ought
23 to be out there tilling and watering and those things?

24 A. That is correct. And even in a landfill too.

25 Q. Yeah, as you put down interim cover and those

1 things that you --

2 A. Leachate collection.

3 Q. Right. So then it isn't our intent with that
4 provision that we can go and close a facility just because
5 they haven't received any new waste in six months?

6 A. No, no.

7 Q. Okay. Why do we need to be able to come in and
8 close the facility when there's been no activity for a
9 specified period of time?

10 A. Well, I think a good analogy would just be like
11 plug and abandon of a well or TA of a well. If it's not
12 being used and there's no further intended use for it, then
13 if it's not closed properly, that it can become a threat to
14 the environment.

15 Q. And one of our responsibilities under our
16 statutes, of the Oil Conservation Division, is to close and
17 reclaim abandoned facilities, correct?

18 A. That is correct.

19 Q. And we'll need a standard so we'll know when it
20 can be abandoned?

21 A. Correct.

22 Q. Thank you. Okay, Mr. Price, with regard to
23 Exhibit 9, Part 1 -- which is the materials that you made
24 your first presentation behind Tab 8 -- is Exhibit 9, Part
25 1, is that materials that were prepared by you --

1 A. Exhibit --

2 Q. Exhibit 9, Part 1, behind Tab 8?

3 A. Yes, okay.

4 Q. Is that materials prepared by you or collected by
5 you from sources on which engineers would normally rely?

6 A. Actually, it was assembled by me and information
7 collected through normal engineering --

8 Q. Well, much of it was prepared by -- many of the
9 slides were prepared by --

10 A. It was prepared by me.

11 Q. -- prepared by you?

12 A. Yes, it was.

13 Q. Well, I will ask you about both of these
14 presentations because I think the same question applies.
15 The materials behind Tab 8 and the materials behind Tab 9
16 -- and this is Exhibits 9, Parts 1 and 2 --

17 A. Right.

18 Q. -- all of these materials were either prepared by
19 you or assembled by you from sources on which a responsible
20 environmental engineer would rely in doing his work?

21 A. Yes.

22 MR. BROOKS: Mr. Chairman, honorable
23 Commissioners, I tender Exhibit 9, Parts 1 and 2, into
24 evidence.

25 MR. CARR: No objection.

1 MR. HUFFAKER: No objection.

2 CHAIRMAN FESMIRE: Mr. Sugarman?

3 MR. SUGARMAN: No objection.

4 CHAIRMAN FESMIRE: With that, Exhibit 9, Part 1,
5 and Exhibit 9, Part 2, will be admitted into the record.

6 Q. (By Mr. Brooks) Okay. Mr. Price, have you
7 studied all of the portions of the proposed Rules -- the
8 portions of Rule 7 that are being amended and all of
9 proposed Rules 51, 52 and 53?

10 A. Yes, I have.

11 Q. Is it your professional recommendation that with
12 the exceptions of the additions and deletions, changes,
13 that we have pointed out, which are very few, is it your
14 professional recommendation that the Commission adopt these
15 for the protection of the environment, public health and
16 fresh water?

17 A. Yes.

18 MR. BROOKS: Thank you, Mr. Price.

19 Pass the witness.

20 CHAIRMAN FESMIRE: Mr. Huffaker, cross-
21 examination?

22 CROSS-EXAMINATION

23 BY MR. HUFFAKER:

24 Q. Do you have a copy of the proposed Rules in front
25 of you there, Mr. Price?

1 A. Yes. Yes, we do.

2 Q. Would you look at the definition of soils?

3 A. Okay.

4 MR. BROOKS: Page 2.

5 THE WITNESS: Page 2, I have S.(7)?

6 Q. (By Mr. Huffaker) Yes, sir. Would you read that
7 into the record?

8 A. Yes: Soil shall mean earth, sediments or other
9 unconsolidated accumulations of solid particles produced by
10 the physical and chemical disintegration of rocks, and
11 which may or may not contain organic matter.

12 Q. You said you got that definition from an ASTM
13 standard, correct?

14 A. We did.

15 Q. What ASTM standard did you get that from?

16 A. I will have to refer to one of the technical
17 people on that.

18 Q. Do you know which person I could ask that?

19 A. Glen von Gonten.

20 Q. Then I'll postpone any further questions about
21 that definition --

22 A. Okay.

23 Q. -- until we get there.

24 I want to address the issue of acceptance of non-
25 oilfield wastes under the current Rule 711. I believe

1 there was some testimony that currently there are two
2 criteria under which a solid waste facility can accept non-
3 oilfield waste, and one is under an emergency order from
4 the Department of Public Safety.

5 A. Under Rule 711?

6 Q. Yes.

7 A. Yes, right.

8 Q. And the other is in a case where the non-oilfield
9 waste is determined by your bureau to be -- to meet two
10 criteria. One is, it's not a hazardous waste under RCRA,
11 correct?

12 A. Right, right.

13 Q. And the other criteria is that it is similar in
14 kind and character to oilfield waste.

15 A. Correct.

16 Q. And have you yourself any familiarity with any
17 instances in which the Environmental Bureau has approved
18 the acceptance of non-oilfield waste?

19 A. I am aware of some, yes.

20 Q. And what are you -- can you give me an example?

21 A. The example that comes to mind is, I believe that
22 there was a facility, an old municipal landfill -- or I
23 believe it was an old landfill, that that particular waste
24 was taken to one of our permitting facilities.

25 Q. And did you have any objection to that?

1 A. I wasn't in the chain of command at that time.

2 Q. Do you have any objection to that idea?

3 A. Yes, I do.

4 Q. What is your objection?

5 A. Well, my objection is, it's not an oilfield
6 waste.

7 Q. And you're basing that on the legal
8 interpretation, and you said we're going to hear about it
9 later --

10 A. Yes.

11 Q. -- in the proceeding?

12 A. Right.

13 Q. All right. Other than that legal interpretation,
14 do you have any objection to the acceptance of an oilfield
15 surface waste facility of a nonhazardous waste that's
16 similar in kind and character to an oilfield waste, if
17 application is made and the Environmental Bureau is given
18 an opportunity to consider the matter?

19 A. I think under situations where if they're almost
20 identical waste -- let's say crude oil, for example --
21 Well, that's a bad example.

22 Let's say maybe a diesel product that's part of a
23 crude oil stream. Then in those particular situations when
24 the wastes are so much intrinsically alike from an
25 environmental standpoint, I don't see any difference.

1 However, we do have a real regulatory problem in
2 the fact that our agency does not regulate those type of
3 wastes, and therefore we might be exceeding our authority.
4 And so that's the problem I would have with it.

5 Q. In other words, your problem is the legal
6 problem?

7 A. Yes.

8 Q. Yes. And that if that can be disposed of, then
9 you don't have a problem; is that correct?

10 A. I'd have to say yes.

11 Q. All right. And I think you've seen in the
12 submissions that CRI has made during the course of this
13 proceeding since November that one of the examples that CRI
14 has given is that they've been asked to accept as -- in
15 their facility, in their landfill facility, mole seal from
16 an ethanol refinery. Do you remember seeing that?

17 A. You know, I'm not familiar with that, I'm sorry.
18 We do have a permit writer that will testify. Ed Martin
19 could probably discuss that with you.

20 Q. We'll take it up with him.

21 You showed the Commission EPA-associated waste
22 studies of tankbottoms.

23 A. Produced tankbottoms, production tankbottoms.

24 Q. Yes, that's correct.

25 A. Right, right.

1 Q. Production tankbottoms.

2 A. Right.

3 Q. And those are the kind of tankbottoms that are
4 addressed in various places in these draft -- proposed
5 Rules, right?

6 A. Yes, it could be one of the waste streams in
7 there, yes.

8 Q. And you noted when you made the presentation to
9 the Commission that tankbottoms found by the EPA to
10 typically have concentrations of heavy metals and other
11 contaminants that would exceed the standards that you
12 suggest be used in vadose-zone monitoring and closure
13 monitoring under these Rules; isn't that correct?

14 A. That is correct.

15 Q. And you also testified that one of the purposes
16 of a landfarm is to remediate contaminants, not to leave
17 them in place; is that correct?

18 A. That is correct.

19 Q. And isn't it true that the kind of contaminants
20 that you identified as being in production tankbottoms from
21 the EPA study would not be remediated in a landfarm?

22 A. Some of it would be, some of it could be. Some
23 of the volatile and semi-volatile chemicals that were in
24 there. Most of the metals would not be.

25 Q. And the metals, therefore, if placed in a

1 landfarm, would not be remediated; is that correct?

2 A. I'm not aware of a whole lot of remediation
3 techniques that removes metals.

4 Q. Now, under the scheme that is being proposed for
5 sampling and testing of materials placed in landfarms in
6 the proposed Rules, at what point in the history of a
7 landfarm would the material in the landfarm or to be placed
8 in the landfarm be tested?

9 A. I would like to refer that to Glen von Gonten --
10 he's going to address the whole landfarm issue and vadose
11 zone monitoring and testing -- if you don't mind. I'll
12 attempt to answer if you want me to, but I think it would
13 just be a repeat.

14 Q. Well, why don't you attempt it?

15 A. Okay, go ahead and ask the question again.

16 Q. At what point would the landfarm waste stream --
17 in this case a tankbottom waste stream -- first be sampled
18 to find out if it had any metals, heavy metals, in it?

19 A. Either in the treatment zone monitoring or in the
20 vadose zone monitoring.

21 Q. So one would not know if a tankbottom material
22 accepted into a landfarm contained heavy metals until after
23 it was placed in the landfarm?

24 A. That's correct.

25 Q. Wouldn't it be better to test tankbottom

1 material, if it's going to be accepted in a landfarm,
2 before it's placed in a landfarm?

3 A. I can't deny that that's not correct. I think
4 you're right. It may not be practical. And just because
5 those constituents are in tankbottoms -- I think I pointed
6 this out, is that it may be in such small concentration,
7 because the tankbottoms are so small in volume, compared to
8 the large amount of material that's in the landfarm, that
9 it basically may not be significant at all. And that was
10 reason that we weren't too concerned about that aspect of
11 it.

12 We are concerned about the constituents, and
13 that's why we need to be aware of them. But are we so
14 concerned that we would not allow them? The answer is no.

15 Q. So you would be able to address your concern if
16 those materials, tankbottom materials, were tested, sampled
17 and tested, before placement in a landfarm, correct?

18 A. Yes.

19 Q. You're proposing to exempt small landfarms from
20 any financial assurance; is that correct?

21 A. Correct.

22 Q. Why is that?

23 A. Well, one of the things that we want to do is, we
24 want to encourage operators, when they have their *de*
25 *minimis* leaks and spills out there, rather than have them

1 build up in one place and not be treated, is to properly
2 handle those, treat those and put into their small landfarm
3 that they can remediate.

4 Remember, the -- most of the products that we're
5 talking about are from leaks and spills. They're not going
6 to be tankbottoms and small landfarms, they're going to be
7 leaks and spills from condensate oil spills, and those
8 materials typically do not have those contaminants that
9 you're talking about, and so it's even a less concern. And
10 the size of it is even -- makes it less of a concern from
11 an environmental standpoint.

12 Q. Thank you. You propose a 50-foot depth to
13 groundwater standard?

14 A. Yes.

15 Q. Why did you choose that number?

16 A. Well, basically when we looked at our modeling
17 assessments, we looked at other states and so forth, and in
18 one case I can tell you where hazardous waste RCRA
19 landfills, or landfarms even, can be put within five feet
20 of water.

21 Well, we certainly don't think that's the
22 appropriate number. Fifty feet has been in our guidance
23 for several years. We feel that's a good place to start.

24 Remember, though, that I modeled 50 feet, and
25 that's the reason I modeled 50 feet, is we didn't have a

1 problem there. Now landfills are going to be triple-lined
2 if they're at 50 feet.

3 Q. You're aware, are you not, that the New Mexico
4 Environment Department solid the waste rules, and the
5 currently proposed solid waste rules, have a 100-foot
6 minimum, and that is in every case applicable to solid
7 waste facilities that have liners. You're aware of that,
8 correct?

9 A. I am aware of that. Can I expand on that?

10 Q. Certainly.

11 A. Okay. We met with the -- Mr. Chavez and I, Carl
12 Chavez and I, we met with the solid waste people and we
13 discussed that at length. And we wanted to know what their
14 technical reason was for the 100 feet, and they didn't have
15 one. It seemed to be a political reason.

16 Q. Who said that?

17 A. I'm sorry, I can't remember. It was in a group
18 meeting with the New Mexico Environment Department solid
19 waste people.

20 Q. When?

21 A. Approximately two months ago, two and a half,
22 three months ago.

23 Q. Could you get the names of people who were
24 present?

25 A. Sure, I don't have a problem.

1 Q. Bring them with you perhaps tomorrow?

2 A. Sure, you bet.

3 Q. I'd appreciate that. You showed a Googol Earth
4 presentation up here, some images of landfarms in southeast
5 New Mexico.

6 A. You liked that?

7 Q. I did.

8 (Laughter)

9 Q. I didn't see any evidence of the re-vegetation in
10 any of those images, did you?

11 A. Let's see -- We could go back and look at them
12 again. I didn't see a whole lot, that is correct.

13 Q. What experience does the Environment Bureau have
14 with re-vegetation of landfarms in New Mexico?

15 A. Landfarms are relatively new to us. If you go
16 back and look at how long we've been permitting landfills
17 and landfarms, I would venture to say -- and I'd like for
18 Ed Martin, our technical permit writer, to answer that, but
19 I'm going to say we're looking at probably around 10 years
20 at the outset. I mean, I don't think it's much more than
21 10 years. But remember, those are active sites.

22 Q. So if they're active sites, re-vegetation hasn't
23 yet commenced?

24 A. No, because they're active. I don't know if we
25 have any site that has applied for closure.

1 Q. There's a definition of re-vegetation in Section
2 J.(1) of the Rules. Would you look at that, please?

3 A. Sure.

4 MR. BROOKS: Page 24.

5 Q. (By Mr. Huffaker) Buried in that long paragraph,
6 but --

7 MR. VON GONTEN: All the way down at the bottom.

8 THE WITNESS: Yeah.

9 Q. (By Mr. Huffaker) See if you can find it and
10 read into the record the sentence, fifth line from the
11 bottom that begins with the word re-vegetation.

12 A. Re-vegetation shall consist of establishment of
13 vegetative cover over at least 70 percent of the site,
14 consisting of at least two native plant species and not
15 including noxious weeds, and maintenance of that cover
16 through two successive growing seasons.

17 Q. Here's my question. Can you equate that standard
18 with your study of EC 50 and LC 20 data from the British
19 Columbia study? Have you done --

20 A. Are you asking me can I, or have I?

21 Q. Have you?

22 A. No.

23 Q. So you don't know whether the recommendations
24 you're making for chloride levels, based upon the British
25 Columbia study, would actually afford an operator closing a

1 landfarm to meet that re-vegetation standard; is that
2 correct?

3 A. Based upon that study, you're correct, I do not
4 know.

5 Q. And you mentioned that there's --

6 A. However -- Can I add to that?

7 Q. You certainly can.

8 A. Okay. I did have an opportunity to discuss this
9 issue with the Lea County extension agent, and there are a
10 number of grasses that are in New Mexico that would not
11 only survive but grow in these type of environments, if the
12 chlorides were held down to less than 1000.

13 Q. Would they germinate?

14 A. It's my understanding these grasses would
15 germinate, these grasses.

16 Q. Who is the Lea County extension agent?

17 A. It's -- He's actually just retired, his name is
18 Wallace Cox.

19 Q. Thank you. You mentioned that there is a
20 consideration that you undertook in deciding upon the
21 chloride standards for re-vegetation. That was the
22 prevalence of high salt in southeast New Mexico; isn't that
23 correct?

24 A. I don't understand the question.

25 Q. You testified that there is an area, or I believe

1 in answer to a question from Mr. Brooks, you agreed --

2 A. Oh, okay, I --

3 Q. -- that there is an area --

4 A. Right.

5 Q. -- of high salt concentrations in the ground in
6 southeast New Mexico?

7 A. That is correct.

8 Q. And you took that into consideration in deciding
9 on the 1000-parts-per-million chloride standard?

10 A. It was part of the decision that the team made,
11 that's correct.

12 Q. But high soil concentrations don't have to go to
13 a landfarm, do they? They can go to a landfill; isn't that
14 correct?

15 A. High salt concentrations would not be allowed to
16 go to a landfarm under the proposed Rule.

17 Q. But high salt concentrations approaching 1000
18 parts per million chloride don't have to go to a landfarm,
19 they have an alternative method of disposal, and that's a
20 landfill?

21 A. Oh, yes, that's correct, yes.

22 Q. So there isn't any particular reason to institute
23 a more lax chloride standard for that reason alone, is
24 there?

25 A. I don't think we relaxed the chloride standard.

1 We've set it -- Our recommendation is at 1000, and we're
2 not recommending that it be relaxed.

3 Q. If you were convinced that it should be set at
4 lower than 1000, you wouldn't object, based on the fact
5 that there is a lot of high salt concentration material in
6 southeast New Mexico, would you?

7 A. Once again, I guess I'm dense here. I don't
8 understand the question.

9 You're saying that just because we have high salt
10 concentrations in certain parts of New Mexico, how does
11 that -- I don't understand what you're trying to tie
12 together here.

13 Q. You're not using that as a criteria for setting
14 chloride standards, are you?

15 A. Not totally, no. Certainly not, no. We
16 considered that. There are areas in New Mexico that has
17 high salt concentration in which very good plant growth is
18 growing because of the salt-tolerant desert plants. That
19 was one of the things that we considered.

20 Q. Okay. What areas are those?

21 A. There are many areas around the salt playas that
22 has extensive growth around the salt playas, that they have
23 salt-tolerant grasses that -- it's amazing, they have salt
24 all around and they're growing this tall. And also they're
25 good cattle feed too, according to the ranchers who have

1 the properties.

2 Q. Next, I want to switch gears and talk about
3 subsection K, exceptions and waivers, and I just want to
4 actually refer to one of your PowerPoint slides. And
5 unfortunately when I printed them out, I didn't paginate
6 them, so I'm going to --

7 A. We'll help you out there.

8 MR. HUFFAKER: If I may approach Mr. von Gonten?

9 CHAIRMAN FESMIRE: You may, sir.

10 MR. HUFFAKER: Can you see if you can find that
11 one, and if you'd put that up?

12 MR. VON GONTEN: Sure.

13 Q. (By Mr. Huffaker) Thank you. This refers to
14 exceptions and waivers?

15 A. Yes, this is a PowerPoint slide, just kind of an
16 overview of that particular section -- subsection.

17 Q. And as I read the -- I'm going to ask you the
18 intent.

19 A. Okay.

20 Q. As I read this, the second bullet, it says Rule
21 53 authorizes OCD to grant the exception or waiver, or the
22 exception or wavier is granted after public notice and
23 opportunity to request a hearing.

24 Is it your intent there will be no public notice
25 and opportunity to participate before the OCD itself

1 decides to grant a waiver?

2 A. That's not our intent. That -- if you look at --
3 Let me take a look at the Rule here. I think the Rule is
4 maybe clearer than the subsection. Let me -- just give me
5 a minute to look at it here.

6 MR. BROOKS: Mr. Huffaker, we intended to have
7 this Rule explained by another witness specifically.

8 MR. HUFFAKER: As well?

9 MR. BROOKS: Yes, Mr. Martin was going to comment
10 on that.

11 THE WITNESS: I'll go ahead and attempt to answer
12 it, but I think Mr. Martin can probably do a little better
13 job on it than I could.

14 Q. (By Mr. Huffaker) If you can attempt to answer,
15 please go ahead.

16 A. All right. If you look at K.(3), page 27, it
17 says, The Division may grant exceptions to, or waivers of,
18 or approve alternatives to, any requirement of [Rule 53],
19 in an emergency, or otherwise after notice and opportunity
20 for a hearing.

21 Q. And that is your intent, that there will be --

22 A. Yes.

23 Q. -- such notice?

24 That's all I have. I pass the witness.

25 CHAIRMAN FESMIRE: Mr. Carr?

CROSS-EXAMINATION

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BY MR. CARR:

Q. Mr. Price, could you tell me what chemical companies you worked for?

A. Unichem International.

Q. And in your job working for Unichem, was I correct in understanding that you were responsible for obtaining certain permits, or they were obtained under your direction?

A. Yes --

Q. Were any of those --

A. -- companywide.

Q. Were any of those permits -- did any of them relate to protecting soil or groundwater?

A. Yes.

Q. When you -- Can you recall any of those permits where any release to soil or groundwater was precluded or prohibited?

A. From a company standpoint?

Q. Yes.

A. Yes. We had internal policies that prohibited releases --

Q. Of any kind?

A. Of any kind, that is correct.

Q. Were those required by regulatory agencies, or

1 was that an internal policy?

2 A. Those were internal company policies.

3 Q. When we talk about surface waste management
4 units, isn't the purpose of those units actually for
5 treating hydrocarbon-contaminated soil?

6 A. The landfarms are.

7 Q. What is meant by treatment of these soils? What
8 happens?

9 A. Well, if you're talking about the bioremediation
10 process, you know, it's -- well, I'll just use the word
11 bugs. There's natural bacteria out there that actually
12 breaks down certain portions of the hydrocarbon, basically
13 renders them nontoxic, and basically leaves behind certain
14 other waste or products.

15 Q. So bioremediation is one?

16 A. Bioremediation --

17 Q. Would volatilization --

18 A. That's a physical -- a physical process, that is
19 correct.

20 Q. Chemical transformations?

21 A. Chemical transformation is one.

22 Q. Diffusion?

23 A. Diffusion is another one.

24 Q. And where do these processes occur? Do they
25 occur in the biopile or in the disc'd soils? Is that where

1 you would anticipate this would occur?

2 A. Yes

3 Q. Does it also occur in the soil below the zone,
4 below the biopile, below the disc'd soils?

5 A. It can.

6 Q. And if I understand what you're recommending,
7 it's the OCD's position to not allow any treatment in that
8 zone, in that zone below the biopile or the disc'd soils;
9 is that correct?

10 A. That's correct, because that's not part of the
11 treatment process, that's not part of the unit.

12 Q. And so you're saying that anything below the
13 surface of the earth is not part of the unit, and therefore
14 no treatment can occur there?

15 A. No planned treatment can occur there. It's not
16 our intent to allow the vadose zone to become part of the
17 treatment unit.

18 Q. And the reason is just because it is, by
19 definition, not part of the treatment zone?

20 A. It's not part of the treatment zone, it's also
21 not responsible waste management, because that would be
22 deemed a release.

23 Q. Are you aware of any surface waste units where
24 that, in fact, doesn't occur to some degree?

25 A. The landfarm information that we have as of today

1 -- and once again, Ed Martin is our permit writer for that,
2 he could probably answer that better than I can, but I am
3 not aware that we have a vadose zone problem at any of our
4 current landfarms, as we speak.

5 Q. Now when I listened to your testimony, you were
6 sort -- as I understand it, you've been attempting to
7 normalize or harmonize these regulations with those of your
8 sister agencies; is that correct?

9 A. Yes, that is correct.

10 Q. And I think you also said that these surface
11 waste management units are not for treat- -- are not for
12 disposal. They're not discharge facilities, but they're
13 for treatment; is that right?

14 A. Well, that's not totally correct because the
15 landfills are certainly for disposal.

16 Q. I'm talking about the landfarms.

17 A. Talking about the landfarms?

18 Q. Yes.

19 A. The landfarms are there to treat hydrocarbon --
20 predominantly hydrocarbon contaminated soils.

21 Q. Now you're aware, are you not, that disposal
22 sites regulated by NMED would allow discharges as long as
23 groundwater standards are not exceeded?

24 A. Which -- what type of facilities?

25 Q. Well, the disposal regulated facilities by the

1 Environment Department.

2 A. Well, no, now, we need to break that down,
3 because are we talking about groundwater discharge plan-
4 type facilities or are we talking about solid waste
5 management facilities? I don't know of any solid waste
6 management facility, that I know about, that the
7 Environment Department allows intentional discharge.

8 Q. Now your Rules are actually, though, going to be
9 more stringent than those rules of ED; isn't that true?

10 A. I'm not --

11 Q. Do you believe they're consistent with ED's
12 rules?

13 A. I do think they're consistent.

14 Q. And they'd be governed by the same regulatory
15 authority?

16 A. They'd be governed by the Oil Conservation
17 Division.

18 Q. You're implementing the same statutes -- you're
19 implementing policies that are consistent between ED and
20 OCD; that is your intent?

21 A. That is our intent.

22 Q. Now you would agree with me, would you not, that
23 the policy of the Oil Conservation Division is set by the
24 Commission?

25 A. Correct.

1 Q. And as staff, you're simply making
2 recommendations to them?

3 A. That is correct.

4 Q. You would agree with me that the Water Quality
5 Control Commission established the policy of the State when
6 it established water quality standards?

7 A. The water -- Yes, the WQCC.

8 Q. And the OCD is a constituent agency of the WQCC?

9 A. Yes, we are.

10 Q. And as such, you are called upon to implement the
11 statutes, and you're promulgating rules in an effort to do
12 that; isn't that what we're doing here today?

13 A. That is correct.

14 Q. When you were developing these Rules, what
15 factors did you consider? You were looking at prevention
16 of -- or protection of the environment, correct?

17 A. That is correct.

18 Q. Protection of fresh water?

19 A. Yes.

20 Q. Protection of human health?

21 A. Yes.

22 Q. And I believe you were -- also considered
23 prevention of waste and protection of correlative rights?

24 A. I didn't testify to correlative rights. I agree
25 with you, though.

1 Q. All right. What did you do to assure that what
2 you were doing was consistent with the Commission's charge
3 to prevent waste?

4 A. To prevent waste?

5 Q. Yes.

6 A. Well, I think that's a really good question, and
7 one of the things pollution prevention is, is one of our
8 major goals, is to prevent pollution. And if you prevent
9 pollution in the oil and gas industry, you prevent waste
10 and -- you prevent the waste of oil and gas. And so any
11 time that we can do that and encourage that, then I feel
12 that we've taken a step in the right direction.

13 Q. So you believe there's a direct connection
14 between preventing pollution and preventing waste?

15 A. Oh, I do.

16 Q. When you were developing these Rules, did you
17 consider the additional costs you might be imposing on an
18 operator who might have to comply with a no-release
19 standard?

20 A. With a what type of standard?

21 Q. With a standard that would not permit releases to
22 the environment?

23 A. No, are you saying that -- This Rule does not go
24 beyond a surface waste management facility, it does not go
25 beyond that. And so if you're -- in no way are we saying

1 to an operator, thou shalt not ever spill again. We're not
2 saying that. We'd like to see that happen, but we're not
3 saying that, because we know that that's not practical.

4 Q. Well, when you developed these Rules, did you
5 anticipate that what you're recommending could result in
6 additional costs to operators?

7 A. We considered the small business aspect of it, we
8 discussed that somewhat. We addressed that, and we didn't
9 see any documentation or we didn't have any hard data or
10 evidence to show that what we're doing is impacting small
11 businesses whatsoever. If anything, I think we're helping
12 them.

13 Q. Do you believe that implementing this surface
14 waste management program will effect a savings for
15 operators in the field?

16 A. I honestly do.

17 Q. Do you think that there are circumstances here
18 where they're going to have to, in fact, take materials to
19 landfills instead of being able to manage them on site, to
20 comply with these Rules?

21 A. I don't see that happening under our Rule 116 and
22 Rule 19. And that's one of the things that Mr. Brooks
23 pointed out in his opening testimony, is that we want to
24 make sure that's clear, that you can still do on-site
25 remediations.

1 Q. When you get to the closure standards, there are
2 circumstances where you will have to haul that material
3 away; isn't that right?

4 A. What closure standards are you talking about?

5 Q. Well, we're talking about when you get to closing
6 a facility and you haven't through a -- been able to get to
7 an 80-percent TPH standard by using the risk-based approach
8 that we have been advocating.

9 A. Well, if the facility is operated properly under
10 a good operational and management plan, that facility will
11 not take waste that it cannot treat properly, it will know
12 that up front. It will be part of its -- part of the
13 business plan. They will know that up front.

14 Q. When you were developing this program, I think
15 several times during your testimony you talked about using
16 good science.

17 A. Yes.

18 Q. What do you mean by good science?

19 A. Well, I think I mean the same thing as the
20 industry means, as anybody else, is, we try to use the
21 latest scientific evidence out there that's going to
22 protect the public, human health and the environment, and
23 at the same time we mix that with environmental justice in
24 which we're mandated to do, and also sensible waste
25 management.

1 Q. When we're talking about good science, are we
2 talking -- are you talking about peer-reviewed technical
3 literature?

4 A. That would be part of it, yes.

5 Q. Are you talking about anecdotal observations?

6 A. I would have to say that could possibly be part
7 of it.

8 Q. And wouldn't you think that good science would
9 tend toward the peer-reviewed literature, as opposed to
10 individual site observations?

11 A. Yes, and no.

12 Q. And why not?

13 A. Okay, what if you have a peer review that's in
14 total conflict with the peer review that you're trying to
15 support?

16 Q. Would that be in a situation where you've already
17 decided what the result should be and you're looking for
18 one you'd like to support?

19 A. But I mean, that's the dilemma, Mr. Carr, that we
20 face, is that there are peer-reviewed information out there
21 that conflicts with other people's peer review, and we as
22 an agency have to make a decision on what part of the good
23 science we can use and protect public health and the
24 environment.

25 Q. And so doing this whole peer-review data may

1 appear pretty much the same to you, is that what you're
2 telling me, and that you can select what works?

3 A. No, no, no. Peer-review data can vary
4 substantially.

5 Q. And different peer-review data might be more
6 valid than others, depending on the group and the
7 information involved --

8 A. I would say that's correct.

9 Q. In this Rule you have continued in your
10 regulatory scheme a proposal that would actually put the
11 burden on the operator to determine whether or not a water
12 hauler has an approved Form C-133; isn't that correct?

13 A. We haven't changed anything in that area.

14 Q. That is the current Rule, and it's what you're
15 proposing today?

16 A. That's correct.

17 Q. And the Rules of the Oil Conservation Division
18 require that any transporter maintain a valid C-133; isn't
19 that right?

20 A. That's correct.

21 Q. And the way you enforce this is, you prohibit an
22 operator from delivering to anyone these wastes unless they
23 have the approved form; isn't that correct?

24 A. That's correct.

25 Q. NMOGA has recommended that instead of just

1 requiring that the operator assure -- has recommended that
2 this be changed so that once a month there is a valid list
3 of approved transporters so that they can go to that and
4 have a reliable source of information to use when they
5 delivered this material to the transporters. Does the OCD
6 oppose that?

7 A. Actually, I think that's in our new -- in the
8 Rules, that no, we don't. We want to put that on the
9 website and do that.

10 Q. How often do you update that?

11 A. I'm not the IT person that does that. We have
12 another individual that does that. But I'm going to say it
13 can be done on a daily basis.

14 Q. And so if I'm an operator and I'm delivering this
15 waste to a transporter, I would have to every day check
16 your records to ensure that this person had an approved
17 C-133; isn't that right?

18 A. No, I don't think that's correct. I think you
19 can look in the windshield of his truck and see if he's got
20 a current one.

21 Q. And you revoke these periodically, do you not?

22 A. I haven't, but --

23 Q. But does the agency --

24 A. -- the agency, I understand, has but I can't tell
25 you --

1 Q. And when the agency --

2 A. -- I can't give you the situation.

3 Q. But when you have a revoked permit, couldn't you
4 still have the old permit in the windshield of your truck?

5 A. Well, that's certainly possible.

6 Q. All we're asking is that there be a once-a-month
7 time period when the data of approved C-133s be posted so
8 we have to look once a month instead of every time we
9 deliver a load. Is there any objection on the part of the
10 agency to letting operators check a website once a month,
11 instead of with every load?

12 A. I think that's a common sense approach.

13 Q. If we go to -- I think it's your slide 8, it's
14 "Rule 53 revamp - WHY?????"

15 MR. VON GONTEN: Do you want it up?

16 MR. CARR: Well, you might put it up, if it's
17 easy.

18 MR. VON GONTEN: Mr. Carr, what slide do you
19 want?

20 MR. CARR: Number 8, I believe.

21 THE WITNESS: Yes, right here, I believe.

22 MR. VON GONTEN: Okay, he's going by slide
23 number. There we go.

24 Q. (By Mr. Carr) If I look at this slide, one of
25 the reasons for revamping the Rule you list is improper use

1 of landfarms?

2 A. Yes.

3 Q. What do you mean by improper use of landfarms?

4 A. Well, about a year ago we were taken to task on
5 the issue of how we had approved the landfarm permits, and
6 that issue was the fact that the way our public notices
7 were written, and also the way the permits were basically
8 written, we were allowing exempt -- RCRA-exempt waste,
9 which included a gamut of waste that probably would not be
10 proper for a landfarm. And so we had -- we just basically
11 felt like, you know, it's time that we need to change that.
12 It wasn't correct, so we need to change it. Landfarms in
13 essence, from a long-term standpoint, it appeared that
14 would become landfills.

15 Q. I guess the question I have is, when you talk
16 about an improper use of the landfarm, are we talking
17 really about an enforcement issue, or was there something
18 really wrong with the underlying Rule?

19 A. There was something wrong with the underlying
20 Rule.

21 Q. And when you've gotten criticism from citizens'
22 groups, has that been only because of problems with the
23 Rule, not because of agency enforcement of existing rules?

24 A. I think the biggest criticism we had there is the
25 lack of inspections and enforcement. And you know, we have

1 a total of five people here, and it's just difficult to get
2 out to all of these sites.

3 Q. But some of that is the source of the criticism?

4 A. Yes.

5 Q. If we go, I think, to the next slide, or the next
6 one, "Rule 53 revamp goals" --

7 MR. VON GONTEN: Oh, revamp, you were there,
8 okay.

9 Q. (By Mr. Carr) If we look at this, you talk about
10 addressing a balance between environmental justice --
11 that's what has been mandated by the Governor; is that not
12 right?

13 A. That's correct.

14 Q. Where are you mandated to consider aesthetics?

15 A. Under our Rules and Regulations we do not, to the
16 best of my knowledge, have an aesthetic rule.

17 Q. And why was that included?

18 A. I think I made the -- sensible waste management.
19 I think it comes down to long-chain TPH hydrocarbons.
20 That's still a wastelike material, and a wastelike
21 material, by definition, is still a waste.

22 And even though, according to some of the risk-
23 management -- or risk-based-approach people or health
24 professionals, they might say, Well, it doesn't present a
25 risk, we have some concerns about that. And it's not our

1 intent to have wastelike materials, whether it be long-
2 chain hydrocarbons, or whether it be Cokes or cans or
3 whatever spread all over the landscape, and we basically
4 classified that as aesthetics.

5 Q. And that's part of sensible waste management?

6 A. Yes.

7 Q. What else is in sensible waste management?

8 A. Proper pollution prevention, proper management,
9 proper response --

10 Q. Is a no-release policy part of sensible waste
11 management?

12 A. No, not a no-release policy, but a -- you try to
13 approach zero discharge, zero release. That's a goal. And
14 we do that -- we do that in order to protect the resources
15 of the State of New Mexico.

16 Q. And that's a method that you are employing to try
17 and protect fresh water from pollution; isn't that right?

18 A. That's one of the methods, yes.

19 Q. And that's one of the things you're doing to
20 implement the Water Quality Control Act responsibility you
21 have; is that fair to say?

22 A. We have responsibility for the Water Quality
23 Control Act for certain facilities.

24 Q. You talked with Mr. Brooks about evaporation --

25 A. Can I say something else --

1 Q. Yes.

2 A. -- Mr. Carr?

3 Q. Yes, sir.

4 A. The Water Quality Control Act does not overlap
5 onto surface waste management facility. Those are strictly
6 oil and gas regulated facilities.

7 Q. So these would not be --

8 A. They would not be permitted under the Water
9 Quality Control Act. Matter of fact --

10 Q. That comes with your protection of fresh water
11 charge; isn't that right?

12 A. Well, that's correct.

13 Q. And we are looking at your role as a constituent
14 agency of the Water Quality Control Commission in this
15 hearing as well, are we not?

16 A. It wasn't -- I don't think it was our intent to
17 tie into -- the Water Quality Control Act into Rule 53. I
18 mean, we certainly --

19 Q. Are you --

20 A. -- we certainly implement --

21 Q. Are you saying that one of the goals today is not
22 to adopt rules that protect fresh water?

23 A. Oh, no, I'm not saying that at all. We're
24 mandated to protect freshwater.

25 Q. All right.

1 A. But we're mandated also under the Oil and Gas Act
2 to do that.

3 Q. When we talk about -- when you were talking with
4 Mr. Brooks about evaporation ponds, storage and treatment
5 ponds --

6 A. Right.

7 Q. -- and NMOGA had suggested that perhaps these
8 would be better dealt with as part of the pit rule --

9 A. Yes.

10 Q. -- if I understood, your answer was that there
11 might be an interim period, if you did that, when they
12 would be unregulated?

13 A. There would be a regulatory gap.

14 Q. And that if you did this, in fact, it might
15 increase the notice requirements on the people who, in
16 fact, had an evaporation pond or something of that nature;
17 was that your answer? You might have to give notice which
18 now is not required?

19 A. Under Rule --

20 Q. And I think Mr. Brooks might have testified --

21 A. Mr. Brooks is wanting to answer real bad here,
22 but I'll --

23 Q. He may have --

24 A. -- answer it for him.

25 Q. And he may have testified.

1 (Laughter)

2 MR. BROOKS: Well, it's only because you looked
3 at me, Mr. Carr, that I responded. If you look at the
4 witness, maybe he'll respond.

5 MR. CARR: I'd like the record the witness was
6 also looking at Mr. --

7 (Laughter)

8 Q. (By Mr. Carr) Tell me why you think these should
9 be in this Rule and not in the pit rule.

10 A. Okay, I think I did touch on that a little bit.
11 The surface waste management facilities, as you know, can
12 be quite large.

13 And so therefore, once again, going back to the
14 technical evidence that I submitted to you, is that large
15 sites that hold -- that basically hold contamination is a
16 much greater threat to the environment than small sites.
17 Typically, the pit rule, we're looking at small drilling
18 pits.

19 Q. Would it be possible to move this to the pit rule
20 and address these issues in the pit rule, instead of
21 keeping them tacked over here in surface waste?

22 A. We would not be willing to do that, because we
23 would have a regulatory gap and we would have large surface
24 waste management facilities that we would -- I mean, there
25 would be no controls on how they would build these ponds or

1 pits.

2 Q. You're recommending it be that approach to the
3 remediation of these sites and these small landfarms; isn't
4 that correct?

5 A. That's correct, that has standards, specified
6 standards.

7 Q. And wouldn't you agree with me that a landfarm
8 with specified standards might in fact be the BDAT in
9 certain circumstances?

10 A. Well, that's -- that is certainly possible.

11 Q. When you're going and adopting this -- basically
12 a no-release standard, this prohibitive approach you're
13 taking in these Rules, is that authorized anyplace in the
14 Oil and Gas Act directly, or is that your interpretation of
15 this statute?

16 A. No, I think if you take a look at our general
17 operations Rule 13, it specifically mandates us to protect
18 fresh water.

19 Q. But does it have a no-release standard?

20 A. To the best of my knowledge, Rule 13 says -- I
21 mean, I'd have to --

22 Q. Yeah.

23 A. -- I'm just paraphrasing. You have to conduct
24 your operations in a manner that's going to be protective
25 of fresh water.

1 Q. And when you say protective of fresh water, do
2 you mean no contamination, or can it just -- must it stay
3 above water quality standards?

4 A. Well, if you're saying that -- somehow or another
5 that by default we allow leaks and spills, that's not
6 correct. Nowhere in our Rules do we allow that -- we
7 specifically say you can leak your spill.

8 Q. But --

9 A. We recognize that there are accidents, we know
10 that, that's part of the business. But when that does
11 happen, then we ask the operator to perform corrective
12 actions.

13 If I may give an example, we've had some produced
14 water lines that have leaked -- have seven, eight plants in
15 one area. We have asked those operators to fix that so
16 they wouldn't leak or spill in the future --

17 Q. Well, Mr. Price --

18 A. -- and we feel that's part of our mandate.

19 Q. -- maybe one thing I'm not understanding here is,
20 what do you mean by release? Do you mean release to the
21 surface or release to the water?

22 A. Release to the environment.

23 Q. Any release?

24 A. Well, yeah, really. We define release.

25 Q. And so it's not release to the land surface or

1 the waters of the state, you're looking at it across the
2 board as no release, period?

3 A. I'm sorry?

4 Q. I mean, it is a no-release policy, you don't -- I
5 was concerned with that question that maybe we're talking
6 about release to the surface, as opposed to release to a
7 water source, but it is just absolutely, period, no
8 release?

9 A. We do not have a rule that says thou shalt not
10 ever release or there'll be some sort of fine or something.
11 What we do have, we have a rule that says -- 116 says that
12 if you do release, you have to report that and you have to
13 perform corrective actions.

14 Q. Could you tell me, when we talk about a small
15 landfarm, what the basis for the 1400 cubic yards or less
16 -- what is the basis for that number?

17 A. That number -- that number was created back a
18 number of years ago when we implemented Rule 711. We knew
19 that every facility would not be permitted pursuant to Rule
20 711, so we had to have some logical size that would
21 basically be exempt.

22 And actually, as -- I'd have to go back and look
23 at the record, but if I recall, industry had supported us
24 on that particular number.

25 And I can tell you where the number come from.

1 The number was a typical production site, six inches thick.
2 That's kind of where we -- that's where the number came
3 from, we had a work group, and the work group agreed on
4 that number.

5 Q. Okay. I believe you testified that you would not
6 object to deleting the tenant provision from approval on
7 the re-vegetation program?

8 A. That's correct.

9 Q. You also are limiting small landfarms to one per
10 lease?

11 A. That's correct.

12 Q. You're aware that there are often leases in New
13 Mexico that may cover more than -- even several sections of
14 land?

15 A. I aware of that.

16 Q. And they can also cover non-contiguous pieces of
17 property?

18 A. Yes.

19 Q. In those circumstances, would there be an
20 opportunity for an exception?

21 A. I would think so.

22 MR. CARR: If we could look, Glen, I think it's
23 slide 50. It's "Subsection H: Small Landfarms (continued)"

24 MR. VON GONTEN: Is that the one?

25 MR. CARR: Yes, sir.

1 Q. (By Mr. Carr) "Subsection H: Small Landfarms
2 (continued)", and it comes down here and the second bullet
3 point says it meets waste management standards specified in
4 Rule 53.G.

5 My understanding was that small landfarms were
6 exempted from much of 53.

7 A. Let me take a look at that.

8 Q. Okay.

9 A. Yes.

10 Q. I think actually, it's all under 53.(H); is that
11 correct?

12 A. It's under 53 -- That slide probably should have
13 said 53.(G).(3), I believe.

14 Q. Okay. Also, if we go back a couple of slides, it
15 says "Subsection J: Closure and post-closure", I think.

16 A. All right.

17 Q. Again, my question is really one of
18 clarification. Do these provisions also -- do small
19 landfarms also fall under these provisions?

20 A. I've got to think about this just a little bit.
21 We had a lot of discussion on this.

22 Under 53.(J) -- I'm going to take a minute and
23 talk to Mr. Brooks, if that's okay.

24 MR. CARR: Or he can testify directly again.

25 (Laughter)

1 COMMISSIONER OLSON: Take a break?

2 CHAIRMAN FESMIRE: Yeah, Commissioner Olson just
3 suggested a real good idea. Why don't we take a 10-minute
4 break, and we'll come back at -- just before three o'clock.

5 (Thereupon, a recess was taken at 2:47 p.m.)

6 (The following proceedings had at 3:02 p.m.)

7 CHAIRMAN FESMIRE: This is the continuation of
8 Case Number 13,586. Let the reflect that it's three
9 o'clock.

10 I believe, Mr. Carr, you were playing stump the
11 witness?

12 (Laughter)

13 MR. CARR: The witness was playing stump Mr.
14 Carr.

15 THE WITNESS: Mr. Carr? Are we ready?

16 CHAIRMAN FESMIRE: We're ready, go.

17 Q. (By Mr. Carr) Mr. Price, did any of the New
18 Mexico Environment staff ever explain to you or your staff
19 that discharge to groundwater is allowed up to standards of
20 the WQCC?

21 A. We recognize that as part of the standards of the
22 WQCC.

23 Q. Have you discussed it with people at the
24 Environment Department, or is that just something that you
25 acknowledge?

1 A. We have -- Yes, we have, but primarily with the
2 groundwater personnel at the New Mexico --

3 Q. And who would that be?

4 A. Of course it would be Commissioner Olson who is
5 the groundwater -- he's the groundwater bureau chief. But
6 we've also discussed it with Marcy Leavitt, we've discussed
7 it with various people in the New Mexico Environment
8 Department, primarily in the groundwater section.

9 But for some time we've been a constituent
10 agency, we have known that those regulations do allow that
11 groundwater -- that constituents can go into groundwater
12 and -- as long as it doesn't exceed the groundwater
13 standards.

14 But I'd like to -- could we --

15 Q. I want to go back to our question --

16 A. Oh, good, yeah, because that's where I wanted
17 to --

18 Q. Subsection J, my question was whether or not
19 these provisions actually apply to a small landfarm.

20 A. And the answer is no.

21 MR. CARR: They do not, okay.

22 I'm going to pass the witness to Mr. Hiser, who's
23 going to ask questions for the technical committee.

24 CHAIRMAN FESMIRE: Mr. Hiser?

25 MR. HISER: Thank you.

CROSS-EXAMINATION

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BY MR. HISER:

Q. Mr. Price, I guess members of the Commission as well, I'm going to be talking about some of the more technical issues. And so if I lapse into jargon that's incomprehensible, please feel free to interrupt me and tell me that I'm speaking gibberish.

I'd like to start with your discussion or your review of the EPA's Oil and Gas Associated Waste Study, which was on slide 14, and my first question for you, Mr. Price, is, when you're developing a regulatory program, how much data did you believe it was necessary to have before you determined that you needed to regulate a constituent?

A. I'm sorry, I have a hard time hearing out of this left ear. Would you say it a little bit louder, and I'll hear it?

Q. Certainly. How much data does OCD staff believe it needs to have before it decides it's going to regulate a constituent, for example, under one of these programs?

A. That is a very good statistical, technical question.

(Laughter)

A. Let's see how I answer this.

CHAIRMAN FESMIRE: Is that an example of a nonresponsive answer, Mr. Hiser?

1 (Laughter)

2 MR. HISER: It may be, but we'll wait and see.

3 THE WITNESS: We as an agency, we pride ourself
4 on trying to use common sense approaches. We try to use
5 field data that we have collected, and I think Mr. von
6 Gonten will show you specifically later on in his slide
7 presentation that we don't just arbitrarily pick and choose
8 numbers, we go out there, we look at data, we look at the
9 amount of data, and we try to draw some sort of trend or
10 correlation to make sure that statistically we're on the
11 right page, and that is our approach.

12 Q. (By Mr. Hiser) And so --

13 A. But let me add to that. The groundwater quality
14 standards are not set by us.

15 Q. Correct.

16 A. Okay.

17 Q. So I mean, how many data points would you be
18 hoping to have as you set a regulatory program up?

19 A. Statistical analysis, I've had some courses --
20 I've had Dr. Deming's extensive course in statistical
21 analysis. That number is variable, depending upon the
22 number of data points that you get, the results of the data
23 points. And so I'm being a little bit vague here, because
24 you've asked me something that there is only a vague
25 answer. There is no set number, one, two, three, four --

1 nine has been an EPA default, but I can tell you right now,
2 sometimes that's enough and sometimes it's not.

3 Q. But would you agree that generally more data and
4 more data points is more helpful than having a very small
5 data set?

6 A. The more data points you have, and the longer
7 time frame that you get it, reduces the sensitivity and
8 improves the accuracy and precision.

9 Q. Is it not true, if we look through the oil and
10 gas associated waste study, that the largest number of
11 sample points that's available in that study is perhaps 13,
12 and usually nine or fewer?

13 A. That's correct.

14 Q. And so that this study just by itself would be
15 not necessarily a real strong basis for determining whether
16 any particular set of constituents might be --

17 A. That is absolutely correct. Matter of fact, if
18 you have -- and I apologize for not putting the whole
19 report in there -- they point that out.

20 Q. Now in your personal experience as a person who's
21 been with the Bureau for a number of years and having
22 worked in the oilfield, as you said, for many years, would
23 you expect to find constituents such as carbon
24 tetrachloride or methylene chloride in the condensate or
25 the crude petroleum itself?

1 A. No.

2 Q. In the tankbottom portion of the associated waste
3 study, did you notice that the sodium concentration seemed
4 to be relatively high?

5 A. In the tankbottom?

6 Q. Yes. If you want to refer to those sections,
7 please feel free.

8 A. Okay. Do you have a sheet that you're on there?

9 Q. I do, but I can't -- it's so small, it's hard for
10 me to read the numbers.

11 COMMISSIONER BAILEY: D-10.

12 Q. (By Mr. Hiser) D-10.

13 A. D-10.

14 MR. HISER: Maybe, Mr. von Gonten, you can put
15 that up on a bigger screen.

16 THE WITNESS: D-10, sodium -- did you -- What did
17 you say, that they were extremely high?

18 Q. (By Mr. Hiser) That these numbers seem
19 relatively high.

20 A. They don't to me.

21 Q. Okay. And is that -- What source of sodium would
22 you expect. Would you expect to find that in the crude oil
23 or in the produced water?

24 A. Actually, it would probably most likely be in the
25 produced water.

1 Q. And so what we may see here is a mixture of
2 produced water and tankbottoms?

3 A. That is correct.

4 Q. Now while we're speaking about the associated
5 waste study, despite the presence of all these constituents
6 did EPA still in the end decide to leave the exemption in
7 place for oil and gas waste?

8 A. Yes, they did.

9 Q. And then if we have a waste stream -- for
10 example, a spill of condensate or crude oil -- is that
11 commonly separated into nice, separate segments of -- this
12 is the crude oil and this is condensate and this is soil?
13 Or do spills and things of that nature tend to be mixtures
14 of the underlying soil with the crude or the produced water
15 that may have spilled onto that?

16 A. All of the above.

17 Q. And would you then expect to find the metal
18 constituents or other constituents of that underlying
19 matrix in the combined mixture?

20 A. You could see it in the combined mixture.

21 Q. And so if we were to erect too high of a barrier
22 for, say, chloride or metals, would that not in effect
23 preclude the ability to treat the hydrocarbons in a
24 landfarm?

25 A. You're absolutely correct, and I think I tried to

1 point that out earlier.

2 Q. Thank you. Now -- Let's look now beyond the
3 tables from the associated waste study to your slide number
4 28, which is the "What is Rule 53?", and in this I think
5 that Mr. Carr asked you about what does release mean to
6 you, and you stated that to you release a release to the
7 environment; is that correct?

8 A. That's correct.

9 Q. But didn't you testify earlier that one of the
10 processes that you expect to occur in a landfarm is such
11 things as volatilization?

12 A. Yes, that is correct. You know, they talk about
13 bioremediation. We know that a lot of the activity in
14 landfarms will be the material that's going to be
15 volatilized.

16 Q. So you would agree, then, that some release to
17 the environment is going to be necessary for the landfarm,
18 at least, to be able to perform efficiently?

19 A. That's correct.

20 Q. Thank you. Going on, then, to slide 31, you
21 spoke at length on this slide about the need to balance the
22 operator's need for practicability and the OCD's need for
23 enforceability, and you spoke in part, I think, about the
24 80-percent reduction factor here as giving an incentive to
25 an operator to operate their landfarm correctly; is that

1 correct?

2 A. The 80 percent was only for the bioremediation
3 endpoint, I think.

4 Q. Correct, but for a bioremediation endpoint
5 operator to operate their landfarm --

6 A. Oh, yes, that's correct.

7 Q. Could not that same 80-percent reduction have the
8 effect of encouraging dilution of the soil to achieve the
9 80-percent reduction factor?

10 A. Why would that -- I don't understand why you
11 would say that that would be dilution.

12 Q. Well, if I add fresh soil with no TPH in it,
13 would the combined volume not show a lower percent?

14 A. That's true, but that's not our intent to have
15 people do that.

16 Q. I understand that's not your intent. Would that
17 be another way for a landfarm operator using a
18 bioremediation endpoint under the Division's proposal to
19 achieve the 80-percent factor?

20 A. That's correct.

21 Q. On the next slide, which is number 32, do you
22 know if the NMED uses a risk-based approach for its soil
23 screening levels and such a program as the voluntary
24 cleanup program?

25 A. Yes, I'm aware of that.

1 Q. Okay. And then under the Water Quality Control
2 Commission and the Water Quality Control Act, does that not
3 define that water pollution is introduction of pollutants,
4 and I quote, then, in such quantity and of such duration as
5 may with reasonable probability injure human health, animal
6 or plant life or property or unreasonably interfere with
7 the public welfare --

8 A. That's correct, I'm familiar with that
9 definition.

10 Q. Doesn't that suggest to you that the presence of
11 some level of contaminants is expected underneath the Water
12 Quality Control Act?

13 A. I don't read it that way. I read it that if
14 there is a release, then there's a probability. If there's
15 a probable -- or if there's a possibility of a release,
16 then it's probable. But it doesn't say highly probability.

17 Q. So you read a reasonable probability of injuring
18 human health as being any release that meets the standard
19 of reasonable probability?

20 A. Repeat that.

21 Q. So you're reading the statutory definition of
22 water pollution so that reasonable probability of
23 injuring -- so that with reasonable probability of injuring
24 human health means any release?

25 A. No, I do not. If I said that, then I was wrong.

1 I did not mean to say that.

2 Q. Moving on, then, to slide 35, you testified that
3 1400 cubic yards, in response to a question from Mr. Carr,
4 had been established back under the original Rule 711, or
5 an amended Rule 711?

6 A. In a work group.

7 Q. In a work group. Was that a risk-based
8 determination?

9 A. No.

10 Q. Could you explain how that determination was
11 reached?

12 A. The work group decided that there was -- a
13 typical production pad six inches high with dirt would be a
14 sufficient place, operators had said that they'd like to
15 take their waste and put it there for leaks and spills that
16 are on site, and it would not further degrade any plants or
17 cause surface contamination, and so that was a good place
18 to do it. And so it was a reasonable number that we come
19 up with.

20 Q. Have you evaluated that 1400-cubic-yard size and
21 your 1000-part-per-million sodium limit?

22 A. No, I did not.

23 Q. Moving, then, on a number of slides back to slide
24 number 41, this is on subsection E, the siting and
25 operational requirements -- and you may have already

1 testified to this, and if you did I apologize for repeating
2 it -- the basis for the choice of the 50 foot to
3 groundwater was --

4 A. Okay, for the 50 foot to groundwater, evaluating
5 several models that have been presented to us, we
6 understood that while the depth to groundwater is not the
7 primary sensitivity factor -- it's not high on the list,
8 it's not on the bottom of the list, but it's in there
9 somewhere. So depth to groundwater does have something to
10 do with -- it is a -- it ranks about the middle of the pack
11 when it comes to input parameters.

12 And so therefore I modeled -- I selected 10 feet,
13 25 feet, 50 feet, 75 feet, 100 feet, and I did a complete
14 model of all those. And 50 feet was the one, if you get
15 much closer -- if you get under 50 feet. Now don't get me
16 wrong, I think 40, 45 is still okay. But you get on down
17 about 20, then you start having impacts to groundwater much
18 sooner than what I showed on my slide.

19 So 50 feet builds us basically time, it's a time
20 issue.

21 Q. Okay, so you looked at it as a way of getting for
22 corrective action --

23 A. Time --

24 Q. -- time for --

25 A. That is correct. And so we knew that we had some

1 distance there, it would buy us some time.

2 Q. On the second point, which is the within 200 feet
3 of any watercourse, you spoke at length about the fact that
4 the definition of watercourse is established by either
5 regulation or statute and that you merely adopted that; is
6 that correct?

7 A. That's correct.

8 Q. And then you spoke that it was not the Division
9 staff, at least your Bureau's, intention to apply that
10 definition rigorously in terms of small erosion channels
11 that might occur in a given field?

12 A. I testified to that.

13 Q. Is there anything that would preclude a group
14 that was interested in opposing a facility from challenging
15 that decision that the staff might make on the basis that
16 the express language of the proposed Rule says any
17 watercourse?

18 A. I guess anyone or any group could oppose
19 anything, so it's hard for me to say yes or no on that.

20 Q. Okay. But you agree that where the express
21 language would appear to do that, that would seem to raise
22 an increased possibility of such challenges where the staff
23 is exercising discretion at somewhat variance with the
24 language?

25 A. Well you know, by -- just by the common sense,

1 logical definition of watercourse, what we have defined
2 with banks where water has flowed, we as an agency, we are
3 going to use logical and common sense, and once again we
4 are not going to -- just because it has a very small
5 erosional channel there, we're not going to call that a
6 watercourse.

7 Q. And so you're going to --

8 A. And we will stand up to that with anyone who
9 wants to challenge us on that, we will stand up to that.

10 Q. Thank you. While you chose 200 feet from any
11 watercourse, you decided to use 500 feet from a wetland,
12 and what was the reason for the decision?

13 A. Those numbers came from the New Mexico
14 Environment Department.

15 Q. Okay, so you just adopted the sister agency's --

16 A. Yes, we did.

17 Q. -- approach here?

18 On the next slide, under "Operational
19 requirements", in the second bullet point you talk about no
20 free liquids in landfarms and landfills. And I presume
21 that no free liquids is not meant to apply to the addition
22 of water for moisture for proper tilling and operation of
23 the landfarm?

24 A. That is correct.

25 Q. You also testified, I believe, on the fourth

1 bullet point, that the Bureau is proposing that the
2 Commission no longer require C-138s --

3 A. That's correct.

4 Q. -- to the OCD for approval?

5 A. That's correct.

6 Q. And you stated that you believe that the staff of
7 the facilities was able to make the decision whether
8 something is a RCRA hazardous waste --

9 A. I think we have a history of 10 years of this
10 agency, and I know I have personally gone through different
11 operations and have trained other personnel on this. All
12 of our permit writers have been out there doing the same.
13 And so we feel very confident that the operators that are
14 out there now can make that determination on their own.

15 Q. So you believe that the staff of these facilities
16 can make the requisite RCRA determination, but would have
17 difficulty determining when they needed to add water to a
18 landfarm to operate it properly?

19 A. I didn't say that.

20 Q. But you've testified that you've had difficulties
21 expanding, for example, the bioremediation endpoint
22 approach to small landfarms, because you're not sure that
23 the operators are sufficiently aware of how to do that, and
24 one of the major issues --

25 A. Oh, I see where you're headed with that. Let me

1 clarify that a little bit.

2 Small landfarms are areas where we want to give
3 as much flexibility as we possibly can to the operator, but
4 we don't want to be out there bird-dogging -- This is their
5 operation, this is something that they need to do on a
6 daily basis. And one of the things that when we took
7 industry's recommendation on the time period of three
8 years. And so three years is a pretty -- fairly short
9 time.

10 And so these things are going to be put into
11 place, they're going to take care of and treat the soils
12 and be over with in three years. And so I don't think we
13 have a problem with operators operating those landfarms
14 without us out there watching them every day. Matter of
15 fact, we won't have time to do that.

16 Q. So then why did you choose not to allow the
17 bioremediation endpoint for a small landfarm?

18 A. Because of the three-year period.

19 Q. You don't believe that a bioremediation endpoint
20 can be achieved in three years?

21 A. I don't know. This is new to us, I don't know if
22 it will or not. It may and it may not.

23 Q. Moving on to slide 46, this is the subsection G,
24 and in the third bullet point for this, once again you have
25 a no liquids in landfarms, and I guess I would just

1 reiterate that, as it was in the case of the general
2 standards, once again this is not meant to apply to the
3 addition of moisture to properly operate your landfarm?

4 A. You need --

5 Q. In other words, if we need to add moisture to a
6 landfarm, you don't read this provision as prohibiting the
7 addition of moisture?

8 A. Oh, no. No, I do not.

9 Q. On the next slide, 47, once again on landfarms,
10 what was the basis --

11 A. Is this the correct slide?

12 Q. Yes, this is, in fact, the correct slide.

13 A. Okay.

14 Q. Thank you. Are not the numbers that you chose
15 for benzene and BTEX based essentially on a risk
16 assessment?

17 A. I'm going to refer that for Mr. von Gonten when
18 he testifies.

19 Q. Okay. And that would be true for the rest of
20 these standards on this page as well?

21 A. Yes, yes.

22 Q. That's fine. On the next slide, which is 48, Mr.
23 Price, I'm a little confused by the third bullet point
24 here. And the third bullet point says because
25 bioremediation is not appropriate for all oilfield waste

1 you're requiring 80-percent reduction in TPH. This is
2 slide 48?

3 A. Yes, I've got it.

4 Q. The Division has proposed to limit bio- --
5 landfarms to contaminated soils and drill cuttings. Which
6 of those two wastes are not appropriate for bioremediation?

7 A. Okay, you're saying -- Repeat that again?

8 Q. You're saying that because bioremediation is not
9 appropriate for all oilfield waste, you're requiring an 80-
10 percent reduction in TPH. But the Division is proposing
11 only to allow landfarming of contaminated soils and drill
12 cuttings?

13 A. Well, predominantly hydrocarbon-contaminated
14 soils and drill cuttings.

15 Q. Which of the --

16 A. Drill cuttings that are predominantly hydrocarbon
17 contaminated.

18 Q. Okay, which of those two wastes that you're
19 proposing to allow is not appropriate for bioremediation?

20 A. I'm not sure if they're not. I mean, they are
21 appropriate --

22 Q. So --

23 A. -- if they're hydrocarbon contaminated.

24 Q. Okay. So you believe they are, in fact,
25 appropriate?

1 A. Yes, I do.

2 Q. Okay. And then the 80-percent reduction is just
3 to address long-chain hydrocarbons?

4 A. The 80-percent reduction is a guideline -- and
5 once again, I'd like to refer this to Mr. van Gonten, but
6 let me answer this. We did a lot of research, and EPA,
7 Corps of Engineers and some other agencies have recommended
8 an 80-percent reduction for TPH, so...

9 Q. And that's in the context of bioremediation of
10 landfarm?

11 A. Not bioremediation endpoint, but if you can't get
12 an 80-percent reduction in TPH, or if you're putting
13 hydrocarbon contaminated soils in there to treat and you
14 know that what you're putting in there, you can't reduce it
15 below 80 percent, it shouldn't go in there.

16 Q. And so Mr. Price, which API gravities would that
17 80 percent prohibit being landfarmed --

18 A. We did not take that into consideration. We did
19 look at Dr. Sublette's information, but we did not
20 incorporate that into this document.

21 Q. And would you be surprised to know that that
22 might be any API gravity of less than 40?

23 A. Did you say 40?

24 Q. Forty.

25 A. I'm not sure.

1 Q. Continuing on with the 80-percent reduction,
2 would you agree that 80-percent reduction might not be
3 protective for condensate?

4 A. I would agree with that, but however, I know of
5 no instance where we have a landfarm where we cannot reduce
6 the GRO down to acceptable numbers, if not zero.

7 Q. But you agree that the 80 percent by itself is
8 not necessarily protective for condensate?

9 A. That's correct.

10 Q. Would the industry bioremediation endpoint
11 approach be more protective for condensate?

12 A. I don't know what their endpoint is. I mean, I'm
13 sorry, but this is new to us. I can't answer that.

14 Q. If I were to refresh your recollection of the
15 industry definition of bioremediation endpoint, it's that
16 point where the rate of decrease in the total -- or the DRO
17 or GRO concentration essentially plateau'd or no longer
18 changed by a statistically significant amount over a 30-day
19 period, to which I should add, as Mr. Sublette will tell me
20 to -- Dr. Sublette will tell me to -- where the temperature
21 of the soil at the maximum is at least 50 degrees?

22 A. Right.

23 Q. That's the industry definition of the
24 bioremediation endpoint?

25 A. We disagree with that.

1 Q. Okay. So you think that that would not be more
2 protective of condensate than your 80 percent --

3 A. Well, I think what I'm saying is, is that we
4 disagree with that -- what I'm saying is, we disagree with
5 the definition of bioremediation endpoint as they define
6 it. We would like to see it expanded a little bit more.

7 You could take two consecutive points one month
8 apart, and you could still be high on the curve, and for
9 some reason, weather reasons, water content, whatever, you
10 could get two numbers really close, but you're not nearly
11 -- anywhere your bioremediation endpoint.

12 Q. So you're concerned about the false positive?

13 A. Exactly.

14 Q. Thank you. I think that completes my questions
15 on your first presentation. The rest are on the salt risk
16 assessment. Reserving the right to change my mind. And so
17 I guess the first question, then, would be on slide 2 of
18 the salt risk assessment. Actually, let's skip over that
19 and go to...

20 On the third slide, the one where you talk about
21 proposed Rule 53 for surface waste management facilities --
22 and I'll let Mr. van Gonten catch up.

23 MR. VAN GONTEN: Which slide, please?

24 MR. HISER: Third slide, please.

25 MR. VAN GONTEN: Number 69 --

1 THE WITNESS: Yeah, that's it right there.

2 Q. (By Mr. Hiser) Could you tell us which states
3 you considered?

4 A. Which states?

5 Q. Which states you looked at?

6 A. Yes, Michigan, Texas and Kansas, and then there
7 was -- The one that's not listed was, I think, Ontario.

8 Q. Ontario, Canada?

9 A. Yes.

10 Q. Is there any reason you chose these particular
11 states?

12 A. They seemed to be -- Well, Michigan was chosen
13 because we have a technical staff member that's from there,
14 and he's very familiar with those regulations.

15 Q. Okay. And climatically, is Michigan similar to
16 New Mexico?

17 A. You'd have to ask him. I've never been there.

18 (Laughter)

19 Q. I will. All right.

20 A. I do know they may have more water than we do.

21 Q. Just a Great Lake or two, perhaps?

22 A. Yeah.

23 Q. All right. In the next slide where you talk
24 about the research that you did, in the number 2, you
25 talked that OCD used EPA's and ASTM's best thinking to date

1 soil screening guidance. Can you tell us what that is?

2 A. Yes, that came -- that best thinking to date came
3 directly out of one of the EPA documents.

4 Q. Could you be more specific about which one of the
5 EPA documents that might have been?

6 (Laughter)

7 A. Sure, if you'll give me a few minutes.

8 Q. If it's okay with the Commission, or you just
9 want to find it afterwards --

10 A. Sure.

11 Q. -- that would be fine with me.

12 A. Yeah, that's fine.

13 CHAIRMAN FESMIRE: I'd rather it be made part of
14 the record if you have --

15 MR. HISER: Okay, that's fine with me as well.

16 THE WITNESS: Sure. It came out of the EPA Soil
17 Screening Guidance User's Guide.

18 MR. HISER: Okay, thank you.

19 MR. VON GONTEN: 1996.

20 THE WITNESS: 1996.

21 Q. (By Mr. Hiser) Okay, the 1996 --

22 A. Yes.

23 Q. -- edition? Okay.

24 And a little bit further down in number 5, you
25 talk about the chloride working group draft proposal.

1 A. Yes.

2 Q. Is that the New Mexico or the federal API
3 chloride working group?

4 A. That was the New Mexico chloride working group.

5 Q. Thank you. On your next slide I think you gave
6 us an example of a box model of how leaching might occur
7 from a landfarm, or any other facility for that matter,
8 into this aquifer underneath it.

9 A. Yes.

10 Q. Do you agree that leachate -- or actually, let's
11 put it this way: Can leachate contain constituent above
12 background levels and still be protective of the Water
13 Quality Control Commission standards in the groundwater
14 under certain circumstances?

15 A. Yes.

16 Q. Okay. And you testified, I think, that the
17 dilution attenuation factor, what we've been calling the
18 DAF --

19 A. Right.

20 Q. -- throughout this, was the ratio of the
21 concentration of chloride, for example, in the core water
22 to the ratio of -- or the concentration in the aquifer; is
23 that correct?

24 A. That is correct.

25 Q. Did you mean to say the concentration, or did you

1 mean to say the rate of flow of the core water and the rate
2 of flow of the aquifer?

3 A. Yes, the mass -- it would be the mass rate flow
4 divided by the mass rate flow.

5 Q. And the mass in this case is the mass of the
6 water or the mass of the constituent of the water?

7 A. You can do it both ways, but you'll come out with
8 the same answer.

9 Q. And you were talking about things that made a
10 significant difference in the effect on the underlying
11 aquifer. And one of those, you said, was the amount of
12 flow that was coming from the surface through the waste
13 stream, going into the aquifer?

14 A. From the surface, that's correct.

15 Q. Is it not also true that the rate of flow in the
16 groundwater would make a significant difference?

17 A. It does make a difference.

18 Q. And does not also the depth of the aquifer or how
19 thick the aquifer is make a difference in that question as
20 well?

21 A. Yes.

22 Q. Do you have a sense of the relative significance
23 of those factors?

24 A. I do.

25 Q. Would you like to share it?

1 A. Sure.

2 (Laughter)

3 A. From a -- Let's start from most sensitive to
4 least sensitive. Most sensitive generally is the
5 infiltration rate, then you have the mass, and then you
6 have the rate of the groundwater flow. So it rates up
7 there really high.

8 Q. Okay. Are you aware of any place where there is
9 groundwater in New Mexico? That's the first thing, where
10 there is --

11 A. If there is groundwater in New Mexico?

12 (Laughter)

13 Q. Are you aware of any place in New Mexico where
14 groundwater is present, where it has no rate of flow?

15 A. I'm aware there's groundwater that is present,
16 that the rate of flow is so slow that one might say that
17 it's not flowing.

18 Q. But there is some --

19 A. That is correct.

20 Q. Okay, thank you.

21 I want to now turn to my mysteriously disappeared
22 copy of your chloride model. First, I believe that you
23 testified that OCD had used consistent parameters across
24 all the various models that you consulted in setting that
25 1000-part-per-million --

1 A. We certainly attempted to do that.

2 Q. Okay. Along that line, if we turn to the VADSAT
3 model, which is, I believe, the third one back, and all
4 that, what is the distance of the source along the
5 direction of water flow in this model?

6 A. I used a square of 465 feet by 465 feet, so
7 therefore it would be 465 feet.

8 Q. And if we look at the EPA steady-state infinite
9 source model, which is the next slide, what was the size of
10 the source parallel to the --

11 A. Okay, 463 feet.

12 Q. And if we look at the chloride working group
13 model, which is the next one back, what is the distance or
14 the length of the source of the water flow on this model?

15 A. I believe it was 50 feet parallel to the
16 groundwater flow.

17 Q. Is 50 feet different than 463 or 465?

18 A. Yeah.

19 Q. Would you expect there to be a difference, then,
20 in the result of the chloride working group model if you
21 had extended the length parallel to the direction of flow
22 to the 465 you used --

23 A. Remember now, we considered that the chloride
24 working group was a very small source when we threw that in
25 there. But we wanted to have some sort of geometric

1 average that would help us in small sources. We didn't
2 want to totally eliminate small sources. And so this is
3 what this list will represent. And I think I said that.

4 Q. So you used this model only to look at small
5 sources, and not to compare across with the other two?

6 A. That is correct.

7 Q. On a similar line, did the flow rates for the
8 aquifers vary in these three models that you used?

9 A. I think they did vary some, but I don't think
10 they varied substantially. It was our attempt to make them
11 all the same, but they could have varied.

12 Q. Okay. And so you would agree with me that you
13 used like .888 meters per day in the VADSAT model but yet
14 16 or 40 meters -- or 40 feet a day in the steady-state
15 model?

16 A. The 40 feet per day is the aquifer hydraulic
17 conductivity in the aquifer, and that was taken out of the
18 New Mexico State Engineer's report. We used their average
19 number. It varied from 16 feet a day to 155 feet per day,
20 and --

21 Q. So you chose 40?

22 A. Yeah, because it came out of that report.

23 Q. Okay, all right. Now in some cases, did not your
24 use of the models to develop this 1000-part-per-million
25 chloride limit -- and perhaps I should say milligram-per-

1 kilogram chloride limit --

2 A. Parts per million is fine.

3 Q. -- contradict the assumption of the model that
4 you were working with?

5 A. I'm sorry, say that again?

6 Q. Did not in some cases your use of this model to
7 develop the 1000-part-per-million limit or threshold
8 contradict the model that you were using?

9 A. Which model?

10 Q. For example, let's go back to the chloride
11 working group model.

12 A. Right.

13 Q. And I think that you -- would you agree with me
14 that as proposed -- that you're proposing to limit
15 landfarms to only two feet of waste on the land surface?

16 A. That's -- landfarms, that's correct.

17 Q. Correct.

18 A. Right.

19 Q. And if you read the second bullet point under
20 assumptions of the chloride working group, what does that
21 say about the salt transport?

22 A. Well, yeah, let me just read it. It says salt in
23 soil above five feet below ground [sic] surface will tend
24 to move upward due to New Mexico high evaporation rates.

25 Q. In the DAF model --

1 A. And we don't deny that. They move both ways.

2 Q. Thank you. In the DAF model, I guess just a
3 general question for you, and let me see if you can answer
4 this. And if not, then we'll ask the same question of Mr.
5 von Gonten when he comes to the stand. Does the EPA DAF
6 model not assume continuous contamination from the land
7 surface to the groundwater interface? -- iso- -- at the
8 same concentration?

9 A. Just a second and I'll tell you. It was -- It
10 was a composite model for leachate migration, and to the
11 best of my knowledge it did not consider an infinite
12 source. It was a reducing source, as the salts moved
13 through there.

14 Q. Okay.

15 A. The model.

16 Q. The model.

17 A. But not the steady-state EPA model that I showed
18 you, the second one.

19 Q. Okay.

20 A. It's an infinite source model.

21 Q. Okay. In general, if you look at the EPA
22 guidelines that you pulled out, which is the SSL guidance
23 from 1996 that I asked you about --

24 A. Yes.

25 Q. -- and all that, when those talk about dilution

1 attenuation factors, those are assuming a continuous source
2 of contamination from the ground surface to the --

3 A. That is generally correct, yes.

4 Q. Thank you. And do you agree that when you
5 calculated your DAF for your five-acre site that you came
6 up roughly with something between 15 and 17 as your sort of
7 composite average?

8 A. Correct.

9 Q. Do you know what two acres would be?

10 A. For the DAF, you mean?

11 Q. Yeah --

12 A. Sure --

13 Q. -- the DAF.

14 A. -- sure, I'll tell you. Off of that study.

15 Well, you want the EPA default number?

16 Q. That would be fine.

17 A. Twenty.

18 Q. Twenty. All right, let's -- Is it not true that
19 in that same study that you looked at, that EPA opined that
20 for a smaller source -- for example, one-and-a-half acre,
21 that the DAF that would be protective of 90 percent of
22 sites would be around 170?

23 A. That's correct, for protection of groundwater.

24 Q. For protection of groundwater.

25 A. Right.

1 Q. Yes. Let's now move on to the Royal Roads
2 University study on page 10, going back to your
3 presentation now.

4 A. The box --

5 Q. No, this is this one.

6 A. Oh, okay.

7 Q. And we're on that slide 10. Thank you.

8 Mr. Price, isn't it true that this study was
9 related in part to road salting --

10 A. It was.

11 Q. -- winter conditions and partially to
12 petroleum --

13 A. Yes --

14 Q. -- production operations?

15 A. Yes, it was.

16 Q. Can you tell me where the petroleum production
17 operations were in the province of British Columbia?

18 A. I can't tell you.

19 Q. Would you be surprised to know that this was
20 northern British Columbia?

21 A. It wouldn't surprise me.

22 Q. And can you discuss for me the climate of
23 northern British Columbia as it relates to New Mexico?

24 A. Well, if I'm top of this big mountain up here it
25 might be similar.

1 (Laughter)

2 Q. Speaking of the oil producing regions, primarily,
3 in New Mexico?

4 (Laughter)

5 A. I would have to assume that it's quite a bit
6 different.

7 Q. Okay, thank you. On the next slide there's four
8 different soil types that are present, and is it my
9 understanding here that your sole purpose is really to show
10 that as we change soil types, that the EC values differ,
11 comparing that versus an extraction approach?

12 A. What I'm trying to do here is to say that as soil
13 types change -- if you have the similar soils, EC values
14 are very accurate, they're very consistent. And I'm not
15 saying that in all cases if you change soils that it
16 wouldn't be the same, but what this points out is, there
17 can be quite a variance between EC values.

18 Q. Okay. And you're not taking the position before
19 the Commission that any of these soil types are present in
20 New Mexico?

21 A. These soil types could be similar. I read a
22 little bit about -- and I'm not a -- I don't have a
23 master's degree in geology, but I can tell you that it
24 looked like there were some clay soils, and then there were
25 some sandy soils. And as far as I know, the texture of

1 clay and the texture of sand, whether it be in Africa or
2 British Columbia or New Mexico, could have the same
3 characteristics.

4 Q. Right, the soil textures may share the similar
5 characteristics?

6 A. That's correct.

7 Q. But the soil constituents may be different?

8 A. That is correct.

9 Q. Moving back, then, to slide 13, this is the
10 effects endpoints for the -- I believe it is invertebrates
11 in the soil. Can you tell me whether this effects curve
12 assumes a constant concentration of salt exposure over
13 time?

14 A. It's my understanding that this data was on some
15 fairly short-term studies.

16 Q. But were the critters exposed to a constant level
17 of the -- in this case, sodium chloride, during that study?

18 A. I don't know that.

19 Q. Okay. Would you expect there to be a constant
20 salt concentration in a small landfarm?

21 A. A small concentration?

22 Q. No, would you expect there to be a constant
23 concentration of salt in a small landfarm, or would it tend
24 to decrease over time?

25 A. I think it would tend to vary over time.

1 Q. Do you know if any of the species in this study
2 are actually found in New Mexico?

3 A. No, I think I testified to that.

4 Q. On the last chart, which is table 6.6, slide 17,
5 the Scots pine/blue spruce chart, why did you choose to use
6 this study from British Columbia and not any of the
7 available studies of chloride sensitivity for desert
8 plants?

9 A. Limited amount of time that I had to make the
10 study. It was readily available.

11 Q. Okay, thank you. Last thing we want to touch on
12 is, you addressed, I think in response to questions from
13 Mr. Brooks, some questions about why you didn't raise the
14 1000-part-per-million threshold for small landfarms, as
15 opposed to large landfarms. And you spoke there of some
16 concern about cumulative impact. Is that true?

17 A. That was --

18 Q. It might be --

19 A. That was part of my answer, yes, that's true.

20 Q. Okay. Did you make any attempt to consider the
21 same things for large facilities?

22 A. No.

23 Q. And then if we go back to your own study that was
24 conducted --

25 A. Right.

1 Q. -- which you -- I don't remember where it is, but
2 it's the one where you looked at the breakthrough that
3 occurred about 90 years after you placed the salt in the
4 landfarm --

5 A. Correct.

6 Q. -- how much reduction was shown by the facility
7 that was a mere 200 feet away, in terms of the decrease in
8 the height of the --

9 A. Percentagewise?

10 Q. Yeah, and you can be very general?

11 A. Well, from 200 to about 150 or 140.

12 Q. Okay, and so what percent reduction would that
13 be?

14 A. Twenty percent.

15 Q. It's about 20 percent?

16 A. Right.

17 MR. HISER: That completes my questions.

18 Appreciate it, thank you.

19 CHAIRMAN FESMIRE: Mr. Sugarman?

20 MR. SUGARMAN: Chairman Fesmire, as I said in my
21 introduction this morning and in the prehearing statement,
22 Dr. Neeper is going to be doing that technical testimony of
23 Chief Price --

24 CHAIRMAN FESMIRE: Okay.

25 MR. SUGARMAN: -- with the Commission's

1 forbearance.

2 CHAIRMAN FESMIRE: Okay, Dr. Neeper?

3 MR. BROOKS: You may sit over here next to me, if
4 you don't mind being so closely associated.

5 DR. NEEPER: With the Commission's presence I'll
6 sit here, because I think it's probably easier for Mr.
7 Price to take questions from the front side rather than
8 from the back side.

9 (Laughter)

10 CROSS-EXAMINATION

11 BY DR. NEEPER:

12 Q. Mr. Price, I will ask a number of questions. If
13 any of those questions seem to be leading you in a strange
14 direction where you wonder where this is going, then will
15 you please stop me and ask me to clarify the question --

16 A. I will.

17 Q. -- because this is not an examination with a
18 trick question to see who can fool the student. We're
19 trying to elucidate information.

20 One of the things I want to elucidate is, what
21 kinds of things are likely to wind up in the landfarm? And
22 I did hear you say earlier in your testimony that the
23 refineries are very busy now removing the chlorinated
24 solvents from their product stream early on. But I
25 wondered, then, how we could get these kinds of things into

1 a landfarm, so I ask the question this way: If I were an
2 operator using a backhoe that broke down in the field and I
3 used trichlorethylene as de-greaser because I knew a very
4 good de-greaser, would that then be an oilfield waste that
5 could be mixed with my waste stream?

6 I'm trying to say, is that why we're proposing to
7 test for these chlorinated solvents, that they come in via
8 this route?

9 A. The oilfield still has a number of sources of
10 chlorinated solvents out there, that are being used in the
11 oilfield.

12 Q. Solvents are being used as solvents and appearing
13 in the waste stream --

14 A. Yeah, still --

15 Q. -- oilfield waste stream, they're not hazardous
16 waste that goes a different --

17 A. Yes, that's correct.

18 Q. That answers the question.

19 You had mentioned at one point, there were things
20 -- essentially that OCD does not legally try to deal with
21 non-oilfield waste. Usually a fuel is a product, and it's
22 regarded not as an oilfield waste, but if it becomes a
23 waste, it's a downstream waste. However, there might be a
24 situation, let's say, where some amount of diesel fuel is
25 spilled on the ground at a facility that you oversee, such

1 as a pipeline facility. Would that then become a waste you
2 would manage, and would it go to a landfarm?

3 A. Yes, yes, it could. If it's under one of our --
4 if it's a regulated facility by us, for example, service
5 company, and they have a diesel tank sitting there and it
6 leaks or spills, then we generally take the lead on that
7 and handle it as waste.

8 Q. So that could go to the landfarm?

9 A. It could go to the landfarm.

10 Q. You have shown that the bond on commercial and
11 centralized facilities was proposed to be either \$25,000 or
12 \$50,000, depending essentially, I think, on the number of
13 facilities that the operator proposed to handle?

14 A. Right.

15 Q. Does that in any way relate to the closure cost
16 or the remediation cost that one -- a state, presumably,
17 would run into if a facility failed and had to be taken
18 over by the state?

19 A. That's a question that needs to be asked Ed
20 Martin. He was the one who formulated that.

21 Q. Okay.

22 A. And so he'll be up here after me, and so...

23 Q. Okay, if I ask more questions like that, just
24 refer me to which witness --

25 A. Mr. Martin.

1 Q. -- because they may answer it --

2 A. Right.

3 Q. -- in the process of their testimony.

4 There has been a significant amount of discussion
5 regarding the proposed Rule that facilities -- some
6 regulations apply to facilities according to the depth to
7 groundwater, and particularly the 50-foot depth to
8 groundwater.

9 Do we have contaminated sites of which you're
10 aware with depth greater than 50 feet to groundwater where
11 they've been contaminated by surface activity?

12 A. Yes.

13 Q. So the 50 feet, then, is not necessarily, as you
14 have said, any particular magic number. It's one that
15 comes from your studies?

16 A. Yes.

17 Q. I will propose a non-hypothetical situation to
18 elucidate, if I can, the 200 feet to watercourse question
19 which has been brought up --

20 A. Right.

21 Q. -- in discussion here. Let us suppose I'm an
22 operator and we're in a canyon in mesa country of
23 northwestern New Mexico, and I blade off about half a mesa,
24 pushing it into the canyon, so that the spill from the
25 bulldozer essentially vertically drops, and there's trees

1 growing right at the site we've just pushed it in, and I've
2 made about a four- or five-acre drill pad this way.

3 A. Uh-huh.

4 Q. Is the 200 feet to the watercourse that
5 presumably existed in the bottom of that canyon, or still
6 exists, measured from the edge of that pad, or is it
7 measured from the well?

8 A. We would generally measure it from the
9 watercourse to the edge of the pad.

10 Q. To the edge of the pad.

11 A. That's right.

12 Q. So at the present time, if that were only 20
13 feet, let us say in that case I'm discussing, that would
14 not be a drill pad that could be duplicated again under
15 these rules?

16 A. Now, we're not talking about --

17 Q. That's not a surface waste facility, excuse me.

18 A. Yeah.

19 Q. But we have talked about using a pad as a small
20 landfarm in that sense, the rest of that pad would become a
21 surface waste facility. You couldn't establish a surface
22 waste facility on that pad, is the point?

23 A. That's correct.

24 Q. Thank you. There was some question about the EPA
25 418.1 test, and you simply mentioned that you thought there

1 was another way out of this. I think you can probably
2 confirm for us that the EPA has approved an alternative
3 method using methylene chloride as the solvent?

4 A. That's correct.

5 Q. Thank you. Regarding the bioremediation endpoint
6 and other circumstances, we will often need to compare a
7 set of measurements with an established standard or, in the
8 bioremediation endpoint case, a set of measurements at one
9 time with a set of measurements at another time to
10 determine if there's been any change. So either we're
11 trying to say, do we meet a standard? or, has there been a
12 change in the performance, a change in the level of
13 contamination that we see.

14 Generally when we go out and measure several
15 points in the soil, we'll get several different values for
16 concentration. I'm going to hypothesize I have measured --

17 A. That's not always true.

18 Q. Not always true, all right. Let us hypothesize I
19 have a landfarm and I measure five different points. Would
20 you think it reasonable to expect in many cases I could get
21 as much as 25 or 20 percent variation among the points I
22 take?

23 A. I've seen variations that large.

24 Q. In environmental sampling?

25 A. Yes.

1 Q. So if we have two situations, or we're comparing
2 one situation with a standard, either way, and say we have
3 variations over here of 25 percent that may even hold, no
4 matter how many samples you took. That is the natural
5 variation of what's really out there. That's what we kind
6 of presume when we do statistics, that there's a normal
7 distribution, and then there's this natural variation
8 within the distribution.

9 What does it mean when we say statistically this
10 equals this other one, or this may be less than the other
11 one?

12 A. Well, I think we would look at two standard
13 deviations.

14 Q. Two standard deviations?

15 A. I believe that would be an acceptable practice.

16 Q. And the proposed Rule, I believe --

17 A. But I don't think you can do that with two
18 points, though.

19 Q. No, you can't do it with two points, I would
20 agree.

21 A. Yeah.

22 Q. But I said five or more, however many it might
23 take. But the proposed Rule specifies not standard
24 deviations but language of alpha and T test?

25 A. That's right.

1 Q. And the two are not necessarily the same; is that
2 correct?

3 A. They are not.

4 Q. So if we talk about the alpha T test, it would be
5 something different?

6 A. That's the proposed language --

7 MR. VON GONTEN: It's their proposed language.

8 THE WITNESS: Oh, sorry. Repeat that again.

9 Q. (By Dr. Neeper) If we talk about the alpha T
10 test, we're not talking about two standard deviations?

11 A. That's my understanding.

12 Q. The alpha of .1 or whatever number?

13 A. Yes, that's my understanding.

14 Q. Standard error. One point you mentioned is that
15 under the Rule, evaporation ponds would be limited, I
16 think, to 10-acre feet in volume and would be required to
17 be netted.

18 A. If you look at the language, I think we also have
19 alternate language in there that says or render it safe
20 for migratory birds.

21 Q. Yes, or -- or some otherwise --

22 A. Some other engineering controls, flags or --

23 Q. -- otherwise convinced you that netting isn't
24 necessary.

25 (Laughter)

1 Q. What I was getting at is, do we at present have
2 such facilities, that you know of?

3 A. We have facilities that -- There are facilities
4 that are netted.

5 Q. Of that size, but say not netted?

6 A. We have large facilities that are not netted.

7 Q. Of that size -- of something like that size?

8 A. Close, yes.

9 Q. So this would be, in effect, a restriction if a
10 newer facility were to come along, it would have a little
11 more restrictive condition than an older facility?

12 A. If it was a threat to migratory birds, yes.

13 Q. You have mentioned in your really very detailed
14 numerical studies, modeling studies, that infiltrated water
15 is the -- is a very sensitive parameter?

16 A. Yes.

17 Q. And --

18 A. If you don't have infiltrated water --

19 Q. -- you don't have a problem, that's right. But
20 likewise would you say other parameters of the ground are
21 equally sensitive, such as the unsaturated hydraulic
22 conductivity?

23 A. The models that I used -- The answer to your
24 question is yes, but the models I used assume a constant
25 infiltration rate.

1 Q. Yes, you assume --

2 A. And so therefore, the unsaturated hydraulic
3 conductivity was not taken into consideration, because I
4 was looking at a constant infiltration rate.

5 Q. Which is an areawide number, something
6 established over a large area by the studies?

7 A. Yes.

8 Q. So that does not account for what we call the
9 preferential pathways?

10 A. No, it did not.

11 Q. In your experience, in most cases, have you found
12 -- when you've had to go out and dig up a site, have you
13 found that the contamination has followed a preferential
14 pathway or that it's had a uniform flow downward?

15 A. I've seen it both ways.

16 Q. Both ways. Without a statistic that --

17 A. I've seen many, many sites, and I've seen sites
18 that -- as large as this table -- no larger than this
19 table, spiral around all the way down to groundwater, and
20 I've seen sites where it was uniform.

21 Q. So this is a factor that's not accounted for by
22 modeling, no matter how good our modeling?

23 A. I don't know of any models that we use or any of
24 the models that have been submitted to us that uses
25 preferential pathway.

1 Q. I would agree, but what I agree is not what's
2 important.

3 You have used a DAF or diffusion factor, a
4 dilution factor?

5 A. Dilution, yeah.

6 Q. Essentially how dilute does the downcoming -- how
7 much does the downcoming water get diluted as it goes into
8 the aquifer?

9 A. No, the DAF that we used was -- only accounted
10 for the dilution in the aquifer, not through the vadose
11 zone.

12 Q. Yes, not in the vadose zone, but at the bottom of
13 the vadose zone there's some concentration. That's the
14 downcoming water --

15 A. Yes --

16 Q. -- and then it gets diluted and --

17 A. -- that's correct.

18 Q. -- essentially what gets to the bottom is like
19 what comes in at the top, because the chloride is
20 transported downward without much alteration, so --

21 A. That is the assumptions that we made.

22 Q. Yeah, as a reasonable assumption. But I think
23 when you showed your five-acre site, the chloride limit
24 that came out of that was about 750. Did I read that
25 correctly? It might have been 758, it was --

1 A. That was the EPA's national DAF study.

2 Q. That was EPA's --

3 A. EPA.

4 Q. -- EPA's study?

5 A. Right. That's a very conservative number.

6 Q. That's a conservative number for a five-acre
7 site?

8 A. Yes.

9 Q. Can you give us any estimate of what fraction of
10 our landfarms out there are five acres, as opposed to being
11 much larger?

12 A. We showed the flyover --

13 Q. It looked to me large, but I'm asking you.

14 A. They are large. If you want to know the exact
15 dimensions, I can't tell you without going to the file and
16 looking.

17 Q. What I'm getting at is, here, isn't it highly
18 questionable to use a dilution attenuation factor
19 appropriate to five acres when most of our landfarms are
20 much, much larger, and you should use a -- I would think a
21 much smaller dilution attenuation factor?

22 A. That is a very reasonable way to look at it.
23 However, we also have to consider just how conservative my
24 modeling approach was. Extremely conservative. And that's
25 the reason I stuck with the 1000.

1 Q. Likewise I asked, in terms of the dilution, it
2 presumes that you have a certain flow rate at the top of
3 the aquifer?

4 A. That's correct.

5 Q. I believe you took the flow rate from essentially
6 the measured discharge, or what people had tried to measure
7 as the discharge of that aquifer, headed toward Texas.

8 A. That's correct.

9 Q. So that would presume that you had uniform flow
10 across the depth of the aquifer?

11 A. No, actually that's not correct. It was a very
12 complicated study, and there was a lot of heterogeneic
13 issues that they actually took into consideration. And so
14 one of the things is, they -- it wasn't a finite-element,
15 it was a finite-difference model where they actually
16 modeled it also --

17 Q. Uh-huh.

18 A. -- and they took all of the data and they modeled
19 it also to try to project a number in the future, and
20 that's the whole reason behind it. But the actual
21 infiltration was a number that they had actually gathered
22 over a 10- or 12-year period. But what they did is, they
23 used a finite-difference model that they would -- I'm
24 sorry, they used a finite-element model where they could
25 actually measure from one point to a very close point

1 throughout the whole aquifer. And so therefore they did
2 take into consideration variations of hydraulic
3 conductivity, geology, so forth.

4 Q. So what I'm getting at, then, your flow rate was
5 one that was appropriate for the top of the aquifer, not an
6 aquifer average?

7 A. My flow rate was taken right out of the report as
8 a mean average flow rate. To answer your question, there's
9 variation there, yes.

10 Q. There's variation. So at the top of the aquifer
11 it could have been much faster, giving a bigger dilution,
12 or much slower, giving you less?

13 A. That's correct.

14 Q. There's been some discussion regarding the
15 Canadian studies, and also with this question of EC versus
16 chloride.

17 A. Right.

18 Q. I'm not arguing either standard here, I'm trying
19 to clarify why we are speaking both languages. You have
20 expressed why you chose chloride in places. When it comes
21 to correlating the damage that the chloride might do with a
22 plant, which measurement correlates more closely with the
23 damage to the plant, the EC or the chloride concentration?

24 A. EC.

25 Q. Thank you. You had mentioned, if I wrote down a

1 quote from your words correctly, that the EC 50, as for
2 example exemplified in the Canadian study --

3 A. Which is not the same EC we just were talking
4 about.

5 Q. No, it's not. I went through agony when I first
6 read this study getting that language straight.

7 A. The EC they're talking about was electrical
8 conductivity.

9 Q. Yes.

10 A. This EC is effects concentration.

11 Q. I now flip between those without thinking how I
12 may confuse somebody else. Thank you.

13 The EC 50, which is the effect -- a measure of
14 effect on a species --

15 A. Yes, whether it be plants or --

16 Q. Plants or animals.

17 A. That's right.

18 Q. And with a plant, what that indicates is that
19 plants growing under that condition achieved only 50
20 percent of their normal growth, whatever that might be. It
21 might be mass of the material or amount of leaves, or
22 whatever was being measured; is that correct?

23 A. Yes, that's correct.

24 Q. So a species, let us say it's a cornfield,
25 alfalfa field, whatever it may be, growing out there -- if

1 it were at an EC 50, which is half of normal growth, would
2 you say that -- in your guesstimate, would you say that
3 looks like a pretty sick field?

4 A. Well, actually it may not be, Dr. Neeper. We
5 have -- There's a lot of dryland farmers that are fortunate
6 to get a 50-percent wheat crop.

7 Q. Okay.

8 A. And one thing you've got to remember now, the EC
9 50 is a variation with several plant species along that
10 line. And so barley could be way up here -- that's very
11 salt-tolerant -- but you might have a grapevine, which is
12 very sensitive. And so there could be a large difference
13 between there.

14 And so EC 50 in some cases might be very
15 detrimental, but in other cases it may not be.

16 Q. Oh, wait, there's where we do need a
17 clarification. Is it not true -- and I'll talk about one
18 specie, whatever specie it may be, barley or anything else,
19 EC 50 means that specie by itself is achieving only half of
20 its normal growth?

21 A. That is correct.

22 Q. In the same sense that LC 20 means that of that
23 one specie, 20 percent of them died in the process --

24 A. At a certain chloride level.

25 Q. At a certain chloride level, that's right.

1 A. Right.

2 Q. That's how the measurement proceeds.

3 A. Right.

4 Q. So what I'm coming back to is a word you said.

5 EC 50 is where it begins to have a nonlethal effect, and
6 I'm wondering if you wanted to qualify that begins to have
7 a nonlethal effect, when in fact the whole species can only
8 achieve half normal growth?

9 A. Every plant, according to that chart, they take
10 one species -- for example, let's say -- let's take
11 tomatoes, for example. And tomatoes grow great in, let's
12 say, 300 parts per million chlorides, up to that point.

13 Q. Uh-huh.

14 A. From that point upward it appears to be somewhat
15 linear. I was very surprised to see that. It's somewhat
16 linear that as you increase the chloride concentrations the
17 net plant doesn't necessarily die, but what it does, it
18 just slows down. And maybe it doesn't make bigger
19 tomatoes, maybe it doesn't put as many tomatoes on the vine
20 that you would normally get, maybe they would be smaller,
21 or so forth. But it doesn't mean that they can't survive.

22 Q. Right. But the LC means that 20 percent of the
23 number of plants of that species did not survive?

24 A. That is correct.

25 Q. That's the distinction I'm making.

1 A. That's correct. But the other 80 percent did.

2 Q. Yes.

3 A question was brought up regarding the Canadian
4 study that you had cited regarding damage to the biota and
5 whether that related to the climate in British Columbia as
6 that might be compared with the climate in New Mexico.

7 So far as you remember from reading that report,
8 were the biota studies that are cited in that report taken
9 from a wide area and, being mostly laboratory studies, that
10 would be independent and totally remote from the soil or
11 the climate in British Columbia?

12 A. I believe they were laboratory studies.

13 DR. NEEPER: Thank you, no further questions.

14 CHAIRMAN FESMIRE: Commissioner Bailey, do you
15 have any questions?

16 COMMISSIONER BAILEY: Yes.

17 EXAMINATION

18 BY COMMISSIONER BAILEY:

19 Q. Since we're on this Canadian study, just to
20 follow through, clearly Scots pine and blue spruce isn't
21 growing wild in southeastern New Mexico. You do have a
22 chart for blue grama grasses that you say is common in
23 southeastern New Mexico, or --

24 A. Yes, there is blue grama grasses in -- variations
25 of them in southeastern New Mexico. I'm not a biologist,

1 and so you'll have to bear with me, but I did get this
2 information, Commissioner Bailey, from the Lea County
3 extension agent.

4 Q. Did they say what were the most common grasses
5 and forbs, and were those tested at all for EC and LC?

6 A. No, not for LC.

7 Q. So when the re-vegetation requirement calls for
8 native plants in the area, we don't know what those re-
9 vegetation type of plants can be in relationship to the
10 chloride limits that we're placing, right?

11 A. Chairman Fesmire and Commissioner Bailey, you're
12 absolutely correct, we do not know that.

13 Q. So when we're talking about re-vegetation for
14 landfills, which is a requirement --

15 A. Landfills?

16 Q. Yes.

17 A. Okay.

18 Q. Landfills --

19 A. Right.

20 Q. -- which is a requirement in this proposed Rule,
21 with chlorides above 1000, is what we can assume since they
22 are landfills and not landfarms --

23 A. Commissioner Bailey, landfills would have some
24 sort of designed top cover, which Mr. Chavez will talk
25 about. Generally for landfills, they go in there and they

1 vegetate with some sort of grass or vegetation that they'll
2 water and plant, and it won't necessarily be the native
3 species.

4 Now, we may have an issue in the Rule where if
5 we're saying that they have to put native species back on
6 top of a landfill, we might have to take a look at that,
7 because most landfills have some sort of grassy cover to
8 establish an ET, and it's watered fairly regularly to keep
9 that going. And so I think there's a big -- there's
10 considerable difference between a landfill versus a
11 landfarm, for re-vegetating a landfill/landfarm.

12 The way I see it, a landfill is going to have
13 basically a design -- maybe even sod put on there and
14 watered and taken care of for a long term, whereas a
15 landfarm, they will most likely want to try to have it go
16 back to Mother Nature and have the native species populate
17 that area.

18 Q. But don't we see the wicking up of the salts up
19 to the surface, isn't that going to --

20 A. If you have --

21 Q. -- affect any re-vegetation for landfills?

22 A. No, for landfills there will be a -- and once
23 again, Mr. Chavez, I'd like to refer that question to him,
24 because he's going to talk about -- extensively about ET
25 caps and what -- and how we prevent that.

1 Q. The definition of landfarm talks about the
2 remediation of the hydrocarbon-contaminated soils and
3 materials, which implies to me, if it's remediated soil,
4 that there is an anticipated end use, rather than just
5 leaving it in the ground.

6 A. Thank you, Commissioner Bailey, that is
7 absolutely correct. It is our intent that once these soils
8 go into landfarms, they're to be treated. And we expect
9 and we highly encourage these soils to be re-used in a
10 beneficial manner.

11 Q. With the high heavy metal concentrations, since
12 heavy metals are not remediated in a landfarm, can you give
13 me -- can you help me envision what these uses of the
14 remediated materials would be?

15 A. Commission Bailey, your assumptions that high
16 metals that are going to be in the landfarm, may not be a
17 correct assumption.

18 Q. But they're not going to be remediated?

19 A. No, that is correct. The metals that are in
20 there most likely will not be remediated, but we feel that
21 they're probably at a low enough number that they will not
22 be detrimental. But we're very concerned about that, and
23 that's why we've set some real stringent closure standards,
24 so the soils -- so we know that if those soils are going to
25 re-used, we feel very confident that those soils could go

1 to a playground somewhere, where it would not impact or
2 cause any sort of damage or threat to the public in any
3 form or fashion.

4 Q. But you don't know that remediated soil in a
5 landfarm is going to be beneficial, because of the level of
6 concentrations?

7 A. The -- if we find, that's why we -- Thank you,
8 Commissioner Bailey. But if we find that the soils that
9 are in our landfarm -- and that's one reason that we're
10 asking that the treatment zone be monitored from time to
11 time, so we have some feedback, so we know what's going
12 into these landfarms, so we know if there's an issue there
13 we'll run a red flag up so we can catch it early on.

14 And so that's one reason why we want to monitor
15 treatment zone and vadose zone, do monitoring in those
16 areas.

17 Q. Does soil moisture play any effect on these LC
18 and EC figures that you have in your standards?

19 A. Thank you, Commissioner Bailey, yes, they do.
20 Soil moistures do vary those numbers. I can't give you the
21 exact range they varied in, but yes, they do.

22 Q. So --

23 A. But I can tell you that the range would probably
24 be -- most likely be plus or minus 10 percent.

25 Q. So in southeastern New Mexico, with the extremely

1 high evaporation and evapotranspiration that we have --

2 A. Yes.

3 Q. -- can we expect these EC and LC numbers that we
4 have to go up or to go down?

5 A. From -- As Mr. von Gonten will show later on,
6 when we have performed sampling, or actually looked at the
7 sampling results that we get back from the landfarms, we're
8 not seeing a problem in the majority of all the landfarms
9 for EC -- well, we don't run EC, but for chlorides. We're
10 seeing fairly low numbers right now. We do have -- There
11 are exceptions.

12 Q. I'd like to go through the proposed Rule, certain
13 areas that I have questions or suggestions.

14 A. Okay.

15 Q. If we could go -- page 6 of Section A, number
16 (2), number (h).

17 A. (2).(h).

18 Q. Yes, lower explosive limit.

19 A. Yes.

20 Q. That's clearly a laboratory definition?

21 A. Thank you, Commissioner Bailey, but no, it's not.
22 It's a -- Lower explosion limit is a common safety device
23 that people in the oilfield carry around with them.

24 Q. Is it common to have it with a centigrade
25 thermometer instead of Fahrenheit?

1 A. Actually, in today's instrument you can flip them
2 from Fahrenheit to centigrade. It's not a problem.

3 Q. Okay, I was just curious if this should be stated
4 as Fahrenheit instead of Celsius.

5 A. You know, we could -- I don't --

6 Q. May prevent --

7 A. -- have a problem --

8 Q. -- person out there.

9 A. Yeah, I don't have a problem with changing that.

10 CHAIRMAN FESMIRE: Thirty seconds, boom.

11 (Laughter)

12 THE WITNESS: Oh, I see your question now, I'm
13 sorry.

14 COMMISSIONER BAILEY: Yeah.

15 THE WITNESS: Yeah. Okay, sorry.

16 Q. (By Commissioner Bailey) Would you like it in
17 Fahrenheit?

18 A. It should be centigrade or Fahrenheit, I'm sorry.
19 That was a good technical catch, Commissioner Bailey.

20 Q. All right, page 10 under financial assurance
21 requirements, would Mr. Martin be the better person to ask
22 about that?

23 A. Yes, he would, Commissioner Bailey.

24 Q. Page 18 --

25 A. That was a big jump. I like that.

1 Q. Well, some I'll ask Mr. Martin. He can count on
2 it.

3 Specific requirements applicable to landfarms, I
4 was wondering, how many current landfarms that are
5 permitted by the OCD could qualify for these waste
6 acceptance criteria?

7 A. Commissioner Bailey, we feel that almost every
8 landfarm that we have could qualify.

9 Q. Good. Page 21, (H), small landfarms, number (1),
10 registration --

11 A. Yes.

12 Q. -- like the fourth or fifth line down there, the
13 operator shall furnish with its Form C-137 EZ its
14 certification it has a written agreement with the fee
15 owner.

16 Would you object to removing "fee"? Because
17 state lands, as owners of the surface estate, would like to
18 be sure that they are in agreement with the use of state
19 lands for this purpose.

20 A. Commissioner Bailey, I would have to refer that
21 to our attorney, but I would think that we wouldn't object.

22 MR. BROOKS: This was drafted by a Texas lawyer,
23 you have to --

24 (Laughter)

25 MR. BROOKS: Fee means something different in

1 Texas from what it does in New Mexico, as I found out when
2 I moved here a few years ago.

3 Q. (By Commissioner Bailey) Okay. Page 24, J.(1),
4 you talk about re-vegetation means establishment of a
5 vegetative cover over at least 70 percent of the site.

6 The re-vegetation standards I'm familiar with
7 talk about a reference site of undisturbed land, so that
8 the disturbed area is -- has the cover equivalent to 70
9 percent of the undisturbed area. Because if you're trying
10 to establish vegetation under drought conditions, 70
11 percent is going to be maybe far above what the reference
12 area would be in a locale adjacent to undisturbed -- I
13 think you need to expand that to include a reference area,
14 rather than just 70 percent of the site.

15 A. Thank you, Commissioner Bailey. We've had quite
16 a bit of feedback on the re-vegetation and I think I have
17 to totally agree with you.

18 Q. Okay. Page 25, the last sentence of that
19 paragraph that comes onto the top of page 25, of the very
20 last line, use plan until the landowner or tenant --

21 CHAIRMAN FESMIRE: We've got that one taken care
22 of.

23 COMMISSIONER BAILEY: You've got that taken care
24 of --

25 CHAIRMAN FESMIRE: Yeah.

1 COMMISSIONER BAILEY: Good.

2 Q. (By Commissioner Bailey) Paragraph (d) on that
3 page, is Mr. Martin a better person to talk to about the
4 use of the Oil and Gas Reclamation Fund?

5 A. Yes, Commissioner Bailey, and our --

6 CHAIRMAN FESMIRE: Who can't testify.

7 THE WITNESS: Chairman Fesmire was reading my
8 mind, you knew what I was going to say.

9 (Laughter)

10 THE WITNESS: I was going to say Mr. Brooks, and
11 -- but the answer to your question is yes, but that is a
12 legal question that I can't answer.

13 MR. BROOKS: I would like to interject, not on
14 that point, but I realize a question was referred to me a
15 minute ago about would we have any objection to deleting
16 the word "fee" and "fee owner", and I talked around the
17 question but didn't answer it. And my view as attorney for
18 the Division is, I don't believe we would have any
19 objection to deleting the word "fee".

20 I'm sorry, go ahead.

21 CHAIRMAN FESMIRE: What about the question on the
22 Oil and Gas Reclamation Fund?

23 MR. BROOKS: Well --

24 CHAIRMAN FESMIRE: Can you prepare a witness to
25 answer those questions?

1 MR. BROOKS: I believe Mr. Martin will address
2 the Oil and Gas Reclamation fund in his testimony. Now, if
3 you're going to ask him questions about the legal authority
4 under the statutes, I don't believe he's prepared to
5 discuss that. But so far as how the fund actually operates
6 and what it is being used for, I believe he's quite
7 knowledgeable on that subject.

8 CHAIRMAN FESMIRE: Okay. I'm sorry,
9 Commissioner?

10 Q. (By Commissioner Bailey) Page 26 under (d).(iv),
11 if treated soils are removed, the cell is filled in with
12 native soil and re-vegetated. Maybe we should include the
13 words with cover equals 70 percent of cover in undisturbed
14 areas?

15 A. I'm sorry, Commissioner Bailey, where are you at
16 now?

17 Q. On page 26 --

18 A. Yes.

19 Q. -- (iv).(d), little four, iv.

20 A. Oh.

21 CHAIRMAN FESMIRE: Wouldn't that refer back to
22 our definition of --

23 COMMISSIONER BAILEY: Yes --

24 CHAIRMAN FESMIRE: -- vegetative?

25 Q. (By Commissioner Bailey) -- can we refer back to

1 the language we'll come up with for re-vegetation?

2 A. Yes, the Division doesn't have a problem with
3 that at all. We recommend that.

4 COMMISSIONER BAILEY: That's all I have.

5 CHAIRMAN FESMIRE: Commissioner Olson?

6 COMMISSIONER OLSON: Yeah, I have a few
7 questions.

8 EXAMINATION

9 BY COMMISSIONER OLSON:

10 Q. I guess maybe just a general question to start
11 with. We have a lot of different proposals. I think that
12 the Division was addressing part of them this morning, it
13 was coming out of the proposals from the industry committee
14 and the strike and bold language that they have here. It
15 seems like the Division is accepting of some of the issues
16 in here, but there's a lot of things that are addressed
17 here.

18 I was wondering if there's some way for the
19 Division to, I guess, respond maybe in a little more detail
20 overall as to what issues that they agree with so we can
21 have something maybe -- I don't know if it would be in
22 writing or some way. I mean, we've got a couple items here
23 today that were admitted for the record, but there's a lot
24 of other things here that some of them may have some merit,
25 and I guess I'd be interested to hear the Division's

1 position on some of this alternate language. Is there some
2 way to do that?

3 MR. BROOKS: Mr. Chairman, Commissioner Olson,
4 much of it will be addressed in the testimony of witnesses
5 who have specialized or prepared presentations for
6 particular areas of the Rule.

7 Now, if you're asking how we're going to assemble
8 all this, I think probably it would be helpful after we've
9 been through it all if the Division -- it would be helpful
10 for the Commission to -- for the Division to assemble a
11 list of those changes that it believes are acceptable,
12 because I believe it will be a much shorter list than the
13 list of changes that we do not find acceptable. And so I
14 think we would want -- that would be the way we'd want to
15 approach it.

16 Since we can't really assemble that list until
17 all the witnesses have testified, though, perhaps it would
18 be something we could put in at the close of the
19 proceeding, based on the testimony that actually has come
20 in at that point.

21 COMMISSIONER OLSON: Okay, I think that would be
22 helpful for me, just to somehow reconcile these alternate
23 language at that point, so maybe we can get there later on,
24 towards the end.

25 CHAIRMAN FESMIRE: It's not always going to be

1 reconciliation. The Division has evaluated each and every
2 one of the comments --

3 COMMISSIONER OLSON: Uh-huh.

4 CHAIRMAN FESMIRE: -- and some of them they've
5 accepted, and some of them they haven't. And the
6 presentations, I think, will address the reasons that they
7 haven't.

8 COMMISSIONER OLSON: I'm just thinking of -- I
9 think -- it sounds like Mr. Brooks is going to address some
10 -- maybe some different portions with different witnesses,
11 and if we could get --

12 MR. BROOKS: That's what --

13 COMMISSIONER OLSON: -- some kind of -- I was
14 thinking maybe a compilation of what they find acceptable
15 at the end of this would be a little more helpful.

16 MR. BROOKS: That's what I was suggesting, and I
17 was suggesting a compilation of only those that the
18 Division finds acceptable --

19 COMMISSIONER OLSON: Right.

20 MR. BROOKS: -- because as I say, most of the
21 testimony relating to these changes will be why we do not
22 find them acceptable.

23 COMMISSIONER OLSON: Right.

24 MR. BROOKS: And so far as the ones that we do,
25 we would be glad to attempt -- to go back and compile a

1 list so the Commission will have that available to them at
2 the time that they review what changes they may want to
3 make.

4 COMMISSIONER OLSON: Or I guess the other
5 alternative might be to draft another document of yours
6 incorporating the parts that you think are acceptable into
7 your document.

8 MR. BROOKS: Obviously the Division is amenable
9 to doing whatever is the pleasure of the Commission.

10 Q. (By Commissioner Olson) Okay. Then I guess,
11 kind of similar to Commissioner Bailey, I was mostly
12 interested in running through the Rule itself with some
13 questions I had in looking at it.

14 On the proposed Rule on page 4, Mr. Price, if I
15 can do some of these, I guess similar to Commissioner
16 Bailey -- if it's something that another witness is going
17 to address, just let me know.

18 On the Rule 51, in A, it talks about other liquid
19 oilfield waste. Are -- I guess what is this including as
20 other liquid oilfield waste?

21 A. Chairman Fesmire, Commissioner Olson, thanks for
22 the question. It's more of a catch-all. We know produced
23 water -- C-133s generally handle produced water. However,
24 as you know, there is other liquids in the oilfield that
25 are not necessarily -- and that are wastes and that are not

1 necessarily classified as produced waters. And so it's a
2 catch-all for all the other wastes.

3 CHAIRMAN FESMIRE: You mean like muds and --

4 THE WITNESS: It could be like drilling --

5 CHAIRMAN FESMIRE: -- frac fluids, things like
6 that?

7 THE WITNESS: Yes, Chairman Fesmire, that is
8 correct. And it's a catch-all. We looked at that, we
9 looked at drilling muds, we looked at anything that is of a
10 liquid nature, whether it be a waste chemical or whether it
11 could be a waste produced water or whether it could be
12 drilling muds, and it basically is a catch-all for all
13 others.

14 Q. (By Commissioner Olson) So would tankbottoms
15 fall within that?

16 A. If tankbottoms met the definition of liquid
17 oilfield waste, they would. However, I would like to point
18 out that we still have utilization of the C-117 form, which
19 addresses tankbottoms directly. And so we have a mechanism
20 to track tankbottoms and approval.

21 Q. Okay.

22 A. And I don't -- Pardon me, I don't anticipate us
23 causing a company to have to have a C-133 when he's
24 operating with a C-117.

25 Q. Okay. Then I guess I'll move up to page 6, and

1 at the bottom of the page under (i), (2).(i), the
2 definition of a major modification, would it also be
3 appropriate to include as a major modification changes in
4 -- significant changes in volume or location of the
5 operation?

6 A. Thank you, Commissioner Olson, I would like to
7 refer that to our permit writer of these type of facilities
8 in -- actually, he probably wrote this definition, is Mr.
9 Ed Martin.

10 Q. Okay. And I guess on page 7, under item C in the
11 middle of the page, the permitting requirements are going
12 towards all new commercial and centralized facilities.
13 Where do the renewals fall within that? I see this is --
14 just in the opening language it talks about all new
15 commercial or centralized facilities, doesn't mention
16 renewals. And then down below in number (1), then, it's
17 just picking up with renewals. Should renewals be included
18 up in that language as well?

19 A. Thank you, Commissioner Olson, give me about 30
20 seconds to read this real quick again, and let me try to
21 determine if your concern here is a problem within the Rule
22 or...

23 Commissioner Olson, the way the Rule is
24 constructed right now, it certainly wouldn't hurt for that
25 language for renewals to be up in that first paragraph.

1 However, I think item number 1 basically covers renewals.

2 Q. Yeah, I saw that, I was just wondering if that
3 was kind of a disconnect between those two languages,
4 because it's only talking about only for new facilities in
5 the opening language, new and existing.

6 A. Yes, I appreciate your concern there. Maybe we
7 could put renewals up in that area. But I'm thinking that
8 where it's at now, it fits okay. But we haven't had any --
9 from industry, we haven't had any comments from industry
10 that are concerned about where the renewals are located.
11 But then again, you know, I'm certainly for improving the
12 Rule to be user-friendly. But the way I read it right now,
13 C.(1) certainly covers renewals.

14 Q. Right, I saw that. Then I guess maybe I'll maybe
15 just think about that. I guess I wasn't sure myself. It
16 was just more of a question.

17 I guess the other issue that is down in C.(1), on
18 that second sentence it talks about for a permit for a new
19 facility, to modify an existing facility. Shouldn't that
20 be a major modification of an existing facility? Because I
21 don't think the intention is to have minor modifications go
22 through the full application process; is that correct?

23 A. Thank you, Commissioner Olson, that's a good
24 catch. You're absolutely correct, is that is not our
25 intention to have minor modifications go through this

1 process, and so that should say major modification.

2 Q. Okay, thank you. And then down in C.(1).(b), a
3 little farther down, you're referring to watercourses and
4 then water sources. I don't see a definition for water
5 sources in the proposal or in the existing regulations. Is
6 there one?

7 And I was thinking, you're -- you seem to be --
8 it seems to me you're implying you're looking at water
9 wells. Is that what the intention is there, water sources?

10 A. Thank you, Commissioner Olson. I'm looking now,
11 and I believe the term "water sources" came from our
12 guidelines from some time ago, and while it might have a
13 common meaning and understanding, if we don't have a
14 definition for it, it could cause some problems.

15 Q. Yeah, I believe it existed -- might have existed
16 in the old 7940 too, I think that's where --

17 A. Yes.

18 CHAIRMAN FESMIRE: But I think it's intended to
19 mean both water wells and springs --

20 THE WITNESS: Yes --

21 COMMISSIONER OLSON: Springs --

22 THE WITNESS: -- right --

23 COMMISSIONER OLSON: -- right.

24 THE WITNESS: -- right. And so therefore it
25 looks like we certainly need to address that.

1 Q. (By Commissioner Olson) So I would maybe suggest
2 that you could get a definition for that --

3 A. Yes.

4 Q. -- for that term, because I think it appears in a
5 couple places --

6 A. Yes.

7 Q. -- not just there.

8 A. Thank you, Commissioner Olson, that was a good
9 catch there.

10 Q. And the next item is down in C.(1).(i), and in
11 the third line it talks about the estimates based upon the
12 use of equipment available to a third party contractor. If
13 I remember right, when you're doing a lot of the work for
14 -- when the Division is actually coming through and doing
15 closure work, they're contracting the work to a third-party
16 contractor, correct?

17 A. Thank you, Commissioner Olson, that is correct.

18 Q. And it's not just the equipment, it's the third-
19 party contractor costs, isn't it? Not just the equipment?

20 A. Well, after "third party contractor", comma, we
21 had, and including costs as necessary for removal of all
22 fluids and wastes. We thought that that covered that.

23 Q. Because I'm thinking of your -- what about your
24 contractor costs for their oversight? They have staff and
25 labor costs that -- I don't know if that's picked up in

1 here or not, it was just a question. If that's fully
2 inclusive of all of the costs that the Division would
3 incur.

4 A. Thank you, Commissioner Olson. Under (i) there,
5 we talk about closure and closure plan, including the cost
6 estimate sufficient to close the facility. In the
7 permitting process, that will be one part of the permit
8 that we will spend quite a bit of time on to make sure that
9 those closure costs are included.

10 Q. I was just wondering of maybe that language right
11 there would just be deleted so that it would be, you know,
12 based upon the costs -- based upon the use of a third party
13 contractor, and just leave it a little broader so -- make
14 sure that all third party contractor costs are included.

15 A. Thank you, Commissioner Olson. Once again, the
16 way we looked at that is that we thought that where it says
17 comma and inclusion costs as necessary for removal of all
18 fluids and wastes, we thought that that covered that. But
19 we -- we think that covers that.

20 Q. I guess I see under things that the contractors
21 do, they prepare reports for you, they do other things, and
22 is that -- this sounds like it's actually just work that's
23 conducted on the site, versus other costs that you may
24 incur. So I'm just trying to be --

25 A. Right.

1 Q. -- broad enough to make sure that the State is
2 covering its costs associated with the closure.

3 A. Commissioner Olson, I would like to take some
4 time to take a look at that --

5 Q. Okay.

6 A. -- and evaluate that further.

7 Q. I guess maybe a question too. Is the Division
8 able to charge its costs as part of the oversight for
9 closure? I mean, as in significant staff resources that
10 are expended by the agency in oversight of these types of
11 closures.

12 A. Commissioner Olson, to the best of my knowledge
13 we cannot recoup those costs.

14 Q. Okay. I guess on -- next on page 8, under -- I
15 guess that's still under C.(1) -- I guess it looks like
16 it's under (o) and (i), you have a category there for
17 geological/hydrological data, under (i) is a map showing
18 names and locations of streams and watercourses. Shouldn't
19 that also include water sources, I guess?

20 A. Thank you, Commissioner --

21 Q. -- or water -- at least -- at a minimum, it
22 should include water wells because what you're doing is,
23 coming down below, in other items you're asking for
24 potentiometric maps of the aquifers, and I would think you
25 would need to have some kind of showing of map of water

1 wells from the area. I didn't see that listed anywhere
2 else in there.

3 THE WITNESS: Thank you, Commissioner Olson.
4 While we probably --

5 CHAIRMAN FESMIRE: Well, let's go to a
6 housekeeping issue here. I guess we're going to have to
7 assemble a list of potential changes that we'll vote on
8 later, and that this should be part of.

9 COMMISSIONER OLSON: Okay.

10 CHAIRMAN FESMIRE: Who's keeping track of that?

11 MR. BROOKS: I don't think we've kept track of
12 everything to this point.

13 I would suggest in this instance, Commissioner
14 Olson, respectfully, that Mr. Martin is the -- going to be
15 our detailed witness on part C.

16 THE WITNESS: Commissioner Olson, I think you
17 have a good point about the water wells, though.

18 COMMISSIONER OLSON: Well, I mean, I'm keeping
19 track of my own, so --

20 MR. BROOKS: Okay, well --

21 COMMISSIONER OLSON: -- I don't know about other
22 folks.

23 MR. BROOKS: -- that should -- I just wanted to
24 point out, I'm not.

25 THE WITNESS: I can say that I am.

1 COMMISSIONER OLSON: Okay.

2 CHAIRMAN FESMIRE: But I -- you know, we still
3 are dealing with the same version that we are always going
4 to deal with, we just need a list of changes that the
5 Commission will vote on later.

6 THE WITNESS: Yes.

7 CHAIRMAN FESMIRE: Okay. You were at -- on page
8 8, (o).

9 Q. (By Commissioner Olson) Yeah, I was just -- I
10 was thinking that we also needed to add to that water
11 wells, to that, for your criteria you're going to need for
12 data.

13 A. Right, thank you, Commissioner Olson. That is a
14 very important part of areal review.

15 Q. Okay. And then I guess coming up on the notice
16 requirements, you were testifying that you're looking to
17 make things consistent with the executive order that came
18 out on environmental justice that the Governor had issued.
19 One of the things that's listed in the executive order is
20 items being printed, at a minimum, in English and Spanish.
21 I didn't see that --

22 A. Thank you, Commissioner Olson, we had a quite
23 lengthy debate concerning that, and I had actually
24 discussed this with two or three of the attorneys here, and
25 that particular -- I think you're referring to the new

1 public notice regulations which were mandated by the
2 Legislature and in the Water Quality Act. However, this is
3 under the Oil and Gas Act, and that would not apply.

4 Q. No, I was talking about the executive order on
5 environmental justice, which --

6 CHAIRMAN FESMIRE: But that will be under the
7 executive order itself, probably not in our Rules.

8 COMMISSIONER OLSON: Right, it's not going to be
9 in the Rules or the --

10 CHAIRMAN FESMIRE: But we still have to comply
11 with that executive order.

12 COMMISSIONER OLSON: Right.

13 THE WITNESS: Right. We did discuss that, and
14 the consensus was, at that time that we discussed it, that
15 it would not -- our public notice regs would be sufficient
16 under the oil and gas regulations. Knowing that there's a
17 new statute out there, that --

18 CHAIRMAN FESMIRE: It's not a statute, it's an
19 executive order --

20 COMMISSIONER OLSON: Right.

21 CHAIRMAN FESMIRE: -- and we will have to comply
22 with that, no matter what our rule says.

23 COMMISSIONER OLSON: Right.

24 THE WITNESS: Thank you, Chairman Fesmire. There
25 is a statute out there that talks about modifying the

1 public -- the public notice regulations; is that not
2 correct, Commissioner Olson?

3 COMMISSIONER OLSON: Well, it did occur with the
4 Water Quality Act, with the changes about a year ago --

5 THE WITNESS: Right.

6 COMMISSIONER OLSON: -- where they -- it was
7 added to the Water Quality Act, but I don't -- you know,
8 the executive order is a separate --

9 CHAIRMAN FESMIRE: It's completely separate --

10 COMMISSIONER OLSON: -- issue.

11 THE WITNESS: Right, okay. And so, obviously you
12 have a good point, and we need to address that.

13 Q. (By Commissioner Olson) Okay. And then one
14 issue, this came up with the regulations, the new public
15 notice regulations that just came out with the Water
16 Quality Control Commission. There's a lot of public
17 concern about legal advertisements for major facilities
18 like this.

19 And I notice here, looking -- it's referring to
20 -- in -- I guess this is on page -- it starts on page 8
21 under (4).(b), where it talks about publishing notice in a
22 newspaper of general circulation in the county, and I'm
23 assuming -- is that intended to be a legal ad?

24 A. Thank you, Commissioner Olson, I'd like to refer
25 that to Ed Martin.

1 Q. Okay.

2 A. He was the individual who basically wrote the
3 public notice regulations.

4 Q. Okay. Let's see, I had some others here.
5 Everything here I should just reserve on the public notice
6 for Mr. Martin. Okay.

7 A. Thank you, Commissioner Olson.

8 CHAIRMAN FESMIRE: Commissioner Olson, would this
9 be a good place to stop --

10 COMMISSIONER OLSON: Yeah, I think --

11 CHAIRMAN FESMIRE: -- and start again tomorrow?

12 COMMISSIONER OLSON: Yeah, I think that -- Well,
13 I don't have a whole lot more, but I think it'll take a few
14 minutes.

15 CHAIRMAN FESMIRE: Okay. Right now I'd like to
16 address a couple of things.

17 We need to give everybody an opportunity to --
18 everybody who's present, to make public comments today. Is
19 there anybody who at this point would be leaving or
20 wouldn't be around for the end of the hearing, who would
21 like to make a public comment? Excluding, of course, Mr.
22 Brooks?

23 (Laughter)

24 CHAIRMAN FESMIRE: Okay. Let the record reflect
25 that no one at this time has asked to make a public comment

1 today.

2 The other thing I'd like to address is, with the
3 counsels' permission, we're going to start at eight o'clock
4 in the morning, and go till about five o'clock, maybe six
5 o'clock tomorrow afternoon. At that time, it's looking
6 like the week of the first Wednesday, Thursday and Friday,
7 which would be the 3rd, the 4th and the 5th, will be the
8 days that the hearing will be continued from after
9 tomorrow.

10 And you're okay with that, right?

11 COMMISSIONER OLSON: Uh-huh.

12 CHAIRMAN FESMIRE: Mr. Huffaker, is that going to
13 be okay with you all's schedule?

14 MR. MARSH: We don't know yet. The EIB board is
15 meeting on the 2nd, 3rd, 4th and 5th to hear the solid
16 waste regulation for the EIB, so I don't know how that's
17 going to affect either myself or our witness who is
18 involved in that proceeding, and we will contact him
19 tonight and see what we can work out about that.

20 CHAIRMAN FESMIRE: Hopefully we'll get to your
21 witness tomorrow.

22 Mr. Brooks, is that going to be difficult to --

23 MR. BROOKS: Well, it's hard for me to predict at
24 this point. I think we should be able to get that far, but
25 Mr. Price's testimony has gone much farther than I

1 expected. Both his direct and his cross were much longer
2 than I expected them to be, so I -- I can't give you any
3 guarantees that we'll get through in time for Mr.
4 Huffaker's witness tomorrow.

5 CHAIRMAN FESMIRE: What do you say we plan on
6 making that deadline, leaving them at least -- you figure
7 about an hour?

8 MR. HUFFAKER: I think it will be less than that.

9 CHAIRMAN FESMIRE: Okay.

10 MR. BROOKS: Okay, if that's all you need -- what
11 you told me -- I think we can do it if that's all you need.
12 What you told me in advance indicated to me that you would
13 need like a half a day.

14 MR. HUFFAKER: No.

15 CHAIRMAN FESMIRE: I don't think they --

16 MR. HUFFAKER: Look in my submissions now.

17 MR. BROOKS: Oh, I was basing it on what you told
18 me in the telephone conversation before your submissions.

19 CHAIRMAN FESMIRE: So as of right now, the plan
20 is to finish up the Division's case-in-chief tomorrow and
21 start with Mr. -- and finish Mr. Huffaker's case tomorrow
22 afternoon, and then continue until the 3rd, and expect to
23 be here the 4th and the 5th.

24 Is that acceptable to everybody? Is there any
25 intolerable conflict there?

1 With that --

2 MR. SUGARMAN: Chairman Fesmire, my concern is
3 that -- Obviously Don Neeper is well competent to present
4 our technical testimony, to do our cross-examination. I
5 have a commitment with the Joint Use Board in Ruidoso on
6 Wednesday the 3rd and also a commitment in Farmington on
7 Friday, so I'm concerned -- while Dr. Neeper is fully
8 capable, as I say, of conducting cross-examination, I'm
9 right now a little bit concerned as to how I'm going to get
10 Dr. Neeper's direct testimony into the record in my
11 absence. I don't know if there's some sort of a procedural
12 accommodation under the Commission's Rule that can be made.

13 CHAIRMAN FESMIRE: Our 1200-series rules I think
14 will allow him to testify on his own.

15 Is there any objection to that from the attorneys
16 here?

17 MR. BROOKS: Not from the Division.

18 CHAIRMAN FESMIRE: Mr. Huffaker?

19 MR. CARR: No, not from industry or NMOGA.

20 CHAIRMAN FESMIRE: If you can't --

21 DR. NEEPER: Mr. Chairman --

22 CHAIRMAN FESMIRE: Yes, sir?

23 DR. NEEPER: -- if there's any relief to this,
24 although I prefer to have my attorney here, I do have a
25 notarized statement that authorizes me to speak *pro se* if I

1 have to.

2 CHAIRMAN FESMIRE: I believe we've got that on
3 record, Doctor, so -- There is a provision for that, and
4 since there's no objection, there'll be no problem --

5 Are you available on Thursday the 4th?

6 MR. SUGARMAN: You know, honestly, I'm not sure
7 what time my commitment in Ruidoso is, whether it's a
8 meeting that's going to be -- I don't even know whether
9 it's a daytime meeting or a nighttime meeting, right now,
10 so...

11 CHAIRMAN FESMIRE: But you think you could make
12 one day of that, or one part of one day?

13 MR. SUGARMAN: I'm pretty sure that I would be
14 able to be back on the afternoon of the 4th, on Thursday.
15 In the event that my meeting runs late in Ruidoso on
16 Wednesday night, I would still be able to drive back to
17 Santa Fe and be here in time for an afternoon session.

18 CHAIRMAN FESMIRE: Okay. What we'll do is -- is
19 that the worst, that Dr. Neeper go on Friday, but if
20 there's a day that you can make it and there's no objection
21 from the attorneys, we'll go ahead and allow you to speak
22 on -- or allow you and Dr. Neeper to present your case on
23 whatever day you can be here?

24 MR. SUGARMAN: Very good, thank you very much.

25 CHAIRMAN FESMIRE: Okay.

1 MR. SUGARMAN: Appreciate it.

2 CHAIRMAN FESMIRE: Are there any other comments
3 that we need to put on the record before we adjourn
4 tomorrow morning?

5 MR. HISER: Just to note that we had four, that
6 Dr. Sublette is not available on the 3rd at all.

7 CHAIRMAN FESMIRE: Okay, that's about the day
8 you'd be ready. Is he available on the 4th?

9 DR. SUBLETTE: Yes.

10 MR. HISER: Yes.

11 CHAIRMAN FESMIRE: Okay. I'm sure we can fill
12 the 3rd, and just plan on him -- Any other solution? Mr.
13 Carr, anything else we have to --

14 MR. CARR: I've been thinking of shooting myself.

15 (Laughter)

16 CHAIRMAN FESMIRE: I realize that you wanted to
17 present your case in order and that this is maybe putting a
18 hardship on you, and we'll work around it.

19 MR. CARR: We'll work with it, with you.

20 CHAIRMAN FESMIRE: Okay. With that, we'll
21 adjourn till eight o'clock tomorrow morning in this same
22 room. Thank you all.

23 (Thereupon, evening recess was taken at 4:55
24 p.m.)

25

* * *

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 April 29th, 2006.



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:)
APPLICATION OF THE NEW MEXICO OIL)
CONSERVATION DIVISION FOR THE REPEAL)
OF EXISTING RULES 709, 710 AND 711)
CONCERNING SURFACE WASTE MANAGEMENT)
AND THE ADOPTION OF NEW RULES GOVERNING)
SURFACE WASTE MANAGEMENT)

CASE NO. 13,586

REPORTER'S TRANSCRIPT OF PROCEEDINGS

COMMISSION HEARING

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

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Volume II - April 21st, 2006

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission, MARK E. FESMIRE, Chairman, on April 20-21, 2006, 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.

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April 20th and 21st, 2006
 Commission Hearing
 CASE NO. 13,586

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* * *

1 WHEREUPON, the following proceedings were had at
2 8:05 a.m.:

3 CHAIRMAN FESMIRE: Let's go ahead and get
4 started. Let the record reflect that this is a
5 continuation of Cause Number 13,586, that it's 8:05 a.m. on
6 Friday, April 21st.

7 I believe that Commissioner Olson was questioning
8 witness Wayne Price.

9 Commissioner Olson?

10 WAYNE PRICE,
11 the witness herein, having been previously duly sworn upon
12 his oath, was examined and testified as follows:

13 EXAMINATION (Resumed)

14 BY COMMISSIONER OLSON:

15 Q. I guess -- I think some other questions look like
16 they might be more appropriate for somebody like some of
17 the other witnesses. Let me just check here.

18 I guess on -- Mr. Price, on page 20, just sort of
19 a clarification for me. Looking at the environmentally
20 acceptable bioremediation endpoints that you're proposing,
21 you have here that the rate of reduction of the TPH
22 concentration is essentially zero. I guess -- how you --
23 What is it? Is it actually zero, or is it -- I guess -- if
24 you explain to me what is meant by essentially zero.

25 A. Chairman Fesmire, Commissioner Olson, thanks for

1 the question. Our intent here is to imply that there will
2 be some statistical analysis run on a number of samples to
3 determine that it's within the acceptable range and that
4 the rate of change is not changing anymore. In other
5 words, it's basically -- the rate of change, the difference
6 between the rate of changes is zero, or close to zero, with
7 some statistical acceptable in it.

8 Q. Would it be better to clarify that a little more
9 and saying it's -- essentially seems like it's got a lot of
10 judgment that's going into what is a zero, or is it not?

11 A. Right. Commissioner Olson, bioremediation
12 endpoint is cutting-edge technology. It's something that
13 this agency hasn't really dealt with, and we basically
14 wrote this particular section off the guidance from Dr.
15 Sublette, and he used these -- similar terms. And I think
16 the important part here is, I don't think you could ever
17 get, maybe, to zero --

18 Q. Right.

19 A. -- but you could approach zero, and that's
20 probably what we really mean to say. And so if the word --
21 We said essentially zero, and if that's confusing I have
22 absolutely no problem in changing that particular sentence.
23 Our goal here is to make sure that we are at the
24 bioremediation endpoint and that there will be no further
25 reduction in the final number, and we'll do that by some

1 sort of statistical analysis.

2 Q. Well, it seems to make a little more sense to me,
3 maybe just -- since it is allowing some discretion to say
4 maybe that it's insignificant, versus zero, but that's --

5 A. Maybe --

6 Q. -- I'll think about that.

7 CHAIRMAN FESMIRE: I think after Dr. Sublette's
8 testimony --

9 Q. (By Commissioner Olson) Yeah, hear some more of
10 the testimony later and see what comes out of that.

11 A. Thank you, Commissioner Olson.

12 Q. I had another question on -- back on page 27.
13 Maybe you can explain to me a little more on K.(2) there.
14 I'm not quite sure I follow some of that language very
15 well. It seems a little confusing to me. Maybe you could
16 explain to me what was intended here.

17 A. Thank you, Commissioner Olson. This was one of
18 the questions that I believe one of the other attorneys had
19 asked, and it is our intent that if there's a major
20 modification, or if there is an exception or a waiver given
21 from one part of this Rule, then -- if it relates to a
22 change in operations of closure or post-closure, and it's
23 not specified in the facility's permit, it may granted
24 administratively, so -- without public notice of hearing.

25 Now to me, our intent here was, if the permit --

1 if there is a permit out there -- and I think our intent
2 here was, if it was a minor change in something to do with
3 the operations closure or post-closure, then it could be
4 approved administratively without public notice.

5 Q. And I think I agree with the concept. I'm not
6 sure -- I just find that language a little confusing there.
7 It doesn't go towards major or minor modification, it talks
8 about changes in operations, not specifically in the -- it
9 could be done administratively, it doesn't talk about them
10 being major or minor at that point.

11 A. Commissioner Olson, would it help if we would
12 clarify in (2) that it would be -- if we would put some
13 sort of language in that would say minor -- minor
14 operational changes or minor closure changes. In other
15 words, differentiate it between major and minor?

16 Q. I think that would be helpful for me, because I
17 was looking at this thing, and it could be major change as
18 well, it could be done administratively, it sounded like.

19 A. And I think you have -- Commissioner Olson, I
20 think you have a very good point, because I think one of
21 the attorneys yesterday pointed that out also.

22 Q. Okay, thank you.

23 And then also clarify something on K.(3). On the
24 third line it talks about an operator requesting an
25 exception or waiver pursuant to Paragraph (3) of Subsection

1 J. I'm not quite clear on what that is doing. I thought J
2 was dealing with forfeiture of financial assurance, and is
3 there some type of a waiver then for forfeiture? I guess I
4 was a little confused what that --

5 MR. BROOKS: Mr. Olson --

6 Q. (By Commissioner Olson) -- language is --

7 MR. BROOKS: Commissioner Olson, with respect,
8 sir, I believe that is a typographical error. At one point
9 in the development of this draft, what's now subsection K
10 was subsection J.

11 COMMISSIONER OLSON: So it probably should be K?

12 MR. BROOKS: I believe that was the intent,
13 Commissioner.

14 Q. (By Commissioner Olson) Well, maybe if you could
15 check on that reference there, because it didn't make sense
16 in following the language of the regulation.

17 A. Commissioner Olson, I have to agree with our
18 attorney, Mr. Brooks. That is a typographical error, and
19 it should be K.

20 Q. Okay. I think I just had one more question on
21 that same page, page 27, under L.(2). It talks about the
22 major modifications for an existing facility, and the
23 language here says that they'll conform to the design and
24 construction specifications. Is that all that they -- They
25 don't have to apply to the other provisions of the Rule? I

1 thought that was the intent for major modifications, that
2 they would apply -- things like public notice, other
3 things, would apply to major modifications but not minor
4 modifications. I wonder if you could explain that for me.

5 A. Commissioner Olson, this was the -- what we would
6 call transitional or grandfathering clause, and our intent
7 here was to -- if an existing facility has a major
8 modification, or if there's any new landfarm cells
9 constructed at an existing facility, they shall conform to
10 the design and construction specifications.

11 And I think your question is -- and I think it's
12 a good one -- is the issue of public notice. And so
13 apparently, if you would read L.(2), then there would be no
14 public notice involved in this, and we would -- I don't
15 believe it was our intent to exclude public notice for any
16 major modification.

17 Now one thing, I would like to expand on that.
18 If you look at the definition of major modification, it
19 would have to be something outside of the boundaries of the
20 original permitted facility. Generally these facilities,
21 they have already defined a large facility that's bounded,
22 public notice has been issued for that total facility, and
23 all we're doing here is, if they have a major modification
24 within those boundaries -- Now I can see where it's
25 confusing, and so I would say that the Division probably

1 should take another look at that and see if public notice
2 is warranted for this particular section, subsection.

3 Q. Okay. Because I thought when I was reading the
4 earlier sections, when it was talking about major
5 modifications, I thought that major modifications, even at
6 an existing facility, would pull it back into needing a --
7 to getting a new permit for that part of the activity at
8 the facility, maybe not for the existing operations, but
9 for the change that was coming about, and --

10 A. Thank you, Commissioner Olson. I do believe that
11 when we put together -- when Mr. Brooks puts together a
12 compendium of all of these issues that we've discussed
13 here, I believe that we will probably include the public
14 notice issue in there.

15 Q. Okay. I think that -- Let me see here. I had --
16 I think I had something else.

17 I was looking under Tab 4, under the fifth
18 amended proposal, and I just wanted to clarify something.
19 I think you said it differently in your testimony than it's
20 listed here. Under -- it looks like it's -- let's see,
21 Rule 53.E.(13) there on the first page --

22 A. Yes.

23 Q. And there is a strikeout of 100, and then it has
24 25-year storm event, but I believe in your testimony here
25 yesterday you were saying that the run-on, runoff is based

1 on a 100-year flood, not a 25-year, so maybe you can
2 clarify that for me.

3 A. Thank you, Commissioner Olson, you're absolutely
4 right. My slide was made before this change, and it had
5 100-year on the slide, and it is indeed what you see under
6 (13).(a) of the errata sheet.

7 Q. And then maybe you can clarify that for me. Why
8 are you looking at -- I'm real familiar -- I was hearing
9 about 100-year floods. I don't think I've ever heard the
10 term 25-year flood. Maybe you can explain to me why the
11 Division is proposing that.

12 A. Commissioner Olson, the Division received comment
13 from industry and industry representatives, and they had a
14 representative from the land -- the landfill consultant,
15 and he pointed out that this is the language used by EPA
16 and the New Mexico Environment Department.

17 Q. And do you know why they use that, versus 100-
18 year flood?

19 A. I don't know, Commissioner Olson.

20 Q. And then -- maybe I'll just, you know, maybe I'll
21 ask somebody else later that might -- maybe who knows that.

22 Then just kind of a -- I guess a point of
23 clarification. It looks like a couple items you have
24 there, looking at that same page, you have the (b) struck
25 out under (13), E.(13), and then down below you've got the

1 same -- similar type of language. It seems like it's kind
2 of duplicating each other. Is there some distinction
3 between those two, what's deleted and what's left there?
4 It looks like they're duplicates to me. Is that just some
5 change in the formatting?

6 A. Commissioner Olson, I'm going to have to refer
7 that to the next witness.

8 Q. Okay.

9 A. Oh, I'm sorry, I'll have to refer that to the
10 second witness that we're going to have today on run-on and
11 runoff from these type of facilities. That will be Mr.
12 Chavez.

13 Q. Because I saw a similar thing on page 2 there,
14 under G.(1), there's the added language there -- I couldn't
15 tell if there was something different -- it looked -- this
16 language here looked like it was already in the final
17 proposal under Tab 3, so --

18 A. Commissioner Olson, on the errata sheet what page
19 are you on?

20 Q. I'm looking at that fifth amended proposal, page
21 2, under G.(1) on the waste acceptance criteria, and
22 there's a highlighted language, and I was looking at the
23 final proposal, and it seemed like the language was the
24 same as what was already in the existing language, so I
25 wasn't sure what -- if there's some difference to that or

1 if it was just an oversight.

2 A. Let me take a moment to compare real quick.

3 Q. Okay.

4 A. Commissioner Olson --

5 Q. Uh-huh.

6 A. -- we had received feedback from industry
7 indicating that they wanted the word "economical" put in,
8 and I think that is the difference. There's one word
9 there, I believe, that --

10 Q. Okay.

11 A. -- that you'll see, it's "economically". And so
12 therefore we agreed with that.

13 COMMISSIONER OLSON: Okay, thanks. I was missing
14 that.

15 And I think that's everything I've got except for
16 other witnesses, I guess.

17 EXAMINATION

18 BY CHAIRMAN FESMIRE:

19 Q. Okay. Mr. Price, the bioremediation endpoint
20 scheme, if that's used will that take more inspection or
21 more oversight from the Oil Conservation Division?

22 A. Chairman Fesmire, the answer to your question, in
23 my opinion and in our -- the Division's opinion, is yes.

24 Q. And so it would take some more manpower?

25 A. Yes, it will.

1 Q. Has that been quantified?

2 A. That has not been quantified.

3 Q. Now the one active facility per lease, can you
4 explain the reasoning behind that?

5 A. Chairman Fesmire, the Division had received
6 comments from various parties, and one of their concerns
7 was about small landfarms, that there would be literally
8 hundreds, maybe thousands, of small landfarms all over the
9 oilfield. And so they wanted some sort of control on that,
10 but yet still be able to have -- an operator still be able,
11 you know, to have a small landfarm. And that's the reason
12 that we placed that language in there, is to have some kind
13 of control on the number of landfarms that would actually
14 be out there.

15 Q. Okay. The point was made that, you know, some
16 leases are large, some are small, some are contiguous, some
17 aren't. The specific reason for basing it on a lease, what
18 was that reason?

19 A. Thank you, Chairman Fesmire. Just from my
20 oilfield experience and the Division's experience we know
21 that most leases are contiguous, however we realize that
22 some are not, and we felt it was a common-sense, practical
23 way to handle it.

24 One thing I would like to point out is that
25 yesterday we had -- I think we had received a question

1 about, you know, if it doesn't turn out to be practical per
2 lease, could a company come in and receive an exception for
3 an additional landfarm, and the answer to that question is
4 yes.

5 CHAIRMAN FESMIRE: I guess those are the only
6 questions I had that hadn't been previously gone over.

7 Mr. Brooks, do you have any redirect of this
8 witness?

9 MR. BROOKS: A little, bit, yes.

10 COMMISSIONER BAILEY: I have one.

11 CHAIRMAN FESMIRE: Oh, I'm sorry, Commissioner
12 Bailey --

13 MR. BROOKS: Oh, I'm -- Okay.

14 CHAIRMAN FESMIRE: -- has a couple questions.

15 FURTHER EXAMINATION

16 BY COMMISSIONER BAILEY:

17 Q. While we're discussing leases, your definition of
18 a lease is different from the Land Office definition of a
19 lease. Is it possible to have a definition of a lease put
20 into this Rule?

21 A. You know, Commissioner Bailey, I didn't realize
22 that until you taught me that some time ago. And -- If we
23 think that that is an issue, if that is an issue, then I
24 see no reason why we can't include in our compendium some
25 sort of recommendation to alleviate your concern there.

1 COMMISSIONER BAILEY: I think it would clarify a
2 source of confusion for quite a few people.

3 CHAIRMAN FESMIRE: Is that all?

4 COMMISSIONER BAILEY: That's it.

5 CHAIRMAN FESMIRE: Mr. Brooks, did you have a
6 redirect of this witness?

7 MR. BROOKS: Yes, may it please the Commission.
8 I'll again attempt to be brief here.

9 REDIRECT EXAMINATION

10 BY MR. BROOKS:

11 Q. Mr. Price, you were asked a number of questions
12 about the Water Quality Act.

13 A. Yes.

14 Q. These regulations -- Well, first of all I would
15 ask you to go to Tab Number 6.

16 A. Yes.

17 Q. Would you read through that and tell me if that
18 is the authority pursuant to which you believe this
19 regulation should be adopted? This is an excerpt from the
20 New Mexico Oil and Gas Act.

21 A. Yes, this is under Tab 6 --

22 Q. Yeah.

23 A. -- in 70-2-12 --

24 Q. Right.

25 A. -- Enumeration of powers.

1 Q. Right.

2 A. And if you want me to read all of it, I can, but
3 I could answer the question --

4 Q. I think the Commissioners --

5 A. -- yes.

6 Q. -- are familiar -- well, yeah, I think the
7 Commissioners are familiar with it, so it's not necessary
8 to read it. So what was your answer? I'm sorry, I talked
9 over you.

10 A. Yes.

11 Q. Okay, and is there any reference in this section
12 -- in this provision to the Water Quality Act or to the
13 Water Quality Control Commission?

14 A. Under section -- or under 70-2-12.(22) --

15 Q. Yeah.

16 A. -- yes, there is.

17 Q. And that has to do with -- that says that the
18 Commission -- or and the Division have the power to
19 regulate disposition of non-domestic wastes from certain
20 types of facilities, including administering the Water
21 Quality Act, correct?

22 A. That is correct.

23 Q. And "including" doesn't necessarily mean --
24 "including" -- normal meaning of "including" would be --
25 would be that it can go beyond that, not -- it is not

1 limited to that. Would that not be the way -- Would that
2 be the way you would read it?

3 A. From my engineering interpretation, yes.

4 Q. Okay, now that's something where an engineer can
5 give a valid observation on construction of the law. Okay.

6 So in exercising our powers that we're doing in
7 proposing this Rule, would you think that we are not
8 limited -- then would it be your opinion that we are or we
9 are not limited by anything in the Water Quality Act or the
10 Water Quality Control rules?

11 A. We're not limited.

12 Q. Now we use the Water Quality Control Commission's
13 water quality standards, do we not --

14 A. That is --

15 Q. -- for all purposes?

16 A. That is correct.

17 Q. But we -- otherwise, when the Commission is
18 exercising its Oil and Gas Act powers, it would not be
19 limited to what the Water Quality Control Act requires it
20 does?

21 A. That is correct.

22 Q. Okay. These provisions, (21) and (22), they give
23 a standard as to the purposes for which we're to regulate
24 these facilities, correct?

25 A. That's correct.

1 Q. And what is that standard?

2 A. Well, the standard that we use, once again, is
3 the Water Quality Act/Control Commission standards for
4 groundwater.

5 Q. Yeah, but then they go on and say, do they not,
6 public health and the environment?

7 A. That is correct.

8 Q. And the environment is a much broader term than
9 just water, right?

10 A. Yes, it is.

11 Q. Now we have somewhat limited environmental powers
12 because, although it doesn't restrict it here, there's also
13 the New Mexico Clean Air Act, correct?

14 A. That is correct.

15 Q. And that gives all power over air emissions and
16 air quality standards to the Department of the Environment,
17 correct?

18 A. Yes.

19 Q. So we don't have anything to do with air quality?

20 A. No, we don't.

21 Q. But we do have all other aspects of the
22 environment?

23 A. That's correct.

24 Q. Now the environment includes some --
25 "environment", as that term is used in environmental law,

1 that includes some concerns other than -- we already said
2 it includes some concerns other than water, but it also
3 includes some concerns other than human health too, does it
4 not?

5 A. That is correct.

6 Q. Such as, for instance, properly cleaning up
7 garbage, not just strewing it around everywhere?

8 A. The example I gave yesterday about everyone
9 throwing their cans out here --

10 Q. Yeah.

11 A. -- that is correct.

12 Q. And that would be an issue -- an environmental
13 issue?

14 A. Yes.

15 Q. And we have a provision, do we not, in this
16 proposed Rule that landfarms are to control odors?

17 A. Yes.

18 Q. And odors, in environmental regulation, is not
19 necessarily limited to those that may be toxic; is that
20 correct?

21 A. That is correct.

22 Q. Okay. Even though some of these concerns might
23 be labeled as, quote, aesthetic, close quote, they are
24 nevertheless a proper and customary subject of
25 environmental regulation?

1 A. Yes, they are.

2 Q. Okay. You said yesterday, in response to a
3 question -- I believe it was from Mr. Huffaker, but I'm not
4 sure -- about the -- selecting the standard for depth to
5 groundwater, you said something about that representatives
6 of the Environment Department had characterized their
7 selection of 100 feet to groundwater as a political
8 decision. Would you explain that a little bit?

9 A. Thank you for the question.

10 (Laughter)

11 A. In our meeting I think I misspoke, engineers are
12 famous for -- if it's not technical, then it's political.
13 And in reality what I should have said is that they didn't
14 give us a basis, a technical basis for it. So therefore I
15 can only assume that it was a policy decision by the New
16 Mexico Environment Department.

17 Q. Okay, and they declined -- in effect, declined to
18 say that they had -- or to advance to you a technical
19 rationale for why 100 was better than 50?

20 A. That's correct.

21 Q. Okay. The -- You had explained your reasons for
22 50 feet, and I believe that, if I understood them
23 correctly, the reason why you wanted to go at least 50 feet
24 was that you felt that your chloride dispersion model would
25 not be valid if you got much shallower than that; is that

1 correct?

2 A. Well, the model would be valid, but the results
3 would be different.

4 Q. Okay, I'm not an engineer, I misspoke in this
5 instance. And so the result that you put into the Rule
6 would not be valid if you didn't -- would not be a proper
7 standard if you had a substantially lesser depth to
8 groundwater, right?

9 A. Correct.

10 Q. Now did you also have some reasons why you
11 thought that we shouldn't go below 50 feet?

12 A. Yes.

13 Q. And what were -- That you didn't explain
14 yesterday?

15 A. That's correct.

16 Q. And what were those reasons, in addition to the
17 ones you gave yesterday?

18 A. In our brainstorming for how to set a distance
19 for siting requirements and so forth, one issue we have to
20 take a look at is that most of the landfarms -- the major
21 number of landfarms that are in the southeast part of the
22 state -- there are some up in the northwest, but the
23 majority, the bulk of them, are in the southeast. The
24 majority of those areas has groundwater between 50 and 100
25 feet. If we would have gone to 100 feet, then basically in

1 areas that need a landfarm, there -- it would not be
2 allowed under the siting requirements.

3 Q. And the siting requirements are the same for
4 small landfarms, are they not?

5 A. And that is correct. And so therefore there are
6 to be no small landfarms in the majority of those areas.
7 And so in essence we would just -- we would be knocking out
8 small landfarms, and that's not our intent.

9 Q. Okay, thank you. In your materials in the first
10 part of your presentation, at pages -- and you don't need
11 to put them on the screen because I'm just going to ask you
12 a general question -- at pages 17 through 28 you had this
13 -- you referred -- incorporated into your exhibits and
14 referred to this Environmental Protection Agency Associated
15 Waste Study.

16 A. Yes.

17 Q. You indicated to me that perhaps you had not
18 correctly characterized the nature and purpose of that
19 study. Would you like to add anything on that?

20 A. Yes. Yesterday I was asked a question, by
21 looking at the number of data points that the EPA had
22 collected, if this would statistically form a basis for the
23 quantity -- to quantify the numbers that were in these
24 types of waste. And my answer was no.

25 And I was also asked the question -- I think I

1 also pointed out that the EPA pointed that out, that it was
2 not meant to be -- to quantify the wastes that are in these
3 type of streams but to qualify the waste, in other words,
4 to identify it. And this whole program was to identify
5 what constituents are or could be in these types of waste.

6 Q. Not necessarily to identify how much you would
7 expect?

8 A. That's correct.

9 Q. Thank you. I forgot to ask you one thing for
10 which I designated you yesterday, and I wouldn't be able to
11 ask it on redirect except Mr. Carr, I believe, went into it
12 -- one of the attorneys did anyway -- and that was about
13 the potential effects on small business of these Rules, and
14 I believe you said your overall opinion was that they would
15 not be adverse; is that correct?

16 A. That is correct.

17 Q. Okay, but we did recognize that in some areas
18 there might be some additional costs, did we not,
19 particularly with regard to hauling dirt?

20 A. Well, I'd like to say that by allowing landfarms
21 to be in certain strategic areas, I think it's going to
22 reduce the hauling costs.

23 Q. Right, and did we not take that into
24 consideration in writing the small landfarm provisions?

25 A. Yes, we did.

1 Q. So we have -- we did consider alternatives that
2 might make -- Did we or did we not consider alternatives
3 that might make this Rule less likely --

4 A. Yes, that was for the decision-making process.

5 Q. And that was one of -- the small landfarm
6 provisions was one of the major ones?

7 A. Yes.

8 Q. Now even if you're mistaken and this does have
9 some adverse impact on small business -- and I'm talking
10 about small business particularly, as defined in the New
11 Mexico Small Business Regulatory Act, which is less than 50
12 employees -- even if the Commission were to determine that
13 these Rules might have adverse -- disproportionately
14 adverse effect on businesses with less than 50 employees,
15 would you still recommend -- would you still believe that
16 the environmental protection as provided by these Rules
17 would justify their adoption?

18 A. Yes, I would.

19 Q. Thank you. One other thing, and this is -- I was
20 going to ask, so far as -- Mr. Olson asked you some
21 questions about subsections K and L. I'm not going to ask
22 you anything about subsection K because I believe Mr.
23 Martin is prepared to discuss that, but -- and Mr. Martin
24 is also prepared to discuss subsection L, but I wanted to
25 call your attention to L.(2) about which Mr. Olson has

1 questioned you.

2 The statement in L.(2) about a major modification
3 is that -- well, I would ask you to read that statement.

4 A. Okay, L.(2), Any major modification of an
5 existing facility, and any new landfarm cells constructed
6 at an existing facility, shall conform to the design and
7 construction specifications provided in 19.15.2.53.

8 Q. Now is there anything in that sentence that says
9 anything one way or the other about what procedure the
10 Division will use in approving these modifications or
11 whether there's notice or whether there's a hearing or
12 anything like that?

13 A. No, there's not.

14 Q. That has only to do with design and construction,
15 right?

16 A. Yes.

17 Q. Now if you go back to C.(1) on page 7 of the
18 Rule, it says that -- well, no, actually C.(4) on page 8,
19 Upon receipt of notification of the Division's termination
20 that the application is administratively complete, the
21 applicant for a new permit, permit renewal or major
22 modification shall give notice. Correct?

23 A. That's correct.

24 Q. Okay. Now is there -- just again, with your
25 engineering construction of legal terminology, would you

1 read anything into L.(2) that would make an exception to
2 the provision of C.(4) requiring notice?

3 A. No, I wouldn't.

4 CHAIRMAN FESMIRE: We'll allow a short recross --

5 MR. BROOKS: Pass the witness.

6 CHAIRMAN FESMIRE: I'm sorry. We'll allow a
7 short recross limited to the subjects of the redirect, if
8 anybody has such questions.

9 MR. HUFFAKER: I do.

10 CHAIRMAN FESMIRE: Okay.

11 RE-CROSS-EXAMINATION

12 BY MR. HUFFAKER:

13 Q. Mr. Price, small landfarms are not subject to any
14 vadose zone monitoring requirements; isn't that correct?

15 A. That's correct.

16 Q. And in proposing the 50-foot depth to groundwater
17 limit that you are proposing --

18 A. Yes.

19 Q. -- you're not leaving any room for error, are
20 you? That's the limit that you calculate as part of your
21 chloride study, correct?

22 A. I am leaving quite a bit of room for error there,
23 because this -- remember yesterday I had talked about --
24 it's a linear -- almost a linear function between the size
25 of the site, which other -- a real large site has a really

1 -- has a larger threat to the environment than a real small
2 site.

3 Q. But isn't it true that when you studied the
4 smallest site of the four modeling studies that you did,
5 you came up with a chloride limit of around 750 parts per
6 million?

7 A. No, that's not correct. 750 was a nationwide
8 study of 1300 sites across the United States, some being
9 very large, some being smaller. However, I will say that
10 for smaller sites, if you look at the DAF study EPA did,
11 then the DAF number goes up quite a bit, and so therefore
12 the threat is considerably less, and that's why we didn't
13 feel a need to have to monitor the vadose zone.

14 MR. HUFFAKER: That's all I have.

15 CHAIRMAN FESMIRE: Mr. Carr?

16 RE-CROSS-EXAMINATION

17 BY MR. CARR:

18 Q. Mr. Price, you talked about the consideration the
19 agency had given to the small business entity in terms of
20 the impact of these rules on those owners.

21 A. Yes.

22 Q. If a small operator can't meet your TPH closure
23 standards, did you consider what the impact might be on
24 that small operator?

25 A. We did not.

1 Q. What would that operator have to do, if he can't
2 meet your closure standards?

3 A. That would be something that we would sit down
4 with the operator and jointly try to determine the most
5 economical, feasible, cost-effective method and that would
6 still protect the environment.

7 Q. Might they have to dig and haul those soils to a
8 commercial landfill?

9 A. That's a possibility.

10 Q. And when you say that you're allowing these to be
11 strategically located, what did you mean by that?

12 A. Well, basically throughout the oilfield.

13 Q. Not in regard to where they might have to haul
14 this material if they can't meet the standard?

15 A. If they can't meet the standards, then we did not
16 -- in the Rule we did not say you have to dig and haul.
17 That is one of the options.

18 MR. CARR: Thank you.

19 CHAIRMAN FESMIRE: Mr. Hiser?

20 MR. HISER: No questions.

21 CHAIRMAN FESMIRE: Mr. Sugarman?

22 MR. SUGARMAN: Dr. Neeper has a question or two.

23 CROSS-EXAMINATION

24 BY DR. NEEPER:

25 Q. In answer to the question this morning, Mr.

1 Price, I believe you indicated that a strong factor in the
2 choice of 50 feet depth limitation to groundwater was the
3 ability to allow small landfarms throughout a large area?

4 A. That was one of the factors.

5 Q. That is, the consideration for small landfarms
6 was defining what you were choosing to be an ecological
7 limit?

8 A. That was part of it.

9 Q. Did you consider making a different depth rule
10 for small landfarms, rather than to choose what you thought
11 was appropriate for small landfarms and apply it to any
12 facility, no matter what its size?

13 A. We took into consideration for large landfarms,
14 that's why we did the modeling for the chlorides, for the
15 1000 parts per million chlorides, because we knew that the
16 larger the size is, then the tighter the controls are going
17 to have to be. And that's what we did, that's the approach
18 we took.

19 Q. I'm just not understanding the answer --

20 A. Okay, maybe I didn't understand the question.

21 Q. You said that your 50 feet was really based on
22 the ability to allow small landfarms?

23 A. No, that was just one of them.

24 Q. That's one of them?

25 A. Yeah, that's just -- that was part of the

1 equation.

2 DR. NEEPER: Okay, that's the question.

3 CHAIRMAN FESMIRE: Commissioner Olson?

4 COMMISSIONER OLSON: Yeah, just something for my
5 information.

6 FURTHER EXAMINATION

7 BY COMMISSIONER OLSON:

8 Q. About how many commercial facilities, landfarms,
9 are there now?

10 A. It's going to be a fairly educated guess, but I
11 think we're up in the range of around 30, 35.

12 Q. What percentage of those are small businesses?

13 A. I would think 100 percent of them are, as far as
14 I know. No, that's not correct, I would say 95 percent of
15 them are small businesses.

16 Q. Okay. And then for operators that may have small
17 landfarms, how many of those would be small businesses?
18 What percentage?

19 A. I don't have that number, because we don't have
20 those registered yet. If you're asking me to project, I
21 wouldn't know how to answer the question, until we start
22 receiving registrations out of small landfarms.

23 COMMISSIONER OLSON: Okay, thank you.

24 CHAIRMAN FESMIRE: Mr. Brooks, I think it's time
25 to dismiss this witness and call your next one.

1 MR. BROOKS: Very good. We call Ed Martin.

2 CHAIRMAN FESMIRE: Mr. Martin, you've been
3 previously sworn, have you not?

4 MR. MARTIN: Yes.

5 MR. BROOKS: Mr. Chairman, with regard to Exhibit
6 12, the late-filed exhibit, I filed all six copies with the
7 Commission, and I don't believe there's a copy up there for
8 the witness. There is a copy of the notebook, but it's not
9 in the notebook. I'm wondering if the witness could be --
10 if a copy of Exhibit 12 could be made available to the
11 witness?

12 Is that a copy we can use on the stand, or he's
13 going to go copy it, or do we need to copy it, or is that a
14 copy that the witness can use on the stand and make
15 available to the court reporter?

16 CHAIRMAN FESMIRE: It was meant to be, but I
17 think he's --

18 MR. BROOKS: Go ahead and copy it.

19 CHAIRMAN FESMIRE: Yeah.

20 MR. BROOKS: We can get started with Mr. Martin
21 while he's doing that.

22 CHAIRMAN FESMIRE: Okay, without the --

23 MR. BROOKS: Without --

24 CHAIRMAN FESMIRE: Okay.

25 MR. BROOKS: -- the exhibit.

1 CHAIRMAN FESMIRE: Why don't you begin?

2 EDWIN E. MARTIN,

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

5 DIRECT EXAMINATION

6 BY MR. BROOKS:

7 Q. Good morning, Mr. Martin.

8 A. Good morning.

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

11 A. Ed Martin.

12 Q. And by whom are you employed?

13 A. Oil Conservation Division.

14 Q. And in what capacity?

15 A. Environmental engineer.

16 Q. And can you describe your duties as they relate
17 to surface waste management facilities?

18 A. I'm a permit writer for landfarms, landfills,
19 evaporation ponds, oil treating plants --

20 Q. Okay --

21 A. -- surface-waste --

22 Q. -- and have you also been involved in
23 remediations of abandoned facilities?

24 A. Abandoned waste management facilities?

25 Q. Yes.

1 A. Yes.

2 Q. And is your full name Edwin E. Martin?

3 A. Yes, it is.

4 Q. Okay. I bring that to your attention because if
5 you'll look under Tab 2 in the folder, we go back to the
6 third page, there is a biography of Edwin E. Martin, and
7 that is you, correct?

8 A. That is me.

9 Q. Without reading it, would you generally state
10 your background and qualifications as an environmental
11 engineer?

12 A. Graduate of University of New Mexico, 25 years
13 combined experience in industry and regulatory agency, 13
14 of those with the OCD, five years with the Environmental
15 Bureau, about two and a half years with the surface waste
16 management facility permitting process.

17 MR. BROOKS: Submit the witness as an expert
18 environmental engineer.

19 CHAIRMAN FESMIRE: Is there any objection?

20 MR. CARR: No objection.

21 MR. HUFFAKER: No objection.

22 MR. HISER: No objection.

23 CHAIRMAN FESMIRE: The witness will be so
24 accepted.

25 Q. (By Mr. Brooks) Mr. Martin, were you involved in

1 the drafting of the proposals that are before us as Rule
2 53?

3 A. Yes, I was.

4 Q. And specifically, did you draft the major portion
5 of the sections C and D relating to the permit application
6 approval process?

7 A. Yes, I did.

8 Q. And did you also draft a major portion of
9 subsection E relating to general operational requirements
10 for --

11 A. Yes, I did.

12 Q. -- for surface waste management facilities?

13 A. (Nods)

14 Q. Okay. We talked with Mr. Price, Chief Price,
15 extensively about what is a surface waste management
16 facility? Now there are two types of surface waste
17 management facilities, basically, are there not?

18 A. Yes, there are.

19 Q. And if you'll look at page 6 of the Rule,

20 A.(1).(a) and (b) --

21 A. Yes.

22 Q. -- Rule 53, proposed Rule 53, does that explain
23 the nature and distinction of those two types?

24 A. Yes, it does.

25 Q. And what are those?

1 A. Commercial and centralized.

2 Q. Now in writing the definition of centralized
3 facility that appears in this Rule, was it our intention to
4 change the definition from what it has previously been?

5 A. No.

6 Q. But, although we re-worded it, our intention,
7 then, was to leave it basically the same -- to leave the
8 same definition in place?

9 A. Basically, yes.

10 Q. And what are the hallmarks of a centralized, as
11 opposed to a commercial, surface waste management facility?

12 A. It does not accept compensation for its services.
13 That's the main one. It's -- also, it's used exclusively
14 by one generator.

15 Q. Okay, and that generator must be an oil and gas
16 operator, correct?

17 A. Yes.

18 Q. And we put in a provision that it could be
19 operated by an affiliate, because industry requested that
20 change?

21 A. That's correct.

22 Q. But it's still -- the idea is still to keep it
23 within a single enterprise?

24 A. Correct.

25 Q. Both the -- from the generation of the waste to

1 the disposal?

2 A. (Nods)

3 Q. Now we did not have a definition -- going down to
4 (c) and (d) and (e), we did not have definitions of
5 landfarm, landfill and small landfarm in the previous -- in
6 Rule 711, correct?

7 A. That's correct.

8 Q. These are new definitions, and I'm not going to
9 ask you about those because I'm going to ask Mr. von Gonten
10 about landfarms and Mr. Chavez about landfills. But then
11 going down to the other definitions in (b).(2) [sic], these
12 are basically all new, are they not? They weren't in
13 Rule -- they aren't in Rule 711?

14 A. (2).(b) on down?

15 Q. Yeah, all the way through paragraph (2) on pages
16 6 and 7. I don't believe there's a single one of those
17 definitions that appears in Rule 711, is there?

18 A. Those are all new.

19 Q. Now most of them are parts of Mr. von Gonten's or
20 principally Mr. Chavez's area, but there are two that I
21 want to talk to you about, and that is A.(2).(i) and (j),
22 the definitions of major modification and minor
23 modification.

24 A. Yes.

25 Q. We did not have a definition -- we had the

1 concept in Rule 711, but we didn't have a definition; is
2 that correct?

3 A. Correct.

4 Q. And what is the purpose of distinguishing between
5 a major modification and a minor modification?

6 A. The major distinction is, a major modification
7 requires public notice.

8 Q. Okay. Now a major modification does not
9 necessarily require a hearing?

10 A. That's correct.

11 Q. But it requires that people have an opportunity
12 to request it?

13 A. Yes.

14 Q. Okay, what are the criteria for a major
15 modification under the definition in A.(2).(i)?

16 A. Of a facility that involves an increase in the
17 land area that the permitted facility occupies, a change in
18 the nature of the permitted waste stream or addition of a
19 new treatment process, or any other modification that the
20 Division determines is sufficiently substantial that public
21 notice and public participation in the application process
22 are appropriate.

23 Q. Okay, the -- under this definition, would an
24 adjustment of an existing treatment process to account for
25 day-to-day or month-to-month changes in the exact

1 constituents of the waste stream, would that be a major
2 modification?

3 A. Not necessarily, probably not.

4 Q. When you say a change in the nature -- or when
5 you say an addition of a new treatment process, what did
6 you have in mind? What do you believe is an addition of a
7 new treatment process? Give us some examples.

8 A. That wording was chosen to accommodate facilities
9 -- landfarm facilities, predominantly landfarm facilities
10 that wanted to turn a landfarm cell into a landfill cell,
11 for instance.

12 Q. And at the time that you were writing this, you
13 had an application pending before you of exactly that
14 nature, right?

15 A. Correct.

16 Q. But there would be other situations that might be
17 governed by it?

18 A. Right.

19 Q. But it wouldn't govern changes -- It would not,
20 would it, govern changes in the nature of the waste stream
21 process that you would consider to be routine at a -- more
22 or less routine at a facility?

23 A. Correct.

24 Q. For example -- and I'll use this example in
25 another context, but in the landfarming provision, there is

1 a provision that addition of microbes to the mix requires
2 Division approval?

3 A. Yes.

4 Q. But that would not be a major modification, I
5 don't imagine?

6 A. Not in my opinion.

7 Q. Okay. Now why did you add this provision about
8 other modification that the Division determines is
9 sufficiently substantial that public notice should be --
10 and participation should be required? That seems awfully
11 vague. Why did you put that in?

12 A. Well, as in this rulemaking process, like all
13 other rulemaking process, it's very difficult to predict
14 changes in technology, changes in treatment process,
15 changes in waste streams. So we put that in there to kind
16 of cover us, to allow us discretion to deem a modification
17 major if it seemed necessary in the future.

18 Q. Now you don't have a crystal ball to know what
19 kind of modifications are going to be applied for?

20 A. No.

21 Q. Now I believe the previous Chief, when we were
22 discussing this, mentioned something about a change that
23 would -- in a landfarm that would increase the depth of the
24 treatment zone, if I recall right.

25 A. I recall that.

1 Q. But that would not be covered as a -- but that
2 was just an example of something that would not be covered
3 by the general language describing a major modification,
4 but that we would still want to have some scrutiny of it --

5 A. That's correct.

6 Q. -- public scrutiny of it. Okay, very good.

7 Now there's one thing -- I'm going on, then, to
8 subsection C, and in the opening paragraph of subsection C
9 it says, All new commercial or centralized facilities prior
10 to commencement of construction, and all existing
11 commercial or centralized facilities prior to modification,
12 shall be permitted by the Division in accordance with the
13 applicable requirements of subsection C.

14 Now several people have read this. Commissioner
15 Olson is not by himself. Almost everybody who has read
16 this has said, But wait a minute. Only major modifications
17 require an application. Is that a correct statement?

18 A. That's not correct.

19 Q. Minor modifications also require an
20 application --

21 A. Yes.

22 Q. -- do they not? They do not require notice?

23 A. That's correct.

24 Q. Now the application for a major modification is
25 covered in paragraph (1), right?

1 A. Yes.

2 Q. But that's only for a major modification or a
3 renewal?

4 A. Yes.

5 Q. And -- or a new application.

6 Now go to paragraph (2) on page 8. Paragraph (2)
7 covers the application requirements for a minor
8 modification, right?

9 A. Yes.

10 Q. But a minor modification is still a modification
11 that requires an application?

12 A. That's correct.

13 Q. So the opening sentence is correct without the
14 word "major"?

15 A. That's correct.

16 Q. It's in accord with our intent?

17 A. Yes.

18 Q. Okay. Now is it perhaps, on the other hand,
19 somewhat inappropriate that we included renewals in C.(1)?

20 A. In C.(1), in my opinion, yes.

21 Q. And why is that?

22 A. It --

23 Q. Is there another provision that governs
24 applications for renewals?

25 A. There is another provision for that, and probably

1 renewals does not belong in this particular section since
2 it's covered somewhere else.

3 Q. Okay, and is that -- would you look at page 11?

4 A. Yes.

5 Q. And does page 11 -- page 11, subparagraph (b) --
6 D.(1).(b) on page 11, does that fairly comprehensively
7 cover the subject of permit renewals?

8 A. Very comprehensively, yes.

9 Q. And it states somewhere in that paragraph -- I'm
10 looking down about the middle of the paragraph, a little
11 below the middle, it says, An application for permit
12 renewal shall include and adequately address all of the
13 information for evaluation of a new permit as provided in
14 Paragraph (1), and then it goes on to make some statements
15 about how you can do that?

16 A. Yes.

17 Q. So probably the statement in C.(1) that you file
18 an application in accordance with C.(1) is probably -- for
19 renewal, is probably not an accurate statement?

20 A. I agree.

21 Q. Okay. Now looking down through C.(1), C.(1).(a)
22 says that an application shall include the names, addresses
23 and principal officers of -- the applicant principal
24 officers and owners of 25 percent or more of the applicant.
25 Did 711 require identifying owners of 25 percent or more?

1 A. No.

2 Q. That's a new provision?

3 A. That's a new provision.

4 Q. Okay, look down, then, at (1).(e), Engineering
5 designs, certified by a registered professional engineer.

6 Does 711 require certification by a registered professional
7 engineer?

8 A. No, it does not.

9 Q. And so that's a new provision?

10 A. The portion pertaining to the registered
11 professional engineer certification, yes.

12 Q. Okay, then look down at (1).(i) where it says
13 closure and post-closure plan. Is there anything about
14 post-closure in 711?

15 A. No.

16 Q. So that's new. Okay, this is really in Mr.
17 Chavez's area, but if you look at subparagraphs (l) and (m)
18 about things that are required in an application for a
19 landfill, are those provisions in 711?

20 A. No.

21 Q. And if you look in subsection (n) about a best
22 management plan, is that required under 711?

23 A. Not in those words.

24 Q. Okay. So those are new provisions?

25 A. Correct.

1 Q. All right. Now you have in -- At this time I'll
2 call your attention to Exhibit 12 that's in front of you,
3 and -- I believe it's the motion there that is in front of
4 you, and Exhibit 12 is the document behind the first page,
5 which is the motion to admit it. So if you'll look at the
6 document behind the motion, do you recognize that document?

7 A. I do.

8 Q. And what is it?

9 A. It's the current guidelines under Rule 711 for
10 operation and management of waste management facilities.

11 Q. And I believe it says on the front that it was
12 revised in 1997 or 1999?

13 A. 1997.

14 Q. Okay, is that the last -- the latest revision of
15 the Rule 711 guidelines that's been --

16 A. Yes.

17 Q. -- done by OCD?

18 A. Yes.

19 Q. Now I know you're fairly familiar with those
20 guidelines because you write permits under them.

21 A. Yes.

22 Q. So you may not have to refer to it all, but if
23 you do, you have it there in front of you.

24 The rest of the application requirements in
25 C.(1), other than the ones I specifically identified, are

1 they all either in current Rule 711 or in the guidelines?

2 A. Yes, mostly from the guidelines.

3 Q. Okay. Now I would ask you to look at C.(1).(q)
4 on page 8. That is somewhat re-worded from the way it
5 appears in Rule 711, is it not?

6 A. Somewhat.

7 Q. And why was that re-wording done?

8 A. To make it more clear, I believe, as to why we
9 needed -- may need additional information.

10 Q. Okay. Now was there not a case in which we had
11 an issue of whether or not a third party could challenge an
12 application on the ground that it did not contain
13 additional information that had not been requested by the
14 Division?

15 A. Yes.

16 Q. And was it our position that that was not
17 appropriate, that that was a provision for the Division to
18 request additional information?

19 A. Correct.

20 Q. And is that what we were trying to say in
21 C.(1).(q), among other things?

22 A. Yes.

23 Q. Okay. Now the application for minor
24 modifications in C.(2), I pointed that out. There is not a
25 corresponding provision in Rule 711, right?

1 A. Correct.

2 Q. But that's more or less in accord with the way we
3 had processed things under 711 --

4 A. Yes.

5 Q. -- is it not? So that's -- it's not a new
6 procedure?

7 A. No.

8 Q. Now this determination of administrative
9 completeness, there's nothing about that in 711, is there?

10 A. No, sir.

11 Q. There is, however, in our permitting provisions
12 under the Water Quality Control Act?

13 A. Yes, there is.

14 Q. That's in the Water Quality Control regulations?

15 A. Yes.

16 Q. Water Quality Control Commission regulations?

17 A. (Nods)

18 Q. And we also have that concept, do we not, in our
19 abatement plan provisions?

20 A. Yes.

21 Q. And we had a case last year where we had an
22 application, and the applicant went out and gave notice
23 before we had reviewed the application to determine that we
24 had the information that we needed, right?

25 A. On the waste management facility?

1 Q. Yes.

2 A. Yes.

3 Q. And then we had to send that person back to give
4 a new application?

5 A. Yes.

6 Q. And is that one of the reasons that inspired
7 putting this provision in this --

8 A. One of the reasons.

9 Q. Okay. Generally, we think it's a good way to do
10 things, right?

11 A. It standardizes things for our purposes, yes.

12 Q. Yeah, and it follows -- it corresponds to
13 procedures that other State agencies use --

14 A. Yeah.

15 Q. -- in this type of application?

16 Now -- then we went through -- going through the
17 provisions in C.(4), we now have a two-step -- actually, we
18 have a three-step application procedure, right?

19 A. Yes.

20 Q. And would you describe in general terms how that
21 works?

22 A. The applicant submits the application. We have a
23 certain time limit to deem that administratively complete.
24 Along with the application, I believe it still required
25 that they notify the landowners within a mile, and that

1 comes under the application.

2 Q. And that's to be done -- I believe if you'll look
3 at that, that's probably not the way it's done here --

4 A. That's --

5 Q. -- that is done after administrative --

6 A. Yeah.

7 Q. -- completeness?

8 A. He's also required at that time, after
9 administrative completeness is deemed, he's also required
10 to publish that -- publish a notice in the newspaper that
11 allows the public a comment period.

12 We -- in that same period of time, we would draft
13 a permit with conditions that would be available, we would
14 -- and I don't remember the terminology used at that point,
15 but we would have, in effect, a draft permit available.

16 Q. And then we publish that permit, do we not?

17 A. Yes, we would -- well, on the website, yes.

18 Q. Right.

19 A. And another public notice period would start at
20 that point in time, giving the public another opportunity
21 to see both the application and any conditions that we
22 would put -- place on the facility.

23 Q. Now what are the notice requirements after the
24 tentative draft permit is published?

25 A. They have to -- they have to publish again in a

1 paper of general circulation in the county in which the
2 facility is located, plus a newspaper of general
3 circulation in the state.

4 Q. Now the requirement for publication in a
5 newspaper of general circulation in the state, that's new,
6 right?

7 A. Well, this three-tier process is kind of new --

8 Q. Yeah.

9 A. -- altogether, but yes.

10 Q. But the -- go ahead. I mean -- I'm sorry, one --
11 I'll inject, 711 requires publication of a notice in a
12 newspaper in the county only?

13 A. Yes, that's true.

14 Q. And the new one requires publication in both the
15 notice -- both the county and a newspaper of general
16 circulation in the state?

17 A. Yes, yes.

18 Q. Okay, continue with describing the process.

19 A. And then a second public comment period ensues
20 and the objectors, if any, have a chance to call for a
21 hearing during that period of time. If the Division
22 Director deems it appropriate to have a hearing based on
23 that public interest, then we would. If not, then there's
24 a third public notice provision.

25 Q. Well now, is there a third notice provision if

1 there's not a hearing?

2 A. No, not if there's not a hearing, right.

3 Q. There is if there's a -- if there's a hearing,

4 then --

5 A. If there is a hearing --

6 Q. -- then the Division gives notice of the hearing?

7 A. Yes.

8 Q. But if there's not a hearing, there's not a third
9 publication, and the Division can then proceed to approve
10 it administratively?

11 A. Yes.

12 Q. Now there is -- in addition to the newspaper
13 notice of the tentative draft, there's also a provision to
14 mail to certain people, right?

15 A. Yes.

16 Q. And does that include anyone who's filed a
17 comment in the first round?

18 A. Yes.

19 Q. But they don't have to go back and mail again to
20 everybody within one mile?

21 A. No.

22 Q. Now as far as these two public notices in the
23 newspaper, if the Commission believes that's excessive and
24 would like to simplify that, would we then recommend that
25 they cut out that first published notice before the

1 publication of the tentative draft and only publish notice
2 after the tentative draft is published?

3 A. We would.

4 Q. Understanding, of course, that the neighbors --
5 the people within one mile would still get notice and an
6 opportunity to comment before OCD --

7 A. Correct.

8 Q. -- came up with a tentative draft?

9 A. Yes.

10 Q. Because maybe it's imposing too much cost on the
11 applicant to publish in the newspapers twice?

12 A. Yes.

13 Q. Okay. Now the standard for a hearing has been
14 changed somewhat, has it not, compared to what appears in
15 Rule 711?

16 A. Yes.

17 Q. And I am looking at C.(4).(h) on the bottom of
18 page 9. What is the standard for public hearing under Rule
19 711?

20 A. If the Division Director deems that there is
21 sufficient public interest to have a hearing --

22 Q. And that's really the only one, isn't it --

23 A. That is the only one.

24 Q. -- under 711, right?

25 Now this C.(4).(h).(iii), the Division Director

1 determines that comments have raised objections, that has a
2 -- that have technical merit, that has a parallel in other
3 rules that we have, does it not?

4 A. Yes.

5 Q. Specifically Rule 19 --

6 A. Yes.

7 Q. -- about abatement plans?

8 A. Yes.

9 Q. The one about -- C.(4).(h).(i), if -- the
10 Division proposes to deny the application or to grant it
11 subject to conditions and a hearing is requested by the
12 applicant, was that provision suggested by me as -- on the
13 idea that due process would require it?

14 A. Yes.

15 Q. And then getting down to C.(4).(i).(iv) [*sic*],
16 that refers to another regulation the Division has that
17 specifically calls for a hearing if it's invoked, does it
18 not?

19 A. C.(4).(h) --

20 Q. -- (iv).

21 A. -- (iv)? Yes.

22 Q. Okay, thank you. Now in C.(4).(i) again, that's
23 the third notice we give if there is a hearing, and that
24 notice is given by the Division, right?

25 A. Correct.

1 Q. And that would again go to everybody that's on
2 the facility-specific mailing list at that point?

3 A. Yes.

4 Q. Okay.

5 A. And a general mailing list that we keep --

6 Q. Yeah --

7 A. -- for --

8 Q. -- the general --

9 A. -- addresses.

10 Q. -- mailing list which -- for all Division
11 addresses?

12 A. Right.

13 Q. Now I want to talk to you a little bit about
14 financial assurance. You're familiar with our financial
15 assurance requirements?

16 A. Yes.

17 Q. Looking at the requirements in C.(5).(a) and (b),
18 would you explain to them -- well, first of all C.(5).(a)
19 deals with centralized facilities?

20 A. Correct.

21 Q. Have the bonding requirements for centralized
22 facilities changed at all?

23 A. No.

24 Q. Okay, now commercial facilities, they have
25 changed --

1 A. Yes.

2 Q. -- in the proposal? And describe to us how
3 they've changed.

4 A. Commercial facilities, in Rule 711 there's a
5 \$250,000 cap on -- \$250,000 maximum bond on any commercial
6 surface or waste management facility. That is no longer in
7 the Rule, it's not in Rule 53.

8 Q. Correct.

9 A. Also, there were provisions in Rule 711 to allow
10 the operator to fund the bond over a period of four years
11 or less, depending on how the surface landfarm or landfill
12 cell was filled, at what rate it was filled during that
13 four-year period. That's no longer a provision of 53.

14 Q. Okay. And then I will call your attention to
15 C.(4) -- or C.(6).(e) at the bottom of page 10, that allows
16 the Division to review the amount of financial assurance.
17 Is that a new provision as compared to Rule 711?

18 A. That's not new, it's not a new concept.

19 Q. Rule 711 tied the amount of the financial
20 assurance to the closure plan --

21 A. Yes.

22 Q. -- correct? And this would allow a renewal of
23 people operating under existing -- a review of the
24 financial assurance of people operating under existing
25 closure plans where their bond has been up for at least

1 five years?

2 A. Yes.

3 Q. Other than those provisions that we talked about,
4 is the financial assurance provision essentially the same
5 as they are under Rule 711?

6 A. Yes.

7 Q. All right. Well, there is a provision in here
8 also that -- well, I already asked you the -- under 711,
9 the amount of the financial assurance is based on the
10 amount of the closure cost in the closure plan?

11 A. Yes.

12 Q. Now Commissioner Olson asked -- I'm going to have
13 to find that wording about the closure plan cost, and I've
14 forgotten exactly where it is. Do you remember what
15 subsection?

16 MR. PRICE: Yeah, if I can approach the witness.

17 MR. BROOKS: You may -- or with the permission of
18 the --

19 (Laughter)

20 MR. PRICE: Chairman Fesmire, may I approach the
21 witness, please?

22 CHAIRMAN FESMIRE: If your attorney requests it,
23 yes.

24 MR. BROOKS: For the purpose of explaining -- of
25 finding the provision we need to talk about.

1 MR. PRICE: Is the answer yes?

2 CHAIRMAN FESMIRE: Yes.

3 (Laughter)

4 MR. PRICE: Okay.

5 MR. BROOKS: Years of habit have had results.

6 CHAIRMAN FESMIRE: I didn't notice.

7 MR. BROOKS: If you don't watch out, I'm going to
8 start ruling on my own objections.

9 (Laughter)

10 MR. BROOKS: While we're looking for that
11 particular provision, I need to ask you something else. Do
12 you have an understanding of why there are different
13 bonding requirements for centralized and commercial
14 facilities?

15 A. I do.

16 Q. And would you explain your understanding -- I
17 believe you were not here when that provision was adopted;
18 is that correct?

19 A. I wasn't here but the reasoning was, centralized
20 facilities are operated by entities that contribute to the
21 Oil Reclamation Fund, and it was decided at the time that
22 to require the bonding of those people was a double whammy
23 on those operators, and it was decided that a \$25,000 or a
24 \$50,000 blanket bond was more appropriate.

25 Q. Now when -- It has been the custom ever since

1 you've been here, if we have to close out an abandoned
2 facility and we do not have a bond or we do not have an
3 adequate bond, where do we get the funds to do that?

4 A. From the reclamation fund.

5 Q. Okay. And now if you go to -- and you don't have
6 that in front of you so I will read it to you, but Section
7 70-2-38 of the New Mexico Statutes says, The Oil and Gas
8 Reclamation Fund shall be administered by the Oil
9 Conservation Division of the Energy, Minerals and Natural
10 Resources Department. Expenditures from the fund may be
11 used by the Division for the purposes of -- and it goes
12 through some preliminaries, but then it says plugging of
13 abandoned wells -- no, abandoned wells, wellsites and
14 associated production facilities. Remediation of abandoned
15 wellsites and associated production facilities.

16 Now the Division through several Directors and
17 several attorneys has construed that to include surface
18 waste management facilities that receive production waste;
19 is that correct?

20 A. That's correct.

21 Q. Thank you.

22 (Off the record)

23 Q. (By Mr. Brooks) C.(1).(i), Mr. Price has been
24 kind enough to find what I had not found there. That's
25 your copy, so I'll go to mine here, and that's on page 7,

1 C.(1).(i). And this is -- C.(1).(i) calls for a closure
2 plan in the application, correct?

3 A. Yes.

4 Q. And the closure plan in the application is the
5 basis on which the -- subject to our review under Rule 53,
6 proposed Rule 53, the bonding amount would be determined?

7 A. Correct.

8 Q. Okay, it says, Said estimate shall be based upon
9 the use of equipment normally available to a third-party
10 contractor, and including costs as necessary for various
11 things.

12 Mr. Olson raised the point that it refers to a
13 third-party contractor only in connection with the
14 equipment. Is this an oversight on our part in drafting
15 it?

16 A. In my opinion, yes.

17 Q. Really what we should be looking to is what it
18 would cost if the job were put out to bid to a third-party
19 contractor, correct?

20 A. That's correct. One of the points of this, in my
21 opinion, was that it not be -- it be based on an estimate
22 from a third party, a third -- hopefully disinterested
23 party.

24 Q. And also, if we have to close it out, we would
25 have to use a third-party contractor?

1 A. Correct.

2 Q. And the philosophy of this for commercial
3 facilities is full-cost bonding so the State will hopefully
4 not be out, the reclamation fund will not be charged with
5 these costs?

6 A. Right.

7 Q. Thank you. In other words, you agree with Mr.
8 Olson's suggestion?

9 A. I do.

10 Q. Okay. Anything else you feel we need to talk
11 about, about bonding?

12 A. Me?

13 Q. Yeah.

14 (Laughter)

15 Q. Well, frankly, I don't think there's anything
16 else to talk about, about bonding. I might change my mind
17 there after cross-examination.

18 Now I want you to look at the requirements of
19 subsection E, beginning on page 12, and going through to
20 page 14. Mr. Price has already discussed subsections E.(1)
21 and (2), siting requirements.

22 Subsection E.(3) relating to the 500 acres,
23 that's new, is it not?

24 A. Yes, it is.

25 Q. Would you look through those requirements and

1 tell us if you can identify requirements that are not in
2 either Rule 711 or in the Rule 711 guidelines or in the
3 customary language used in existing Rule 711 permits?

4 A. With some minor changes these are, I believe, all
5 in either the guidelines or Rule 711.

6 Q. Okay. Now there is a long list of plans in here
7 that have to be filed. There's a contingency plan in (14),
8 a run-on/runoff control plan in (13), inspection and
9 maintenance plan in (12), spill reporting and corrective
10 action in -- well, no, that's not a plan, that's part of
11 your contingency plan -- and then some additional things
12 about plans related to landfarms -- landfills, I'm sorry,
13 gas safety management plans only for landfills, and there's
14 a requirement in here we also talked about for a best
15 management practices plan that's back in C.(1).

16 We've gotten a comment that asks about, are we
17 requiring too many plans? Do we really mean that they have
18 to have a separate document for each one of these subjects,
19 or just that they all have to be covered?

20 A. In my opinion, again, they all have to be
21 covered.

22 Q. If they submitted one operations plan that
23 addressed specifically each of these issues, that wouldn't
24 be a problem?

25 A. Not to me.

1 Q. And you're the guy that writes the permits?

2 A. Right.

3 Q. And do you believe that's a reasonable
4 construction of this Rule as proposed?

5 A. I do.

6 Q. Okay. Now let us go to -- Let's skip way over to
7 the closure requirements in -- appearing in subsection J.
8 I believe that Chief Price has explained most of J.(1) with
9 regard to how the procedure works, and we've already talked
10 about the re-vegetation requirements, but just so far as --
11 in terms of the procedure for realizing on financial
12 assurance and so forth as set forth in J.(3), is that
13 basically similar to the way it works under the existing
14 Rules?

15 A. Yes.

16 Q. With a little bit of detail added, perhaps?

17 A. It's expanded somewhat, but the general concepts
18 are the same.

19 Q. Now contrary to the way we do with well-plugging
20 bonds, would these facility bonds -- as this Rule provides,
21 is it not -- has it been -- How has it been done in
22 practice? And I'm asking you this question because I'm not
23 even really sure of the answer myself. Have we -- Where
24 we've had bonds, have we attempted to collect the bonds in
25 advance, or have we waited till we incurred expenditures

1 for remediation and then attempted to collect bonds?

2 A. It's happened both ways.

3 Q. Okay. In the well-plugging area, we do it
4 exclusively by plugging the well and then calling the bond,
5 but in the environmental area we have sometimes called the
6 bond in advance and then spent the money afterwards, right?

7 A. As a rule, it happens the way you describe the
8 well-plugging activity, but it has happened both ways.

9 Q. Okay. Now this Rule allows us to collect the
10 bond before we expend the money?

11 A. Yes.

12 Q. And if we have an excess of money left over we
13 would smile, but in addition to that would we refund the
14 excess to the bonding company?

15 A. Yes.

16 Q. Okay. If we get a check or a draft payable to
17 the order of the State of New Mexico and you're an employee
18 of the State of New Mexico, are you aware that there's some
19 fairly strict requirements that we deposit that in the
20 State Treasury?

21 A. Yes.

22 Q. And what we would do -- what we've been doing
23 with those bonds all along is, we've deposited them to the
24 Oil and Gas Reclamation Fund?

25 A. That's correct.

1 Q. And that is because the statutes call for
2 depositing well plugging bonds to the Oil and Gas
3 Reclamation Fund, correct?

4 A. Correct.

5 Q. And there is a statute -- there is a provision in
6 the Oil and Gas Act that authorizes the Oil Conservation
7 Division to require financial assurance from surface waste
8 management facilities, is there not?

9 A. In the Oil and Gas Act?

10 Q. Yes.

11 A. Yes.

12 Q. And it doesn't specifically say where they're to
13 be deposited?

14 A. I don't believe it does.

15 Q. You might say that that invokes the general
16 provision of statute that all moneys are to be deposited in
17 the State Treasury -- in the general fund, if it's not
18 otherwise specified?

19 A. Could be construed that way.

20 Q. But that wouldn't be a very reasonable
21 construction, because that would say we have to use the Oil
22 and Gas Reclamation Fund to reclaim these facilities, but
23 the bonding goes to the general fund, and we don't have it
24 available to us to --

25 A. Correct.

1 Q. So that would not be a very reasonable
2 construction of that statute, right?

3 A. I agree.

4 Q. Okay, thank you. Now I will take you back to
5 subsection K. Mr. Olson asked some questions about
6 subsection K this morning, and I think it must not be very
7 well drafted because it seems to confuse a lot of people,
8 Mr. Olson isn't the only one -- Commissioner Olson isn't
9 the only one.

10 But there are three provisions with regard to
11 exceptions and waivers in subsection (3), right?

12 A. Yes.

13 Q. (1), (2) and (3). The first one is that an
14 applicant for a permit can request a variance of any of the
15 rules in the application?

16 A. Yes.

17 Q. Now there's going to be notice given of the
18 application, right?

19 A. Yes.

20 Q. And there's going to be notice given of the draft
21 permit that will or will not incorporate the requested
22 exception?

23 A. Correct.

24 Q. So there's no problem with notice on that?

25 A. I don't believe so.

1 Q. Okay. And number (3) is a catch-all that we can
2 waive or modify anything after notice and hearing, right?

3 A. Yes.

4 Q. Now number (2) is the one that causes the
5 problem, and I'm going to read what it says: Any division
6 approval specifically described in 19.15.2.53 that relates
7 to a change in the operations, closure or post-closure of a
8 facility that is not specified in the facilities permit may
9 be granted administratively, without public notice or
10 hearing, unless otherwise specifically provided.

11 Now does that sentence as it is currently written
12 provide for a limited category of changes that can be
13 approved without notice and hearing?

14 A. I think so.

15 Q. And how would you determine whether a change
16 falls in that category or not?

17 A. It depends on the nature of the change, but if
18 it's specifically excluded from this provision by the Rule,
19 then it would have to go to public notice.

20 Q. Well, what it would basically be would be,
21 because K.(2) applies only to an approval specifically
22 described in Rule 53, you would have to go to -- wouldn't
23 you have to go to some other provision in Rule 53 and find
24 whether it conferred on the Division the power to grant
25 that approval?

1 A. Correct.

2 Q. For instance, the one we talked about this
3 morning about landfarms, if they want to add additional
4 microbes to a landfarm that would require Division
5 approval?

6 A. Yes.

7 Q. But the provision for Division approval of that
8 is specifically provided in 53.G?

9 A. That's correct.

10 Q. So they wouldn't have to give public notice --

11 A. Correct.

12 Q. -- or opportunity for a hearing before the
13 Division could give that approval?

14 A. (Nods)

15 Q. Now it might be a good idea, might it not, to
16 have some kind of catch-all provision for minor approvals
17 that aren't specifically described in 53, as suggested by
18 Commissioner Olson?

19 A. That would provide for public notice?

20 Q. That would except them from public notice,
21 because if it doesn't come under (2) it comes under (3),
22 and they have to give public notice before we can approve
23 it, right?

24 A. It's a good concept, but it's hard to predict --

25 Q. Very difficult to define --

1 A. -- ever variance of the changes, but --

2 Q. Very difficult to define what would constitute a
3 major versus a minor approval for that purpose?

4 A. Right.

5 Q. And that's why we tied it to the things that are
6 specifically said in Rule 53 --

7 MR. CARR: May it please the Commission, I'm
8 going to have to object. I mean, the judge is testifying.

9 (Laughter)

10 CHAIRMAN FESMIRE: Are you saying some of these
11 questions are leading?

12 MR. CARR: Somewhat.

13 CHAIRMAN FESMIRE: Okay, Mr. Brooks, I'll sustain
14 that objection.

15 Q. (By Mr. Brooks) Okay. Mr. Martin, if we did not
16 have some such provision, would it create considerable
17 difficulties in administering the supervision of surface
18 waste management facilities?

19 A. It would create administrative problems --
20 difficulty, yes.

21 Q. I said some such provision. What I mean is, if
22 we did not have a provision that would allow some approvals
23 and variances to be granted without hearing?

24 A. Yes, it would cause us problems.

25 MR. BROOKS: Okay, I'm going to pass the witness.

1 Oh, before I do, sorry --

2 (Laughter)

3 MR. BROOKS: -- I have to offer Exhibit 12.

4 CHAIRMAN FESMIRE: Is there any objection to
5 Exhibit 12?

6 MR. CARR: No objection.

7 MR. BROOKS: Pass the witness.

8 CHAIRMAN FESMIRE: Exhibit 12 is admitted.

9 Mr. Huffaker?

10 CROSS-EXAMINATION

11 BY MR. HUFFAKER:

12 Q. Good morning.

13 A. Good morning.

14 Q. Mr. Martin, were you involved in the selection of
15 the definition about soils that's proposed in the new Rule?

16 A. I was not.

17 Q. Are you familiar with the Division's practice of
18 approving the acceptance of non-oilfield waste in landfills
19 on a case-by-case basis under Rule 711?

20 A. Yes.

21 Q. Are you aware of any problems with that approval
22 process?

23 A. I have not.

24 Q. Have you been involved?

25 A. Yes.

1 Q. Are you aware that under existing Rule 712, in
2 sort of a tit-for-tat, the Division may cede its
3 jurisdiction over oilfield waste to NMED-licensed
4 landfarms?

5 A. I am aware of that.

6 Q. And are you aware of any problems with that --

7 A. I am not aware of any --

8 Q. -- ceding of jurisdiction?

9 A. No.

10 Q. What's mole sieve? Do you know what that is?

11 A. Molecular sieve. I'm aware of -- I know what the
12 term means, yes.

13 Q. What does it mean?

14 A. It's a filtering agent used in the oilfield,
15 refineries, gas plants and various and sundry places in the
16 oilfield.

17 Q. And is it a type of waste that is accepted under
18 the jurisdiction of the Division in Division-permitted
19 landfills?

20 A. Yes, in my opinion.

21 Q. And are you aware of whether mole sieve is used
22 in the refining of ethanol in the State of New Mexico, in
23 ethanol refineries?

24 A. I believe so, yes.

25 Q. And under existing Rule 711, if a landfill

1 operator were to propose to the Division that non-oilfield
2 waste be accepted in a Division landfill, would that be
3 considered under the existing Rule 711?

4 A. It could be.

5 Q. Do you know of any reason why it would be -- why
6 such an avocation would be denied under the existing Rule?

7 A. I don't believe so, no. I don't know of any
8 reason.

9 Q. Now with respect to the definition of major
10 modification in the proposed Rules --

11 A. Yes.

12 Q. -- is it fair to say that you drafted that
13 portion of the Rules with the idea in mind that the
14 Division staff will have to exercise its judgment as to
15 what constitutes a major modification, what constitutes a
16 minor modification?

17 A. The intent -- Yes, I did draft it, and the intent
18 of the drafting was to take as much of the subjectiveness
19 out of it. But there will be cases where some judgment
20 will have to be made.

21 Q. Based on what you have heard in this hearing up
22 to now, are you satisfied with the language of that
23 provision defining major modifications?

24 A. I am.

25 Q. Do you expect to propose any changes to it?

1 A. I don't.

2 Q. Paragraph 53.E.(16) on page 14 of the proposed
3 Rules covers the subject of training program?

4 A. Yes.

5 Q. Did you play any part in the -- or do you play
6 any part in the administration of training programs?

7 A. The administration of them, no.

8 Q. It's true, isn't it, that this provision doesn't
9 propose any significant change in the Division's practice
10 with respect to operator training program; is that right?

11 A. That's a fair statement.

12 Q. Does the Division currently publish a syllabus or
13 otherwise provide information to operators to help them
14 design their training program?

15 A. We have in the past helped them or given them
16 guidance as to what needs to be included in training. We
17 don't have a -- to my knowledge, we don't have a
18 standardized or a standard publication that does that.

19 Q. Okay. Do you think it would be helpful to
20 operators for the Division to undertake to propose a
21 syllabus and have regular training programs to train
22 trainers?

23 A. I think it would be helpful, yes.

24 MR. HUFFAKER: That's all I have.

25 CHAIRMAN FESMIRE: Mr. Hiser, would you like to

1 begin?

2 MR. HISER: Well, in the temporary absence of Mr.
3 Carr.

4 CROSS-EXAMINATION

5 BY MR. HISER:

6 Q. Mr. Martin, we talked a little bit about the
7 renewal provisions, and do you agree that operators who may
8 be less knowledgeable than you about the renewal provision
9 might find it difficult to find the renewal provision
10 buried in Section D.(1).(b) of rules that govern the
11 application provisions in Section C -- I'm sorry, in
12 Section --

13 A. It's possible that you would find it difficult.

14 Q. Would it not be better to sort of extract that
15 provision and put it in with all the other application
16 requirements under C.(1) and C.(2) that perhaps --

17 A. G.(1).(b)?

18 Q. Right now it is -- I believe it's in D.(1).(b).

19 A. I'm sorry, G? G or D?

20 Q. D, D as in dog, on page 11. I believe that's
21 where you said the Rule application requirements are found;
22 is that correct?

23 A. Yes.

24 Q. And I guess my question is, would it not make
25 sense to extract that and place that in Section --

1 A. -- C?

2 Q. -- Section C someplace in the 2 or 2.5 area?

3 A. I can see that as a logical thing.

4 Q. One last question. You spoke a little bit about
5 the exception of waiver provisions under Section K on page
6 27.

7 A. Yes.

8 Q. How much additional burden does a special hearing
9 and waiver request of this nature place on the Division
10 staff?

11 A. Well, in the hearing process -- the hearing
12 process is a great deal of effort, preparing for the
13 hearing and a massive amount of data that's going to be
14 required for the hearing, that's what's trying to be
15 avoided.

16 Q. Okay. And does a hearing also place the Division
17 on the resources of the Commission itself?

18 A. Yes, of course.

19 MR. HISER: Thank you.

20 CHAIRMAN FESMIRE: Mr. Carr?

21 MR. CARR: Thank you, Mr. Chairman.

22 CROSS-EXAMINATION

23 BY MR. CARR:

24 Q. Mr. Martin, you have a three-step process in the
25 Rule that's new for obtaining approval for a new facility

1 or a major modification?

2 A. Correct.

3 Q. As I go through that Rule there are a number of
4 time periods set out, as we move through each of these
5 three phases.

6 A. Yes.

7 Q. Did you estimate the total amount of time that
8 might be required to go through this whole process to get a
9 new facility approved?

10 A. I can get a general idea, based on the way it's
11 worded, how long it will take, yeah.

12 Q. How long do you think -- if it moved as quickly
13 as reasonably possible, how long would it take, do you
14 think?

15 A. Well, there are certain standard -- certain set
16 time periods that cannot be accelerated, so it would be a
17 minimum of, I think, about three months, three and a half
18 months.

19 Q. If we had go through all of these, in fact, the
20 time periods total seven months, don't they?

21 A. Is it? All right.

22 Q. And then if we had to go to a hearing, that could
23 take many months more; isn't that right?

24 A. Correct.

25 Q. Did you consider the impact this might have on

1 someone who was trying to oppose a modification or
2 implement a new facility?

3 A. I can't say it was not considered. However, the
4 impetus that we try to place on public notice outweighed
5 that.

6 Q. When you were talking about financial assurances,
7 I thought I heard you talk about associated facilities, use
8 that term.

9 A. I'm sorry?

10 Q. When you were testifying about bonding and
11 financial assurances, I thought I heard you use the term
12 "associated facility"?

13 A. Associated facilities?

14 Q. Yes. Is that a term that you use in regard to
15 requiring bonding and financial assurances? I may have
16 misheard you.

17 A. Associated facilities I believe was mentioned by
18 Mr. Brooks when he was discussing the reclamation fund,
19 when he was giving me testimony.

20 (Laughter)

21 A. So I didn't say it, but I think I know the
22 instance you're talking about.

23 Q. And I don't really want to cross-examine Mr.
24 Brooks, but I want to just ask you if it is your
25 understanding, either directly or from listening to Mr.

1 Brooks, does "associated facility" -- does that term
2 include a landfarm?

3 A. In the broader sense, yes.

4 Q. Wasn't that term actually added some time ago to
5 enable the Division to clean up an old processing plant?

6 A. I don't know for sure, but --

7 Q. But your interpretation would be, "associated
8 facility" would include a landfarm?

9 A. It could.

10 MR. CARR: That's all I have, thank you.

11 CHAIRMAN FESMIRE: Dr. Neeper, Mr. Sugarman, did
12 you have any questions of this witness?

13 MR. SUGARMAN: Yes, Chairman Fesmire, Dr. Neeper
14 has a couple of questions.

15 MR. PRICE: Dr. Neeper, do you want to --

16 DR. NEEPER: Is it easier if I'm up there?

17 MR. PRICE: I think it probably would be.

18 MR. BROOKS: Yeah, I believe so.

19 CROSS-EXAMINATION

20 BY DR. NEEPER:

21 Q. Mr. Martin, again I will give the same preamble
22 for you that I gave for Mr. Price yesterday. If you can't
23 tell where a question is going, don't look for tricks.
24 Make me stop and clarify the question.

25 A. All right.

1 Q. I have noticed, I believe correctly, in the
2 proposed regulations there is no longer a limit on landfarm
3 cell size; is that correct?

4 A. Cell size?

5 Q. Cell size.

6 A. I don't believe so, no.

7 Q. Is there any requirement to have a cell at all?

8 A. No.

9 Q. But yet our regulation, particularly in K.(2)
10 [sic] talks about a cell?

11 A. Correct.

12 Q. So it is not necessarily meaningful, then, to try
13 to regulate in terms of cell terminology if cells are not
14 required?

15 A. It's -- I see your point, but it's a kind of a
16 commonly used term --

17 Q. I recognize --

18 A. -- in landfarms, and my experience has been that
19 landfarm operators will construct such cells because they
20 are easily -- it's easy to operate a smaller unit within a
21 land area than in a larger unit.

22 Q. But is it not correct, in the past they were
23 required to do so with a maximum cell size of five acres?

24 A. Yes.

25 Q. So if we are sampling for compliance, whether for

1 a new lift or for closure, if we're not limited to a given
2 cell size, how do we know where to sample or what to
3 sample?

4 A. That's probably a question I'm going to have to
5 defer to Mr. von Gonten.

6 Q. Very good. The regulation C.(1).(i) requires a
7 closure cost estimate in the application.

8 A. Yes.

9 Q. This would presumably be the applicant's cost
10 estimate of closure; would that be correct?

11 A. I'm sorry, repeat that please?

12 Q. Well, the application is required to have a
13 closure cost estimate in it.

14 A. Yes.

15 Q. That's the applicant's estimate of the closure
16 cost, it's not OCD's estimate?

17 A. No, it's not OCD's. It's submitted by the
18 applicant, yes.

19 Q. All right. If -- Let us presume that a landfarm
20 has accepted some materials that cannot be remediated. I
21 think we understand what that means without elaboration.

22 A. Yes.

23 Q. Sometimes you can reach a point where no further
24 remediation is possible, and it may be well above the
25 established limits. In that case, is there any physical

1 mechanism that OCD has for remediation, other than to dig
2 out the contents and remove them?

3 A. No.

4 Q. Is your \$25,000 cost estimate for bonding based
5 on a dig-and-haul cost?

6 A. The \$25,000 minimum, or the \$25,000 --

7 Q. The \$25,000 minimum for the bond, is that based
8 in any way on a dig-and-haul cost?

9 A. No, I would say no.

10 Q. So you haven't established what a dig-and- --
11 your own estimate of what a dig-and-haul cost would be for
12 any given particular area?

13 A. No, it would be difficult to do that because the
14 size would vary and the amount would vary greatly.

15 Q. But would you think it might be somewhat
16 proportional to the area involved?

17 A. Yes.

18 Q. You have said that in the event the bonding was
19 inadequate in some cases, you might be able to go to the
20 Oil Reclamation Fund to get funds for remediating an
21 abandoned or otherwise improperly closed landfarm?

22 A. Yes.

23 Q. Can you give us any estimate of the currently
24 outstanding liabilities against that fund, as compared with
25 the amount of money in the fund?

1 A. I do not know for sure at this -- currently. No,
2 I don't, I don't have those figures.

3 Q. Can we take a -- just a guess to say there are
4 far greater liabilities than there are assets?

5 A. Potential liabilities.

6 Q. Potential liabilities.

7 A. I see what you're saying. I'd say that's a fair
8 statement.

9 Q. So it is not a high likelihood that you would
10 have readily available funds for additional liabilities,
11 should bonding be inadequate on these new facilities?

12 A. It's a possibility. Highly unlikely that we
13 would, I don't think that's a fair statement.

14 But it's geared to, among other things, the price
15 of oil, which is skyrocketing right now, and there are --
16 and I'm not real familiar with them, but I know there are
17 efforts in the works to increase the capital fund. And if
18 that were to happen, I wouldn't say that there would be
19 unlimited funds available, but there would a lot more than
20 there is now, and maybe enough to cover some portion or
21 some majority of landfarm closures.

22 Q. Very good. Finally, in the section K.(2) that
23 was being discussed a few minutes ago, let me say I
24 recognize the need for the Oil Conservation Division to
25 have some administrative room to maneuver and to adjust

1 things. You can't administer if absolutely every action is
2 limited by rule. In that case, we wouldn't need humans. I
3 understand that.

4 However, as I read this Rule am I correct, it
5 says that you can make any change that's covered by the
6 permission applications of Section 53 without notice? We
7 were discussing that you had the capability to do this
8 without notice, without hearing and notice.

9 A. We have the capability to -- if I understand your
10 question, we have the capability to approve certain
11 operational changes without public notice.

12 Q. And among those operational changes would be the
13 limits of concentration of contaminants in landfarms for
14 closure?

15 A. Could be, but it probably would not be.

16 Q. Probably would not be, but --

17 A. Yes.

18 Q. -- it would be allowed?

19 A. The way this is written, it could be allowed.

20 Q. Could be allowed. The citizens come here and
21 regard those limits as somewhat sacred because it's the
22 only cap they can see on this process. Can you think of a
23 real logical reason why such things as those limits should
24 be allowed without the hearing and notice process the
25 citizens have to go through in order to establish those

1 limits?

2 A. No, I cannot.

3 DR. NEEPER: Thank you, Mr. Martin.

4 CHAIRMAN FESMIRE: Commissioner Bailey?

5 EXAMINATION

6 BY COMMISSIONER BAILEY:

7 Q. On page 10, (6).(e) provides for review of the
8 adequacy of the financial assurance. The Division may at
9 any time not less than five years make that review.

10 Since a major modification could have a large
11 impact on the closure costs of the original design of the
12 facility, would not review of the financial assurance at
13 the time of major modification approval be a reasonable
14 part of the process?

15 A. Commissioner Bailey, Chairman Fesmire, yes,
16 ma'am, I think it would be, would be a very reasonable
17 time.

18 Q. Okay. So you would have no objection to putting
19 language of that sort within that paragraph?

20 A. I wouldn't have any objection. I think it's
21 covered somewhere else, but I couldn't point to it right
22 now. But no, I would have no objection to putting it here.

23 Q. On page 21 you refer to, under H.(1), small
24 landfarms. Let's spend some time on this section. Refer
25 to the Form C-137-EZ. Has that been drafted yet?

1 A. No, it has not.

2 Q. Okay.

3 A. To my knowledge. I don't think it has.

4 Q. Will drafting of that be open for comments from
5 land management agencies --

6 A. Could be, certainly.

7 Q. -- because you will be requiring approval of the
8 small landfarms by the land owner?

9 A. Yes.

10 Q. Page 13, number (9) up at the top of the page,
11 I'm a little confused, because the bottom -- the last
12 sentence of section (9) up at the top says, All waste
13 management facilities shall be fenced in a manner approved
14 by the Division.

15 Yet small landfarms appear not to be regulated by
16 that section because they're only defined by paragraph (1)
17 of section A and are exempt from everything except for
18 certain requirements. So is fencing not anticipated to be
19 required for small landfarms?

20 A. It's -- wasn't -- It should be required. And I
21 think that the thinking was that where the small landfarms
22 would exist would already -- those sites would already be
23 covered under a general fencing rule that we have or we're
24 about to modify or propose for well sites or other
25 facilities.

1 But having said that, it wouldn't be a bad idea
2 to include it in here in the meantime.

3 Q. Because there's no requirement that a small
4 landfarm use an existing --

5 A. Right, yes.

6 Q. Also having to do with netting of any facility
7 under a small landfarm, that's not a requirement at this
8 time either?

9 A. The way this is written, no.

10 Q. Right. Is that something that should be
11 considered?

12 A. It could be considered. I don't -- It should be
13 considered. I don't think that it was anticipated that
14 tanks of that size would exist on a small landfarm, but
15 it's possible that they could.

16 Q. Because there's no maximum size limit?

17 A. Yes.

18 COMMISSIONER BAILEY: That's all I have.

19 CHAIRMAN FESMIRE: Commissioner Olson?

20 EXAMINATION

21 BY COMMISSIONER OLSON:

22 Q. Mr. Martin, maybe I'll start with kind of just a
23 general concept with these regulations, and I guess my
24 question is on existing facilities. Under this regulation,
25 will they be required to be renewed on a 10-year basis?

1 A. I'm not sure. My first reaction would be, no,
2 they're not, they would be required to be renewed -- well,
3 they wouldn't be -- I'm not sure on the answer to that,
4 having -- I'm not sure how we have that covered or not
5 covered, as the case may be, in the Rule, on the existing
6 landfarms or landfills or whatever, existing waste
7 management facilities.

8 Q. Because that was a confusion of mine. I see the
9 talk about renewals, but I didn't see any real language for
10 how that applied to existing facilities, so it was a little
11 confusing to me whether they're --

12 A. I don't whether we have that covered or not. I'd
13 have to go back and look. But my first reaction would be
14 that I don't think that it is covered that way. I don't
15 think that they -- I don't know, I don't want to state
16 anything, but I don't think they're covered under that
17 renewal process, by the way that -- except by the way that
18 these transitional provisions are worded.

19 Q. Is there a reason why an existing facility should
20 not be renewed on a 10-year basis?

21 A. No.

22 Q. I think I'll move on to the -- some questions on
23 the public notice section. Under C.(4).(b) -- and I guess
24 this also occurs later on with a tentative decision, the
25 publication of that -- it talks about publishing in a

1 newspaper of general circulation, and -- of the state and
2 the county. Is this intended to be a notice in the legals
3 or just a display ad, or what kind of notice is anticipated
4 or proposed by the Division?

5 A. I think the intent was to -- in the past it's
6 always been in the legal section, and I think the intent
7 was to continue that. But it doesn't -- the way it's
8 worded it doesn't preclude us requiring a format of our
9 choosing, of OCD's choosing, it doesn't preclude us from
10 requiring a display ad.

11 Q. And I guess -- Do you have an opinion, would it
12 have more effective notice whether it be a display ad or
13 publication in the legal section of the paper?

14 A. My opinion is that -- my opinion is that a legal
15 notice is sufficient. However, I do see the point that
16 other people have made about the public generally not
17 perusing public notices, or legal notices, on a regular
18 basis. I'm not sure I buy the argument that they would
19 peruse all the display ads for similar information either.

20 Q. Okay. And then also I want to look at the
21 language you've got in here. I know it starts, I believe,
22 in C.(4).(e), and it's language about a tentative decision.
23 Is that -- most likely in most of those cases that's going
24 to be a draft permit, is that what --

25 A. That was the intent.

1 Q. The intent? Because I think the thing that
2 confused me a little later on was -- I thin it occurs in
3 (f) later on page 9 where it talks about giving notice of
4 the tentative decision and the potential for then
5 subsequently a hearing on that tentative decision. What
6 partly was confusing to me was, if the Division denies the
7 application and the applicant doesn't wish to pursue it
8 anymore, I guess I'd be kind of confused as to why that
9 would go out for notice and potential hearing.

10 A. I tend to agree with -- I see your point, and I
11 don't see any reason not to try to cover that in there, in
12 the case of denials.

13 Q. Okay. I was just having -- That was just a
14 problem I was seeing there. I don't know that it's
15 necessarily occurred at the Division. It's really had a
16 lot of things in terms of denials, but just a point of
17 clarification there that we made.

18 And then next one coming on page 9 under (h).(i),
19 it talks about potential for a hearing if the granting an
20 application subject to conditions not expressly required by
21 rule. Why is that necessary, that language? I think if
22 it's -- the Rule doesn't allow for it, it doesn't allow for
23 it. So I don't know why that clarification is necessary.

24 Q. Well, there are several provisions of the Rule
25 that do allow us to put additional conditions on, that may

1 or may not be covering the Rule. We wanted to make it
2 clear that the applicant could call for a hearing if we
3 decided to do that. He would have a right to a hearing,
4 and should have a right to a hearing, if we decided to
5 impose that are not specifically covered in the Rule.

6 Q. Well, I guess along the same line, then, if the
7 Division proposes to grant an application that the
8 applicant doesn't like, they can't request a hearing on it
9 just because it was not subject to conditions not expressly
10 required by Rule?

11 A. I'm sorry, say that again?

12 Q. It seems to me that it almost would limit the
13 ability of the Applicant to request a hearing. I don't
14 know if that's -- maybe I'm reading that wrong.

15 A. It wasn't -- that wasn't the intent. It was not
16 the intent to limit, certainly not to limit his
17 availability to a hearing. It was only to expressly
18 indicate that should that happen, he certainly has a right
19 to a hearing. I think that was the intent.

20 Q. Okay. And then I guess down on the same page
21 there, on (h).(iv), it talks about the determination of the
22 application requires the Division to make a finding about
23 water sources having a reasonably foreseeable beneficial
24 use. And it's referring you back to 19.15.1.7 at (3), and
25 the definition in there that that's referring to is for

1 fresh water. So I was wondering whether that should read
2 -- that it should be whether any fresh water has a
3 reasonably foreseeable beneficial use, versus a water
4 source. Is that the intent, is to apply that fresh waters
5 and whether they have a foreseeable beneficial use?

6 A. That was the intent, and since we don't have a
7 definition for water source, I would agree with that, what
8 you're saying.

9 Q. Because the reference there for the section goes
10 towards water -- water -- fresh waters, excuse me.

11 Then I'll move up to the financial assurance
12 requirements on page 10, item (5), and maybe some -- I need
13 some clarification under (5).(b). The first sentence talks
14 about posting -- the facilities posting the \$25,000 bond
15 upon approval of the permit. Is this -- And then the next
16 sentence then goes towards the bond being based on
17 estimated closure costs. Can you maybe explain the
18 difference in those two? Is this intended to be if there's
19 an initial bond placed on the facility, then they later
20 come back and place a full bond? I guess I was a little
21 confused --

22 A. No --

23 Q. -- in that language.

24 A. -- before the \$25,000 -- submit acceptable
25 financial assurance in the amount of the facility's closure

1 cost and post-closure cost, or \$25,000, whichever is
2 greater. So if the closure and post-closure cost was
3 \$100,000, they would have to post \$100,000 bond. That was
4 the intent.

5 Q. Okay. And then I follow down later in that
6 paragraph where it's talking about the applicant
7 disagreeing with estimated closure costs and they can
8 request a hearing on that. I guess isn't the closure cost
9 part of the permit application that's going to be subject
10 to a hearing to start with?

11 A. But we have -- Yes, but we have the authority
12 under the Rule to adjust that if we don't think it's
13 adequate. So if we do that, the applicant would have an
14 opportunity for a hearing to dispute that determination.

15 Q. Shouldn't the public also have the opportunity to
16 dispute that, say if the Division lowered the bond over
17 what they thought it should be?

18 A. If we lowered the bond?

19 Q. Yeah.

20 A. Yeah, I would agree with that.

21 Q. Or they increased it and didn't think -- and the
22 public still thought it should be even larger than that, I
23 guess.

24 A. That's -- I would agree with that.

25 Q. Okay. And then also, down on -- under the forms

1 of financial assurance on the same page, on page 10 under
2 item (6).(b), it talks about the terms of the letters of
3 credit being five years. Why wouldn't this be consistent -
4 - be 10 years to be consistent with the permit term?

5 A. I don't know the answer to that question. I'm
6 not sure whether there's some legal -- I know how the 10
7 years was chosen, because it would be totally burdensome to
8 review every five years, but I'm not sure what the five-
9 year limit on the letter of credit is. It's probably -- I
10 don't know who that's a question for, exactly. That could
11 be -- we could find out, though, and have a response.

12 Q. Because it seems like it would make sense that
13 the -- at least the term of the letter of credit be the
14 same as the permit term, but there must -- may be a reason
15 for that, I don't know.

16 A. It seems logical, so I'm thinking there's some
17 other reason that's not logical.

18 Q. Then also that -- towards the end of that first
19 sentence it talks about the expiration of the letter of
20 credit and talks about unless the insurers [sic] notify the
21 Division in writing of non-renewal at least 90 days before
22 its expiration date -- I guess I just -- maybe it's
23 something I'm not clear on. Is the insurer able to cancel
24 out the letter of credit and leave the Division without
25 financial assurance?

1 A. No, not according to the terms on a letter of
2 credit.

3 Q. Okay --

4 (Off the record)

5 COMMISSIONER OLSON: Let me see, that may be --
6 Let me check.

7 That's all I had at this time, thank you.

8 EXAMINATION

9 BY CHAIRMAN FESMIRE:

10 Q. I've got two questions along the lines we've been
11 talking about. Page 9, C.(4).(h).(iii), the Division
12 Director determines that comments have raised objections
13 and that have probable technical merit. Should that
14 determination be in writing?

15 A. Your determination, the Division Director's
16 determination?

17 Q. Yeah.

18 A. Probably should be.

19 Q. Okay. Page 8 where we referred to the C-137-EZ
20 for minor modifications, should -- Let's see, what's that?
21 That's C.(2). Should that also make reference to the
22 C-137-EZ in paragraph (2)?

23 A. Allowing them to submit a C-137-EZ if that was
24 applicable?

25 Q. On the minor modification.

1 A. Probably.

2 Q. Isn't that --

3 A. Yeah.

4 Q. -- the purpose of the C-137-EZ?

5 A. Yes.

6 CHAIRMAN FESMIRE: Okay. Mr. Brooks, I don't have
7 any further questions. Do you have a redirect?

8 MR. BROOKS: A couple of questions, maybe just
9 one.

10 REDIRECT EXAMINATION

11 BY MR. BROOKS:

12 Q. Mr. Olson -- I guess two, but I will stick to
13 two. Commissioner Olson asked a question about whether or
14 not the 10-year renewal provision applied to existing
15 facilities. In that respect, I would like to call your
16 attention to page 11 of the Rule, D.(1).(b). Starts out,
17 if -- Each permit issued for a new surface waste management
18 facility shall remain in effect for 10 years from the date
19 of issuance. Based on that language, would it appear to
20 you that that provision does not apply to an existing
21 surface waste --

22 A. That's the way it appears to me.

23 Q. Okay, my other question was about the five-year
24 term for the letter of credit. Is that the term that
25 you're using for your surface waste management facility

1 letters of credit now?

2 A. Yes.

3 Q. Do you know whether or not banks are willing to
4 issue letters of credit for longer terms?

5 A. I do not know.

6 MR. BROOKS: Thank you, no further -- nothing
7 further.

8 CHAIRMAN FESMIRE: Recross on subjects?

9 MR. HUFFAKER: Nothing.

10 MR. CARR: (Shakes head)

11 CHAIRMAN FESMIRE: Mr. Hiser?

12 MR. HISER: Just a couple from -- question from
13 the Commissioners, actually.

14 RECCROSS-EXAMINATION

15 BY MR. HISER:

16 Q. Mr. Martin, what would be the purpose of fencing
17 a small landfarm?

18 A. The purpose for the --

19 Q. Why would you want to fence a small landfarm?

20 CHAIRMAN FESMIRE: Mr. Hiser, is that on the
21 subject of the redirect?

22 MR. CARR: Yes.

23 (Laughter)

24 CHAIRMAN FESMIRE: Apparently Mr. Carr thinks so.

25 MR. CARR: I've been listening to Mr. Brooks.

1 (Laughter)

2 CHAIRMAN FESMIRE: Where did I lose control?

3 (Laughter)

4 MR. HISER: It really is to follow up on the
5 question asked by Commissioner Bailey.

6 CHAIRMAN FESMIRE: Is that your only question on
7 that?

8 MR. HISER: Then I have one that's related to the
9 question by the Chairman on the Form EZ.

10 CHAIRMAN FESMIRE: Okay, if there's no objection
11 from counsel, we'll let him --

12 MR. BROOKS: No objection.

13 CHAIRMAN FESMIRE: -- go ahead and do that.
14 You would object?

15 MR. BROOKS: I said no objection.

16 CHAIRMAN FESMIRE: Okay. Go ahead, Mr. Hiser.

17 THE WITNESS: What was the question?

18 Q. (By Mr. Hiser) Why would you fence a small
19 landfarm?

20 A. It seems a logical progression from the rest of
21 the Rule requiring fencing around other landfarms.

22 Other than that, I would have -- During the
23 discussion period it was anticipated that these would exist
24 on already fenced -- mostly already fenced facilities, and
25 thereby -- therefore would not need a separate fence around

1 the small landfarm.

2 Q. Okay. Since I guess I'm on relatively thin ice,
3 I'll ask my other question.

4 The Chairman, Mr. Fesmire, asked a question about
5 adding the C-137-EZ form to the provision in C -- in C -- I
6 guess it's to permit applications.

7 A. Right.

8 Q. Is it not true that the C-137-EZ is for
9 registering a facility, which is not a permit, and
10 therefore wouldn't it make sense --

11 A. Oh --

12 Q. -- to add a registration provision to the
13 permitting provisions?

14 A. That's correct, yes.

15 MR. HISER: Thank you.

16 CHAIRMAN FESMIRE: Mr. Brooks, I guess that
17 finishes what we had to do with this witness.

18 MR. BROOKS: That's -- Nothing further with this
19 witness.

20 CHAIRMAN FESMIRE: Okay, why don't we take a 10-
21 minute break, return at 10:30, and Mr. Brooks will start
22 with -- Who's your next witness, Mr. Brooks?

23 MR. BROOKS: Mr. van Gonten.

24 (Thereupon, a recess was taken at 10:18 a.m.)

25 (The following proceedings had at 10:37 a.m.)

1 CHAIRMAN FESMIRE: Let's go back on the record.

2 During the break there have been some discussions
3 on scheduling. It looks like we're going to change the
4 order of some witnesses around today. The State is going
5 to put on part of its case with Mr. Chavez, then CRI is
6 going to put on their case, at which time we will break
7 this afternoon.

8 We will reconvene on Thursday the 4th at eight
9 o'clock in the morning, and it looks like we will go at
10 least Thursday the 4th -- Thursday May 4th, Friday May 5th,
11 and Saturday May 6th.

12 So -- I almost asked if there was any objection.
13 If there is, I'm going to throw this gavel at you.

14 (Laughter)

15 CHAIRMAN FESMIRE: So that's the way we'll be
16 proceeding.

17 Mr. Brooks, your next witness was Mr. Chavez?

18 MR. BROOKS: In view of the scheduling, we have
19 changed what we announced on the record prior to the break.
20 Instead of calling Mr. von Gonten at this time, we'll call
21 Carl Chavez.

22 CHAIRMAN FESMIRE: Mr. Chavez, you've been
23 previously sworn?

24 MR. CHAVEZ: I have.

25 CHAIRMAN FESMIRE: Mr. Brooks?

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CARL J. CHAVEZ,

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

DIRECT EXAMINATION

BY MR. BROOKS:

Q. Okay. Mr. Chavez, good morning.

A. Good morning.

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

A. Carl J. Chavez.

Q. And by whom are you employed?

A. The Oil Conservation Division.

Q. And how long have you been employed with the Oil Conservation Division?

A. About nine months.

Q. Before that, did you work for the New Mexico Environment Department?

A. Yes.

Q. Now if you will look at your -- at the book in front of you and go to Tab Number 2 and page back there to the fourth page behind Tab Number 2, that is -- is that a biography of yourself?

A. Yes, sir.

Q. Without reading it, would you give us a brief summary of your qualifications and experience as an

1 environmental engineer, with specific emphasis on your
2 background -- or on your background and experience with
3 regard to landfills.

4 A. I hold a bachelor of geological sciences and
5 minor in economics from New Mexico State University in Las
6 Cruces.

7 I attended the California State Polytechnic
8 University in Pomona, California, majoring in mechanical
9 engineering, petroleum option, for two and a half years.
10 As part of that I did a couple of summer interns as a
11 chemist in Unocal 76, Wilmington, California refinery, the
12 second summer as a petroleum engineer in the Unocal 76
13 Orcutt/Santa Maria area.

14 I then served one year as a geotechnical field
15 engineer for Pacific Soils Engineering in California,
16 overseeing the construction of hillside development, curb
17 and gutter, familiarity with nuclear densometers, soil
18 testing, and overseeing the construction of hillside
19 development sites under California codes.

20 I then went to Michigan to serve for six years as
21 a project geologist with the Michigan Department of Natural
22 Resources, investigating and overseeing the cleanup of oil
23 and gas contamination, oil and production facilities
24 throughout Michigan for six years, involved in
25 voluntary/involuntary cleanups and driving compliance with

1 state regulations for cleanup from oil and gas facilities.

2 I served for five years as a project manager,
3 superfund project manager, under CERCLA where I oversaw two
4 landfills in Michigan in particular, the Ionia city
5 landfill, the Butterworth landfill superfund sites, and all
6 aspects of engineering review and from A to Z technical
7 review of all incoming reports, responsibility for all
8 projects.

9 I then served about four years in the
10 Environmental Sciences and Services Division as a point of
11 contact for the Remediation of Redevelopment Division,
12 responding to all questions and incoming calls on emergency
13 responses and cleanups, investigations.

14 After that, a year and a half with the New Mexico
15 Environment Department Hazardous Waste Bureau in the Waste
16 Isolation Pilot Plant group, specifically dealing with
17 their groundwater monitoring program in the Culebra
18 dolomite formation downgradient from the WIPP facility.

19 And the last nine months I've been now acting as
20 the NPDS liaison for OCD, the NPDS primacy program, the
21 Underground Injection Control, and assisting the Division
22 with rulemaking process.

23 MR. BROOKS: Thank you.

24 Mr. Chairman, we submit Mr. Chavez as an expert
25 environmental engineer with specialized expertise in

1 landfill operations.

2 CHAIRMAN FESMIRE: Is there any objection?

3 MR. HUFFAKER: None.

4 MR. CARR: No objection.

5 MR. HISER: No objection

6 MR. SUGARMAN: No objection.

7 CHAIRMAN FESMIRE: Mr. Chavez will be so
8 accepted.

9 Q. (By Mr. Brooks) Okay. Mr. Chavez, I will call
10 your attention to -- I will ask you to direct your
11 attention now to the materials behind Tab 10 in the binder,
12 and is Mr. von Gonten going to be assisting you here? Very
13 good.

14 Before we go into the presentation, Mr. Chavez,
15 do you understand that to the extent that -- Well, first of
16 all, much of your material relates to design and
17 construction of landfills, does it not?

18 A. Yes.

19 Q. And do you understand that under the provisions
20 of the proposed Rule, the provisions relating to design and
21 construction would not apply to existing landfill
22 operations that are permitted by the Division?

23 A. That's correct.

24 Q. But the operations provisions would?

25 A. Yes.

1 Q. Okay, very good. With that understanding, I will
2 ask you to begin your presentation. I may interrupt you
3 from time to time for questioning, but in the course of
4 your presentation you may want to comment on what you
5 consider to be design and construction and what you
6 consider to be operation.

7 You may proceed.

8 A. Okay. This particular oil and gas landfill is
9 the Gandy Marley landfill, southeast New Mexico. And the
10 reason we're highlighting photos of this landfill is that
11 it probably the first landfill to implement a municipal
12 solid waste landfill design in the construction and design
13 of its facility. What we're looking at here is a
14 geotextile over a high density polyethylene liner. In the
15 distance you see a pipe riser coming up to the top of the
16 slope, and they're currently constructing three feet of
17 leachate collection removal system, a permeable layer.

18 This is the riser pipe, the 1/4 HDPE geopipe
19 that does not penetrate the liner but is going up to a
20 collection or gathering area.

21 Q. Now having a riser pipe of this kind for your
22 leachate collection system and your leak detection system,
23 are those requirements that are in subsection F of the
24 proposed Rule?

25 A. They are.

1 Q. And why do you not want to have pipes penetrate
2 the liner?

3 A. Past experience and -- past experience tells us
4 that pipe through liners, penetration through liners, has
5 the potential for leakage locations where gas can offgas,
6 where rainfall can penetrate the liner and leach into the
7 landfill.

8 Q. Okay, you may continue.

9 A. A picture of some engineering control, a laser
10 level to monitor the thickness of the leachate collection
11 removal system layer going down.

12 We're checking out the -- That's a picture of
13 myself and Daniel Sanchez of OCD, along with -- I believe
14 that's Bill Marley, overseeing the key-in at the top of the
15 slope, where the liner is keyed into the -- our key-in
16 spot.

17 Q. Mr. Chavez, both the landfill rules in part F and
18 the pond rules in part I of this Rule refer to an anchor
19 trench. Is this -- Is that what's depicted here?

20 A. That is the correct terminology, this is an
21 anchor trench.

22 Q. And that is one of the design elements that is
23 required by this Rule, correct?

24 A. Yes.

25 Q. Go ahead.

1 A. My references for today's presentation, the EPA
2 Crude Oil and Natural Gas Exploration and Production
3 Wastes, exempted from RCRA Subtitle C regulation, 1995.
4 For those of you who are not familiar, Subtitle C deals
5 with hazardous waste regulations from EPA.

6 My second reference is EPA Guide to Technical
7 Resources for the Design of Land Disposal Facilities, EPA
8 guidance.

9 Third, an important reference is -- for many of
10 my exhibits here today, is the Geotechnical Aspects of
11 Landfill Design and Construction. This is from Xuede,
12 Koerner and Gray, a 2001 publication. I want to highlight
13 this one, because when I begin talking about leachate from
14 landfills I'm going to make a reference to this reference
15 here for more information.

16 Designing with Geosynthetics, fourth edition,
17 1998, Robert Koerner.

18 And lastly, Contaminant Hydrogeology, the
19 godfather of contaminant hydrogeology, C.W. Fetter,
20 Copyright 1993 on that.

21 To understand what goes into our landfills in
22 just one particular component of it, I just want to ask the
23 question, crude oil, what does it consist of? It consists
24 of a mixture of hydrocarbons of varying molecular weight
25 and on average contains about 84.5 percent carbon, 13

1 percent hydrogen, 1.5 percent sulfur, .5 percent nitrogen
2 and .5 percent oxygen.

3 A typical crude oil might consist of about 25
4 percent alkanes -- paraffins, wax -- 50 percent
5 cycloalkanes -- naphthenes -- 17 percent aromatics,
6 including polycyclic aromatics, and 8 percent asphaltics,
7 which are molecules of very high molecular weight with more
8 than 40 carbon atoms.

9 There have been more than 600 hydrocarbon
10 compounds identified in petroleum, according to Hunt in
11 1970. This is from Fetter.

12 Aside from just the petroleum-contaminated soils
13 that could be going into this landfill, there are going to
14 be other oilfield exempt-type wastes. Any type of
15 exploration and production wastes that come in contact with
16 the borehole are going to be considered -- or are
17 considered exempt from RCRA Subtitle C hazardous waste, and
18 that's purely a determination from EPA in that first
19 reference where the EPA exempted oilfield waste and
20 oilfield non-exempt, non-hazardous waste from RCRA Subtitle
21 C.

22 And to give you an idea of what these may be,
23 oilfield wastes in our landfills that we may expect to see
24 would be drilling fluids, drill cuttings --

25 Q. Okay, excuse me here, I don't -- I think it's

1 probably not worthwhile to read through this entire list.
2 If there are some particular points you want to emphasize,
3 please do so, and otherwise we can leave this as an exhibit
4 for the Commissioners to peruse.

5 A. I think that the point here with this long list
6 of oilfield exempt waste is that a lot of these type of
7 things that go into our landfills will display similar
8 characteristics as RCRA Subtitle C wastes --

9 Q. Okay --

10 A. -- however, they are exempted.

11 Q. -- and then in this connection did you review the
12 materials that were introduced in evidence during Chief
13 Price's testimony at pages 17 through 28 of the notebook?

14 A. Yes.

15 Q. And did you also review the constituent materials
16 -- and I'm not sure what page they're on, I don't have it
17 flagged -- that are a part of Mr. von Gonten's presentation
18 that's not yet been introduced into evidence?

19 A. Yes.

20 Q. And does that provide further support for your
21 statement that the materials contained in landfills, in oil
22 and gas landfills, may be similar in properties to
23 hazardous waste constituents?

24 A. Yes, and some may even be actual priority
25 pollutants that are --

1 Q. Okay, you may continue --

2 A. -- EPA --

3 Q. -- with your presentation.

4 A. Examples of non-exempt oilfield waste that we
5 might find in landfills, unused fracturing fluids or acids,
6 gas plant cooling tower cleaning wastes, painting wastes,
7 waste solvents. The symbols you see beside them, and I
8 think what you probably may already notice is that many of
9 these type wastes are liquid-type wastes. And so we have a
10 designation that these will need to be solidified before
11 disposal into our landfill.

12 Q. And we require in -- the proposed Rule requires
13 that landfill waste, like landfarm waste, be subjected to
14 the paint filter test --

15 A. Yes.

16 Q. -- to determine -- to eliminate materials that
17 may have an impermissible liquid content?

18 A. We want the wastes as dry as possible. Our
19 mantra here today will be the entombment of dry wastes.

20 Q. Now the Rule as written is not intended to state
21 that every load must be separately tested, it's --
22 contemplates a sampling procedure for the paint filter
23 test; is that correct?

24 A. I think that it is such an easy test to perform
25 that the generator of the waste and the operator of the

1 waste would be very easily able to perform this test
2 expediently.

3 Q. Okay, you may continue with the presentation.

4 A. Now some of the leachates that was examined for a
5 hazardous waste landfill, and under that reference that I
6 mentioned earlier, Geotechnical Aspects of Landfill Design,
7 you clearly see here that we have constituents like
8 benzene, ethylbenzene, toluene, at levels in leachate that
9 again these are priority pollutants under EPA, and we would
10 expect oil and gas field wastes to perhaps consist of
11 similar constituents that may exhibit high pH, low pH, high
12 conductivities.

13 But again, we do expect to see BTEX, we do expect
14 to see some of these metals in there. And I would just
15 reference the Geotechnical Aspects of Landfill Design for
16 leachate information for municipal solid waste landfills,
17 which consist of similar-type constituents.

18 Q. Okay, now this slide that you have on the screen
19 now, which is page 111 in the notebook, this is a list of
20 constituents that were encountered in hazardous waste
21 landfills; is that correct?

22 A. That's correct.

23 Q. And those are regulated by Subtitle C of the
24 RCRA --

25 A. Yes.

1 Q. -- Federal Act, right?

2 And what is the significance of these values? Is
3 that just the values that were encountered in this study?

4 A. Yes, these were just the -- well, the sources at
5 the bottom of the page there, these were a sample collected
6 -- again, we don't know whether these were average samples.
7 These are just provided as a basis to show, based on this
8 source, that they had priority pollutants such as benzene,
9 toluene, and under their values those concentrations exceed
10 the hazardous waste designation and are, in fact, EPA
11 priority pollutants.

12 Q. Okay. Now these -- although these were taken
13 from a hazardous waste landfill, not from an oil and gas
14 waste landfill, your point is that some of the -- is your
15 point that some of these constituents would also be found
16 in an oil and gas waste landfill?

17 A. Yes, particularly benzene, toluene, ethylbenzene
18 and xylene.

19 Q. Okay, continue.

20 A. Now EPA recognized this close similarity between
21 oilfield wastes and Subtitle C-type hazardous wastes, and
22 in my first reference they have this information. The RCRA
23 Subtitle C exemption, however, did not prevent or preclude
24 these wastes from control under state regulations, under
25 the less stringent RCRA Subtitle D solid waste regulations

1 or under other federal regulations.

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

6 Q. All right --

7 A. They go on in the second section --

8 Q. Yeah, go ahead.

9 A. -- to indicate -- again, this is just making
10 reference to oilfield waste -- in general, the exempt
11 status of an exploration and production waste depends on
12 how the material was used or generated as waste, not
13 necessarily whether the material was hazardous or toxic.
14 For example, some exempt exploration and production wastes
15 might be harmful to human health and the environment, and
16 many none-exempt wastes might not be as harmful.

17 And what they're saying there is basically, the
18 determination by EPA on the exemption from RCRA C purely
19 lies with the fact that anything that comes from downhole -
20 - it wasn't a toxicity consideration, it was basically a
21 determination that anything affiliated with the oil and gas
22 industry exploration and production that comes from
23 downhole or really with it is exempt.

24 Q. Would it be a fair characterization with respect
25 to exempt wastes that they are hazardous -- that they are

1 not hazardous as a matter of law by virtue of the
2 exemption, but they may be hazardous as a matter of fact?

3 A. True, yes.

4 Q. Now in your opinion, Mr. Chavez, as a
5 professional in this field, do you believe that oil and gas
6 waste landfills are likely to present hazards similar to
7 those that would be encountered from Subtitle C hazardous
8 wastes?

9 A. Absolutely.

10 Q. And that is based both on your -- is that based
11 -- in addition to your professional experience generally,
12 is that based on the research that you did for purposes of
13 this presentation?

14 A. It is.

15 Q. And does that include the materials that we asked
16 you to look at from Mr. Price's and Mr. von Gonten's
17 presentations?

18 A. I'm sorry, say that again?

19 Q. Does the materials that you looked at in forming
20 that opinion, does that include the materials that I
21 referred you to in Mr. Price's and Mr. von Gonten's
22 presentations?

23 A. Absolutely.

24 Q. Thank you. You may continue.

25 A. Section 53.E.(5), siting and operational

1 requirements applicable to all permitted facilities. As
2 Mr. Brooks mentioned earlier, we do not want any free
3 liquids going into our landfills, the drier our wastes, the
4 better. The wetter the wastes, the more gas emissions, the
5 more leachate that we're going to have to handle in
6 perpetuity if we don't put this stuff in dry.

7 The 9095 method that's mentioned here is very
8 simple. It consists of a graduated cylinder with a funnel,
9 a ringstand if you have one, your standard 16 mesh paint
10 filter from a paint shop. You stick 100 -- place 100 grams
11 of sample, or 3.5 ounces of sample, into your filter and
12 wait five minutes. If you have a drop that leaches after
13 five minutes, then it's -- within five minutes, if there's
14 a drop, then it's too wet to go into the landfill.

15 Q. Now Mr. Chavez, again we have received some
16 comments that have indicated that some people feel that
17 this test is difficult to perform accurately in the field,
18 and I gather your opinion is that it's not?

19 A. Absolutely not.

20 Q. You may continue.

21 A. It can be done by both the generator and the
22 receiving operators.

23 Q. You may continue.

24 A. To talk about -- a little bit about liner
25 definitions, so you have an idea what we're going to be

1 looking at, the composite liner is a liner that may consist
2 of multiple layers of geosynthetics in low-permeability
3 soils.

4 The different layers of a composite liner may
5 have different material properties and may be applied at
6 different stages of the landfill liner installation. Many
7 people refer to a composite liner as a double liner,
8 however in geotechnical engineering it is referred to as a
9 single composite liner.

10 Geosynthetic is a generic classification of all
11 synthetic materials used in geotechnical application,
12 including all the definitions below. Geosynthetics is
13 basically plastic, it's not soil.

14 Geocomposite is a manufactured material using
15 geotextiles, geogrids, geomembranes, combination thereof in
16 laminated or composite form. Geocomposites -- unlike
17 composite liners, geocomposites deal strictly with
18 geosynthetics, geogrids, geotextiles, but no soil-type
19 material.

20 Geogrid is a deformed or non-deformed netlike
21 polymeric material used to provide reinforcement to soil
22 slopes. And we'll have a diagram of that later.

23 Geomembrane is an impermeable polymeric sheet
24 material that is impervious to liquid and gas as long as it
25 maintains its integrity and is used as an integral part of

1 an engineered structure or system designed to limit the
2 movement of liquid or gas in a system.

3 Q. Now in our prescribed design that's in the
4 proposed Rules, we require geomembranes in several
5 locations, do we not?

6 A. Yes, and we've conferred with many manufacturers
7 of these liners.

8 Q. And we require a composite liner in the base?

9 A. Yes.

10 Q. These other terms we have here are not something
11 that we require but alternatives that can be used; is that
12 correct?

13 A. We allow the flexibility for alternative designs,
14 for our --

15 Q. Okay, in the interest of time I'm going to ask
16 you now to go to your next slide, unless there are any
17 questions -- and if people have any questions about these
18 other definitions they can raise them, so go ahead to your
19 next slide.

20 A. Intermediate cover. As you know, under our
21 regulations there is no limitation on landfill size.
22 However, we do have a provision under F.(1).(g) for
23 intermediate cover whenever an operator stops work on the
24 working face. If they stop for more than 30 days they're
25 required to install an intermediate cover, and it has to be

1 approved by the Division. It's basically a thicker cover
2 than a daily cover, usually a sand layer stabilized with
3 vegetation to prevent erosion, manage infiltration or
4 leachate similar to the daily cover, control dust and
5 nuisances.

6 Q. Okay. Now did I understand you to say there's no
7 limit on the size?

8 A. We have no cell size limit for our landfill
9 cells.

10 Q. We have a 500-acre limit on the total size of the
11 facility --

12 A. Yes, sir.

13 Q. -- do we not?

14 So that would be the -- The 500 acres would be
15 the total limit on the size of the landfill site?

16 A. Good, yes.

17 Q. You may continue.

18 A. Thank you. 53.F.(1).(f) [*sic*], landfill cell
19 closure is dictated by 53.J.(4).(b). I guess we require in
20 our closure a top cover, a soil contour to promote drainage
21 of precipitation.

22 We don't allow side slopes to be less -- or
23 greater than 25 percent in grade. This is consistent with
24 the New Mexico Environment Department as part of our
25 prescriptive design.

1 Final cover gradient on the top after the cover
2 is placed on the top, drainage should range from 2 to 5
3 percent to prevent ponding and provide for adequate
4 drainage.

5 And the cover must be re-vegetated.

6 And we are required to receive notice within
7 three working days that the top cover is going to be in
8 place so that we may be present to oversee that.

9 Q. Now let me interrupt you here. The top cover is
10 -- you refer here to F.(1).(h). The top cover is a matter
11 that is covered in considerable detail in the Rules, and I
12 believe that is in F.(3).(h), is it not, on page 16 of the
13 proposed Rule?

14 A. Yes.

15 Q. Okay. And the re-vegetation -- well -- Yeah, the
16 re-vegetation requirements you refer to, but they're not
17 specified in F.(1).(h). They're actually found in J.(1),
18 is that not correct, on page 24?

19 A. Restate your question, please?

20 Q. Where are the re-vegetation requirements? I
21 don't see them in F.(1).(h).

22 A. They would be under section J.(1), the last two
23 sentences of J.(1).

24 Q. Thank you. And the three working days notice,
25 where is that found in the Rule?

1 A. I'm sorry --

2 Q. I believe it's actually -- Look at the last
3 sentence of F.(3).(h) on page 16.

4 A. F.(3).(h) on page 16?

5 Q. Yeah.

6 A. The operator shall provide a minimum of three
7 working days, okay.

8 Q. Okay.

9 A. Yes, there it is.

10 Q. Okay, would you explain a little bit about this
11 side slopes and vinyl-covered gradient, because that's not
12 something that us non-landfill people understand.

13 A. Well, I guess I should start off by saying that
14 the top cover, it's -- you know, the basis for it is to
15 control moisture and percolation, to promote surface water
16 runoff, to minimize erosion.

17 Q. Is the top cover going to be sort of a mound, is
18 that --

19 A. It will, it depends on the waste elevation, the
20 engineered waste elevation height, but generally it will be
21 -- it just depends on the design. It can be in an
22 excavation and rise up to a mound.

23 Q. Okay, and what is it that you require -- what
24 exactly portion of it is it that you require to be sloped?

25 A. Well, in this particular instance it would be the

1 actual side slopes of the hill. As the cover goes over, is
2 laid over, the slope over the waste shall not exceed 25
3 percent.

4 Q. But the reason you require a slope is so that the
5 -- is that so that moisture that falls onto the landfill
6 cover will drain away, rather than run in --

7 A. It is to prevent erosion and damage to the
8 structural integrity of the cap.

9 Q. And it has the effect of channeling moisture.
10 Does it have the effect of channeling moisture away from
11 the waste itself, rather than down into the waste?

12 A. It does.

13 Q. Okay.

14 A. That is a primary function of the cap, to direct
15 a runoff away from the inside of the landfill.

16 Q. Now in 3.(1).(h) [sic] you have the following --
17 you have inserted the following sentence: The operator
18 shall install the top landfill cover within one year of
19 achieving the final landfill cell waste elevation.

20 What is the purpose of that requirement?

21 A. We want to allow the waste to settle within that
22 one-year period. As you know, not all waste is uniform,
23 and it goes down under compaction in many cases, and we
24 want all waste to settle as much as possible before placing
25 the cap.

1 Q. Okay, and let me look at one other --

2 A. Structural integrity of the landfill.

3 Q. -- before you go on.

4 Call your attention to page 26, section (4).(b).

5 Is that where these side slope and gradient requirements
6 are found?

7 A. Yes, sir.

8 Q. Okay. You may continue with your presentation.

9 A. The groundwater monitoring program. These wells
10 are used to detect leaks from the landfill, they're vital
11 to -- in the efforts to protect the groundwater, to protect
12 groundwater and surface water supplies from contamination.
13 The groundwater monitoring wells provide a third line of
14 defense beyond the primary and secondary leachate control
15 systems, that being the leachate collection removal system,
16 the leak detection system, and they're -- the monitor wells
17 are there to ensure the long-term security of the disposal
18 area.

19 We will require a groundwater monitoring work
20 plan to be submitted as a part of this, so you don't see
21 this -- aside from this, we don't mention too many
22 particulars about it.

23 We require a sampling and analysis plan of
24 groundwatering monitoring system. It will have a
25 sufficient number of wells that shall yield groundwater

1 samples from the uppermost aquifer, and those wells should
2 be spread out and in a quantity necessary to determine the
3 background water quality as well as the downgradient water
4 quality downgradient from the facility.

5 Q. Okay. Now one of our commentators has raised the
6 issue that we don't have any specific requirements for
7 reporting in connection with this monitoring. I would like
8 to ask you to look at page 13, E.(11). Would you read
9 E.(11) for us?

10 A. Well, I'm on page 13?

11 Q. 13.

12 A. And --

13 Q. Paragraph (11).

14 A. Oh, okay, it's up on the top. Operators shall
15 comply with the spill reporting and corrective action
16 provisions of 19.15.3.116 of NMAC.

17 Q. Okay, and then I'll call your attention also to
18 the material behind Tab 4 in your booklet, on page 2 of
19 that material -- I'm sorry, on page 1 of that material.
20 And that again refers to E.(11), does it not?

21 A. Yes.

22 Q. And that makes a change in E.(11) by adding
23 something? Would you read E.(11) as it appears on page 1
24 of Exhibit 2, behind Tab 4?

25 A. Operators shall comply with the spill reporting

1 and corrective action provisions of 19.15.1.19 or
2 19.15.3.16 [sic] NMAC. There is a change in that --

3 Q. Yeah. Now under that provision, if the operator
4 in conducting these monitoring requirements encountered any
5 actual water pollution or threat of water pollution, would
6 they be required to report it to the OCD?

7 A. Absolutely.

8 Q. Okay, thank you. You may continue.

9 A. Rule F, 53.F(3), landfill design specs, we
10 require the base layer and a lower geomembrane liner --
11 again, this is where we talked about a composite liner
12 system -- a leak detection system above that, above that an
13 upper geomembrane liner. And we're going to discuss those
14 design engineering requirements later.

15 Above that a leachate collection and removal
16 system, above that a leachate collection and removal system
17 protective layer. Above that would come the oilfield waste
18 zone, and then above that would be the top landfill cover
19 that we previously discussed.

20 Q. Okay, you may continue.

21 A. 53.F.(3), landfill again design specs. Composite
22 liner will consist of a base layer and a lower geomembrane
23 liner. In the base layer we're going to require two feet
24 -- this is our prescriptive landfill design -- two feet of
25 clay soil compacted to the minimum 90-percent standard

1 Proctor density, ASTM D-698. There are ASTM standards for
2 all of this. And that liner, that two-foot compacted clay
3 layer shall have a hydraulic conductivity of less than 10^{-7}
4 centimeter per second or less.

5 The lower geomembrane liner will consist of a
6 30-mil flexible PVC or 60-mil HDPE, high density
7 polyethylene or an equivalent liner approved by the
8 Division.

9 Now --

10 Q. Okay -- Go ahead.

11 A. -- we offer -- in the middle there we offer --
12 again, we mentioned, we offer some flexibility here in
13 areas where the depth to groundwater is greater than 100
14 feet or where there is no groundwater present, the operator
15 may propose an alternative base layer design, subject to
16 our approval.

17 Q. Okay, now I want to talk about that for a minute.
18 You said that this -- this base layer you refer to as
19 composite liner that has both a clay base and a
20 geomembrane, correct?

21 A. Correct.

22 Q. And you consider that to be all one liner?

23 A. Under geotechnical engineering specifications,
24 that's considered a composite liner.

25 Q. But you can understand, can you not, why some

1 people think of it as two liners?

2 A. I can.

3 Q. Okay. So if people ask you about a triple-liner
4 requirement, from your point of view is that technically
5 incorrect?

6 A. Technically it's from a nomenclature standpoint.
7 In all geotechnical engineering literature, they would not
8 refer to quadruple liners, triple-liner system, so...

9 Q. And the reason somebody might say -- Well, let's
10 see. We require this composite liner that consists of a
11 base and a geomembrane, right? That's what our
12 prescriptive design requires?

13 A. Absolutely, yes.

14 Q. And then above the leak detection layer, does it
15 require another geomembrane?

16 A. Yes.

17 Q. And would that be why somebody might characterize
18 this as requiring a triple liner?

19 A. That is why.

20 Q. Okay. Now to clarify, geomembrane -- is a
21 geomembrane designed to prevent the passage of fluids
22 through it?

23 A. It is, and gas.

24 Q. Yeah.

25 A. Including gas.

1 Q. Okay. Now with regard to PVC and HDPE liners, we
2 have -- we are familiar with those, right?

3 A. We have invited -- the Oil Conservation Division
4 invited the Environmental Protection, Incorporated -- the
5 PVC liner manufacturer to come and talk to us for a half a
6 day about their liner manufacturing process. In addition,
7 we had Raven Industries, the high density polyethylene
8 liner manufacturers, come out and speak.

9 Q. But we are not at all -- by approving these,
10 because we are familiar with them and we know what their
11 specifications, are we in any way trying to say that they
12 have to use these as opposed to other commercial materials
13 that might be equivalent?

14 A. Absolutely not. However, in our evaluation and
15 in the evaluation of the New Mexico Environment Department
16 solid waste regulations, we conform to the guidance on the
17 30-mil liner and the 60-mil HDPE. We added the PVC, that
18 was based on our engineers reviewing all of the information
19 and the technical design and the engineering features of
20 the liners, we felt that PVC was a very good material, very
21 flexible membrane, very strong, and --

22 Q. But like you say here, they can propose other
23 alternatives --

24 A. Absolutely.

25 Q. -- if they want to, and we'll determine what type

1 of -- what would be the equivalent material?

2 A. Yes.

3 Q. You may continue with the presentation.

4 A. Okay. Well, this is a comparison of an OCD
5 landfill prescriptive design for the top cover, the waste
6 zone and the bottom layer zone. And I guess I can start
7 from the bottom --

8 Q. Well, let me interrupt you. A comparison of
9 what? Of OCD's design with what?

10 A. With the RCRA Subtitle C hazardous waste --

11 Q. And also --

12 A. -- guidelines.

13 Q. -- with --

14 A. RCRA Subtitle D municipal solid waste --

15 Q. Okay, continue.

16 A. -- landfill designs. Okay.

17 And it's color-coded. The red, kind of,
18 signifies low-permeability layers. The yellow is there
19 just to kind of highlight the higher permeability, and the
20 light blue is the waste zone.

21 You can see from the bottom going up of our
22 landfills, that we are similar, two feet of compacted clay,
23 10^{-7} centimeters per second. And I'll key on OCD above --
24 OCD column. Then you can see the OCD's recommendation for
25 the 30-mil PVC, 60-mil HDPE or equivalent liner. Under

1 RCRA Subtitle C they specify a 30-mil liner or a 60-mil
2 HDPE, and under Subtitle D there would be similar to the
3 Subtitle C.

4 Up above the geomembrane, OCD has a leak
5 detection system which will show -- consists of granular
6 soil greater than 10^{-5} centimeter per second, two-foot
7 layer of that.

8 And I want to point out here that we originally
9 had specified 10^{-2} , a higher permeability, but looking at
10 the Subtitle C hazardous waste leak detection layer, they
11 go with a very low permeability, 10^{-7} . And so by doing the
12 10^{-5} we give the oil and gas industry the option to find a
13 cut area for native soils, perhaps, that may give them more
14 of a range of permeable-type soils that would be acceptable
15 to us.

16 Q. Now interrupting, if you look at page 15 of the
17 Rule, 3.(c) --

18 A. Yes.

19 Q. -- third line, that says 10^{-2} , does it not?

20 A. That's a typo.

21 Q. Yes, and we've proposed a change, have we not, in
22 the change sheet that's behind Tab 4?

23 A. Yes --

24 Q. Okay, I won't --

25 A. -- to 10^{-5} --

1 Q. Okay --

2 A. -- or greater.

3 Q. -- I just wanted to alert everyone's attention to
4 that, I don't mean to be -- I don't want to go any further
5 with it.

6 A. Okay. And so we accomplished a couple of things
7 there. The less permeable the native soil is, it perhaps
8 is going to give us a double composite liner similar to
9 Subtitle C.

10 So at any rate, I think that OCD is giving the
11 oil and gas industry an opportunity to find native soils
12 that it would be conducive for that two-foot leak detection
13 system layer on or near site.

14 And you'll notice that over to the right Subtitle
15 D does not have a leak detection system. Their leak
16 detection system is monitor wells, their monitor well
17 network will alert them to a tear in the liner or leakage.

18 As we go up from the leak detection layer, again
19 we get into our liners. For OCD it's similar, for -- I
20 guess across the board it's going to be for -- for Subtitle
21 C it's going to be similar, except without the PVC.

22 Above our geomembranes will follow by the
23 leachate collection removal system, granular soil greater
24 than 10^{-2} centimeters per second, and that's a two-foot
25 layer, and that's pretty uniform across the board.

1 Then we go up to the leachate collection and
2 removal system, protective layer. OCD requires 12 inches
3 of 10⁻² soil to protect the leachate collection and removal
4 system. Subtitle C is similar. Subtitle D allows up to 24
5 inches, but generally they will allow 12 inches.

6 Then it's followed by the hazardous waste
7 placement.

8 Q. Okay, now let me interrupt you again, Mr. Chavez.
9 Why do you have a leachate collection system in the
10 landfill? What is the reason for it?

11 A. Well a leachate collection system is to collect
12 -- if you put wet wastes into the landfill, or moist wastes
13 into the landfill, you're going to get leachate residues
14 that leach down on top of the layer.

15 Q. And although we require the paint filter test to
16 be required on incoming waste, is there a danger that some
17 of that waste will have moisture that will settle out of it
18 after it's placed in the landfill, even though it's fairly
19 dry when you put it in?

20 A. Whenever you compact the waste, put it under
21 pressure, and it's somewhat moist, you're going to squeeze
22 out any liquids from the waste materials, you're going to
23 squeeze them to into the leachate collection and removal
24 system.

25 Q. Now what would happen to that leachate if you did

1 not have a leachate collection system?

2 A. Well, it would build up, it would build up to the
3 point where it would exceed the one-foot design
4 specifications over the base of the liner, the leachate
5 collection liner.

6 Q. Would that threaten the integrity of your liner?

7 A. The structural integrity would be compromised,
8 the hydraulics -- it would have a tendency to want to
9 become buoyant and float and upset the structural integrity
10 of the liner.

11 Q. Now because the leachate collection system, as
12 you've testified, is designed to collect liquids, it is not
13 designed to exclude them. You expect to have -- is it
14 correct to say you expect to have leachate -- liquids in
15 your leachate collection system?

16 A. We do. But the drier the waste, the better. But
17 from the practical nature of the type of waste types that
18 we have, the liquid nature of them and the solidification,
19 we might expect to see a high volume of leachate that's
20 coming out of an oil and gas --

21 Q. Consequently, the fact that you have liquids
22 coming out of your leachate collection system, does that
23 indicate that anything is wrong, or is that simply the
24 system functioning as it's expected to function?

25 A. It would indicate that there could be a design

1 concern, because when we design these landfills and we
2 review them, we're required to ensure that the design will
3 now allow greater than one foot of head over the top of any
4 liner, one foot of leachate or fluid.

5 Q. So you're saying there should not be very much
6 leachate coming out of the collection system?

7 A. That's the goal, I should say.

8 Q. But you very much expect that there will be some?

9 A. Yes.

10 Q. Now on the other hand, a leak detection system --
11 if the liners are working properly, would there be any
12 liquids in the leak detection system?

13 A. We should not expect to find any leakage coming
14 into our leak detection system.

15 Q. So if you're getting liquids in your leak
16 detection system, then that's a signal that you need to do
17 something?

18 A. That is a signal of a problem. And also if the
19 leachate volumes exceed the one-foot head elevation, that's
20 another concern. We refer to that as an action leachate
21 rate, that if they exceed a certain volume based on the
22 design, then we need to come back and look at the way
23 they're handling the waste, processing the waste, and
24 there's things we can do to make it drier going into the
25 landfill.

1 Q. Is it fair to say that the leachate collection
2 system and the leak detection system serve different
3 purposes, based on what you've just said?

4 A. Yes.

5 Q. And is that the reason why our prescriptive
6 design requires both?

7 A. I wouldn't say that they're different, they're
8 actually lines of defense. The first line of defense is
9 the leachate collection and removal system, to remove the
10 leachate, handle it, store it, treat it, dispose of it in a
11 timely manner.

12 Q. Yeah.

13 A. The leak detection system is our secondary line
14 of defense for -- if that fails, we should be able to
15 remove leachate from the leak detection system and route it
16 for disposal.

17 And the third line of defense would be our
18 monitoring.

19 Q. Does the leak detection system also tell you,
20 though, whether you have a failure in your liner or not?

21 A. Absolutely.

22 Q. Okay, continue.

23 A. Okay, above our waste zone -- and I guess you
24 just see under OCD, oilfield exempt and non-exempt, non-
25 hazardous waste zone, that's what we accept in our

1 landfills.

2 Above the top cover zone we have a gas vent or
3 foundation layer, sand or gravel, 12 inches. That's to
4 facilitate any offgassing from the waste zone.

5 Under the Subtitle D they also have a similar
6 layer. You'll notice under Subtitle C they have no
7 permeable layer, but they have a clay barrier, 24-inch clay
8 barrier, 10^{-7} or less. You'll notice under Subtitle D they
9 have a clay barrier of 18 inches above their gas vent
10 layer.

11 And then that -- So we don't have the clay
12 barrier on ours, we have a liner that's above that, the
13 geomembrane, 30-mil PVC or 60-mil HDPE. We think that with
14 the strength of our liner system and the passive gas
15 system, vent wells, that we should be able to overcome any
16 concerns and the need for a barrier layer for an OCD
17 landfill. We did not specify that.

18 You'll notice that for the geomembrane, up above
19 the gas vent layer, that RCRA Subtitle C -- or Subtitle C
20 requires a 40-mil geomembrane, whereas under Subtitle D
21 they only require a 20-mil liner, or equivalent.

22 We require the 30-mil PVC with 60-mil HDPE or
23 equivalent liner.

24 Above that we have our drainage layer, and this
25 is where we wanted slope from two to four percent. The

1 drainage layer would help facilitate drainage into side
2 drainage and route it around our landfill. 10⁻²
3 centimeters or greater, 12 inches.

4 Subtitle C is similar, Subtitle D is similar, for
5 the drainage layer.

6 Go up above that to the protection layer or
7 native soil, 12 to 30 inches for New Mexico. What that
8 layer is is a frost-protection layer. Depending on where
9 you're at in the state -- if you're in the southeast where
10 we do not get cold temperatures as much, we don't get the
11 precipitation of the northwest part of the state -- our
12 protective layer may be only 12 inches in the southeast,
13 versus 30 inches up in the San Juan area.

14 You'll see that Subtitle C requires an 18-inch
15 protective layer, and Subtitle D has a 12-inch -- or what
16 is it? 18-inch. And then we all have six-inch topsoil
17 covers.

18 Q. Okay. Mr. Chavez, Commissioner Bailey yesterday
19 indicated a concern about re-vegetation over a landfill
20 because of the potential chloride content of the landfill.
21 Is the top cover designed, among other things, to prevent,
22 to the extent possible, the contaminants that are in the
23 landfill from leaching upwards into the topsoil on top?

24 A. I would not -- it would -- if any type of -- I
25 guess what is commonly referred to as wicking upward --

1 Q. Yeah.

2 A. -- it would be deterred by any of our
3 geomembranes.

4 Q. And that's --

5 A. It would be held down to the waste where our
6 geomembrane is above our waste line.

7 Q. And your design requires a geomembrane within the
8 top cover that would tend to have that effect?

9 A. That would be secondary -- that would prevent any
10 upward wicking of chlorides.

11 Q. Now you have to have that geomembrane in the top
12 cover, because otherwise you would be filling your landfill
13 with fluids, as the rain --

14 A. It acts as a -- It acts as an impermeable barrier
15 and is sloped to route any drainage off and around to the
16 side, into our toe drains and away from the waste.

17 Q. And if your top cover were more permeable than
18 your bottom cover, then that would create the bathtub
19 effect, would it not?

20 A. It would. Under Subtitle D, municipal solid
21 waste regulations, they require that -- and we followed the
22 New Mexico Environment Department's lead on general
23 designs. The final cover system must have a permeability
24 less than that of the bottom liner system. Okay?

25 Q. Okay.

1 A. So if we have the bottom liner system configured
2 with the permeability, the top cover should be at least
3 similar or less permeability.

4 Q. And this prevention of the bathtub effect, is
5 that one of the specifications that you have for your
6 alternative designs?

7 A. It is.

8 Q. Okay. Now you've been through this table. Would
9 it be a fair characterization that the OCD's requirement,
10 our prescriptive design that you've described that is set
11 forth in subpart F of Rule 53, is that very similar to a
12 hazardous waste landfill design?

13 A. Yes.

14 Q. Are there any particular differences that are --
15 any important differences?

16 A. The only differences I've mentioned is -- well,
17 there are a couple of differences -- was in the -- what is
18 it, the -- up above the waste zone where we don't have a
19 two-foot barrier layer similar to Subtitle C, we have the
20 one-foot foundation gas vent layer, followed by a strong
21 30-mil PVC, 60-mil HDPE liner.

22 And then the only other difference would be down
23 in the bottom layer zone, above the geomembrane there where
24 I mentioned that we had -- originally had 10^{-2} , a higher
25 permeability soil requirement there, where we went to 10^{-5} ,

1 a lower permeability, to be -- we were more consistent with
2 Subtitle C, but we were also able to -- the less permeable
3 it is, the more protective we're going to be there. And we
4 also give the oil and gas industry that option to find
5 native soils that are probably going to comply with that
6 requirement.

7 Q. Now in your opinion and your -- based on your
8 experience with landfill designs, are these protections
9 that are found in Subtitle C landfills something that it's
10 reasonable to require in oil and gas landfills for the
11 protection of the environment?

12 A. Absolutely, due to the similarity of our wastes.

13 Q. And do you believe that they are necessary for
14 that purpose?

15 A. Absolutely.

16 Q. Okay, you may continue with your presentation.

17 A. An exaggerated drawing of an OCD landfill. You
18 basically see the composite liner, the drainage systems,
19 the protective cover, the waste zone. What you see here is
20 a passive gas vent well. I think it's --

21 Q. Now before you go any farther, is this a diagram
22 that depicts basically the prescribed design in our
23 proposed Rule?

24 A. Yes.

25 Q. Okay, now go ahead. Oh, before you do, do you

1 have the pointer there so you can point to each element as
2 you go through it? Okay, continue.

3 A. I'm sorry, excuse me, gentlemen, I will --

4 (Laughter)

5 A. Wear your sunglasses.

6 The composite liner system, two foot compacted
7 clay, geomembrane, two foot of leak detection system layer
8 with drainage pipes. This is typically a chevron pattern
9 because, as I said, it's exaggerated in order to protect
10 the pipes and allow -- to facilitate better drainage at
11 two-percent slope. We like to put these pipes down into
12 depressions where they can be covered by aggregate and
13 protected from damage during construction.

14 Above the leak detection system, another
15 geomembrane, leachate collection removal system, drainage
16 pipes. This is called the filter layer. For us it's a
17 protective -- 12-inch protective layer. Waste zone, gas
18 vent layer. For RCRA Subtitle C this is a low-permeability
19 barrier layer.

20 This is followed by the geomembrane, the drainage
21 layer above, sloped to two to four percent to allow for
22 drainage to the toe, to be drained out and away from the
23 landfill. And the topsoil cover, the vegetative cover.

24 I just wanted to point out that we will most
25 likely have passive gas wells that will also -- that also

1 supports the pressure, relieving pressure from above the
2 waste, and this further supports the OCD's change in our
3 design where we do not put a barrier layer above the waste,
4 we use the sand and then a strong permeable geomembrane.

5 Q. Now my client pointed out a question that I need
6 to ask you that I had not asked you about comparing
7 hazardous waste, oilfield waste and solid waste landfills.

8 In the solid waste landfills, do the Environment
9 Department regulations require that certain types of waste
10 be pre-treated before they're put into the landfills?
11 Specifically hydrocarbon-contaminated wastes?

12 A. I can't cite the reference, I don't know. I'm
13 pretty sure that we do. We want it to come in dry.

14 Q. Well, yeah, what I'm talking about is the
15 Environment Department, municipal waste --

16 A. Oh.

17 Q. -- landfill regulations.

18 A. I don't know.

19 Q. Okay, very good. Then in this particular design,
20 you raised the issue of the gas vent. I believe that
21 there's going to be some testimony, perhaps, there are
22 certainly some comments that raise the issue that there
23 will not be methane generated in these landfills because
24 they don't have vegetable waste like a municipal landfill
25 would. Is it not entirely possible, though, that

1 hydrocarbon wastes will offgas to a certain extent also?

2 A. According to EMCON, a designer and constructor of
3 landfills, they claim -- and I have in a slide later on --
4 any organic contaminated waste will emit gas. In fact, the
5 whole premise behind soil sampling and using photo-
6 ionization detectors is because for benzene, toluene, these
7 organic contaminated soils consist of ionizable gases -- an
8 example: benzene, toluene -- and it is those offgases --
9 offgassing, that the photo-ionization detectors, their
10 lamp, will detect.

11 Q. And now whatever municipal waste requirements,
12 which you testified you did not know, our Rule does not
13 have any limitation on the hydrocarbon content of waste
14 that can be deposited in landfills; is that correct?

15 A. It does not.

16 Q. Okay, continue.

17 A. Now we talked about alternative designs, and this
18 is the design where you can see along the left side you've
19 got some geogrids. Those are placed horizontally. What
20 those nets do is, they -- you know, that's a 25-percent
21 slope there. That further stabilizes and prevents slope
22 failure from occurring. I just wanted to point that out,
23 because we've talked about geogrids and their use. This is
24 showing it applied.

25 You see a composite clay liner followed by a

1 geonet. A geonet, again, is -- it looks like a net, it's
2 about three inches high. It facilitates drainage.

3 Do I have to go through all of these?

4 Q. No, please don't.

5 (Laughter)

6 Q. This is an illustration of an alternative design
7 that we might approve.

8 A. There are so many possible design change that can
9 occur, and we propose that would work, that I would have 35
10 slides to show all the different combinations that could --

11 Q. Okay. Go on, then, to your next slide.

12 A. This is just to show the bottom layer of a
13 composite of a solid waste landfill, the two foot compacted
14 clay with the geomembrane. Again, it's exaggerated with
15 the leachate collection and removal system -- this is for
16 municipal solid waste -- with pipes and the filter layer or
17 protective layer, followed by the solid layer.

18 The only thing this doesn't show is the sump, but
19 this is just to show a typical configuration of the solid
20 waste bottom liner.

21 Q. This would not meet our prescription
22 requirements, correct?

23 A. It would not.

24 Q. But in an appropriate site-specific case, we
25 might consider this as an appropriate design?

1 A. A municipal solid waste design could work --

2 Q. Yeah.

3 A. -- in the right instance.

4 Q. Okay, continue.

5 A. This is just what I showed you earlier on our
6 design. The only difference is in the bottom layers. I'm
7 just showing you where the sump is. The sump exists within
8 the perimeter of the landfill. And that's where the -- in
9 this situation here, that's the leak detection system sump.

10 Q. Okay, go ahead.

11 A. In our situation we would have a leak detection
12 and leachate collection and removal system sump.

13 Alternative designs. Based on performance-based
14 landfill design systems using geosynthetics, geocomposites,
15 including geogrids, geonets, geosynthetic clay liners,
16 composite liner systems, et cetera.

17 We must -- If somebody is going to propose any
18 design to us, including alternatives, they are required to
19 provide us with EPA's hydrologic evaluation of landfill
20 performance, the HELP model, or we may accept another
21 approved model if it's approved by us. And all these
22 designs that are presented to us must prevent the bathtub
23 effect, and that is having a high-permeability cover over a
24 low-permeability bottom layer, you end up with a bathtub
25 effect. And so that's what this HELP model will help us

1 achieve.

2 Q. Okay, go ahead.

3 A. To talk a little bit more about the HELP model --

4 Q. The HELP model is basically a design that is put
5 out by EPA to make performance standards for landfills, set
6 performance standards for landfills, is it not?

7 A. That is correct.

8 Q. Okay. Since we're running a little bit behind,
9 I'm going to suggest we pass on by the details of the HELP
10 model and go on to some other things.

11 A. Okay, this basically shows what the HELP model
12 evaluates. It evaluates percolation runoff, climatological
13 information, evapotranspiration, helps us to estimate the
14 leachate collection removal volumes. So it is a quasi-two-
15 dimensional vertical/horizontal-type model that is very
16 important, taking into account site-specific climatological
17 precipitation information, et cetera.

18 Q. It's a recognized industry standard?

19 A. It is. It is required also by the New Mexico
20 Environment Department Solid Waste Bureau.

21 Q. So if we're evaluating an alternative design,
22 we're going to look primarily to that, but we have this
23 provision in here that if they can show us another model
24 we'll consider that also?

25 A. This would be their demonstration to us that

1 their alternative design meets our prescriptive design.

2 Q. Let's continue. Go ahead.

3 A. Well, we kind of touched on this, 30-mil general
4 requirements for liners, 30-mil PVC, 60-mil HDPE. The
5 hydraulic conductivity of these liners must be less than
6 10^{-9} centimeters per second. These liners must be
7 compatible with different types of chemicals, should be
8 impervious, should be resistant to ultraviolet radiation or
9 rays. Again, it depends on the placement of the liner,
10 where that would apply. If the liner is below the sun
11 horizon, then it's not an issue.

12 We do reference the EPA Southwest 846 9090A.
13 It's basically EPA's requirements for testing of liners,
14 puts everybody on the same playing field.

15 It shall withstand the loading stresses,
16 settling, disturbance from overlying waste, and on our
17 liners we have to have a minimum two-percent slope to
18 ensure that drainage will drain.

19 Q. Now in the interest of time, Mr. Chavez, the next
20 three slides, are these all technical summaries of material
21 that you considered in designing your liner specification
22 requirements that you put in subsection F?

23 CHAIRMAN FESMIRE: Mr. Brooks, I appreciate the
24 way you treat your time. I do need to tell you something,
25 though, that we probably won't break for lunch until 12:30

1 or a little after because of a commitment Commissioner
2 Olson has, so...

3 MR. BROOKS: Well, I understand that, but I would
4 like to move through this presentation fairly quickly if
5 possible.

6 CHAIRMAN FESMIRE: And that is appreciated.

7 MR. BROOKS: I understand we have a little more
8 time than I might have thought we had. Okay, thank you
9 very much.

10 Q. (By Mr. Brooks) Then would you go on to the
11 slide on page 134 and tell us about the additional liner
12 specifications that you've prescribed?

13 A. Well, I've already mentioned this, they must be
14 compatible with the waste, must be resistant to chemical
15 attack, must be demonstrated using test reports, laboratory
16 analyses or other Division-approved methods, must withstand
17 the calculated tensile forces that will be acting upon them
18 from loading, waste loading, and the high density of our
19 wastes that we anticipate coming into our oil and gas
20 landfills.

21 Q. Okay. Now this deals with seams, does it not?

22 A. It does.

23 Q. And Mr. Price talked somewhat about seams
24 yesterday, but go ahead and tell us basically what it is we
25 require in terms of seams.

1 A. All the seaming methods, we like and prefer the
2 thermal seaming using the hot wedge method, basically a
3 double-track weld that creates an air pocket for non-
4 destructive air channel testing. And it's kind of nice,
5 when we talk about nondestructive, that means we don't have
6 to cut up the liner, take it into a lab, do peel tests on
7 it to determine whether it's going to hold up. You can
8 simply take five minutes to pressure up the air pocket from
9 a double wedge -- Mr. Chairman, may I approach?

10 CHAIRMAN FESMIRE: You may.

11 THE WITNESS: This is a sample of the double
12 wedge. It allows a -- as you notice, there's two locations
13 on the double track that will prevent any type of
14 compromise of that field seam. And so we like the hot
15 wedge seaming method with double track. We do allow some
16 latitude for alternative thermal seaming. If they have an
17 irregular-shaped liner, you know, they may be able to use a
18 single-track thermal method to seam.

19 Q. (By Mr. Brooks) Now Mr. Price indicated in his
20 testimony yesterday that we'd found that in a lot instances
21 where we have liners, they have been stitched. This
22 doesn't really take an engineer to understand what's wrong
23 with stitching a liner, but would you explain what the
24 problem is with stitched seaming?

25 A. Well, you're basically sewing two liner materials

1 together, and wherever the thread passes through the liner
2 you're basically creating a conduit or channel for
3 migration.

4 Q. Okay, continue.

5 A. The seams must be overlapped four to six inches
6 before seaming, they should be oriented parallel to the
7 slope and not horizontally. We should try to minimize the
8 number of field seams in corners and irregularly shaped
9 areas. Factory seams should be performed where possible.
10 There should be no horizontal seams within five feet of the
11 toe of any slope, and only qualified personnel should
12 perform field seaming.

13 Q. Now these are -- on the next page, these are
14 illustrations of what you would consider -- well, these are
15 illustrations of various types of seams, are they not, on
16 this slide --

17 A. That's correct.

18 Q. -- page 136? Now which is the ones that you
19 prefer?

20 A. Well, both (a) and (b) are thermal seaming
21 processes. (b), the thermal fusion seams, that's the dual
22 hot wedge. And then the single track is over to the right
23 where they're unable to do a dual hot wedge. But it's
24 basically a hot, thermal process that seams the two liners
25 together. And again, I explained with the dual hot wedge

1 you've got some redundancy there. If one of those seams
2 fails, you've got a second seam in place.

3 The other thermal method, the fillet type up
4 above, an example would be for high density polyethylene
5 where they use a heated extrudate of HDPE, and they
6 basically -- heating both liners and the extrudate will
7 seam the liners together.

8 Q. So --

9 A. I would say that the hot wedge is applicable to
10 all of the liners that we looked at, and some liners you
11 can't use that method on. And certainly thickness of the
12 liner comes into play with seaming as well. If the liner
13 is too thin, you will not be able to implement, for
14 example, a hot wedge, the preferred seaming.

15 Q. So you would consider these other types of seams
16 that are illustrated here where hot wedge would not be
17 appropriate for whatever reason?

18 A. It would have to be a very rare instance, but I
19 don't think we would approve any other type of seaming
20 method, other than a thermal seaming --

21 Q. Okay, very good.

22 A. -- based on our --

23 Q. Okay, then let's go on to the next slide.

24 A. Requirements for soil components of composite
25 liners. The base layers will be placed on a prepared

1 subgrade, compacted to 90 percent standard Proctor density.

2 We're probably going to have to add water to our
3 soil materials in order to increase the density and
4 moisture -- increase the moisture to achieve the 90-percent
5 density compaction limit there.

6 Soil surface must be properly prepared to prevent
7 damage to the geosynthetic. We don't want any pebbles,
8 rock, irregular type of materials compromising the
9 integrity of the geomembrane.

10 Clay soil component of any composite liner below
11 waste must be compacted to the minimum 90 percent standard
12 Proctor density.

13 Must have a plasticity index greater than 10
14 percent. Plasticity index and Atterberg limit is basically
15 a -- plasticity index is equal to the liquid limit minus
16 the plastic limit. And this usually applies to clay
17 materials. If you have --

18 Q. Okay, well, would you just go ahead and tell us
19 what the other specifications are, and if people don't
20 understand this, they can ask questions.

21 A. Okay, liquid limit between 20 and 25 percent --
22 25 to 50 percent. The percent by weight of material
23 passing a 200 sieve would be at least greater than 40
24 percent, to ensure clay. 18 percent for clay. Again, that
25 40 percent will allow colloidal, smaller-than-clay-sized

1 materials to pass through as well.

2 Q. Okay, go ahead.

3 A. This is just showing you the different types of
4 things that we would look at for low-permeability soils,
5 the soil type, moisture content, in-place density, the
6 strength. And all of these, over to the right, there's an
7 ASTM, American Society for Testing Materials, test method
8 that is commonplace for all of these type of design
9 features.

10 Q. Okay, let's go ahead to the next slide then.

11 A. Top landfill cover design, top to bottom. Again,
12 we kind of covered that already. Do I need to go over
13 this?

14 Q. No.

15 A. Okay. This is basically from EPA, a picture of
16 our top cover design. It's in conformance with EPA RCRA
17 Subtitle C hazardous-waste top cover designs, and it
18 basically illustrates what I mentioned to you earlier in
19 the layers.

20 Q. Okay.

21 A. I'm showing this side section of a top cover
22 overlaying the waste and the side of the landfill liner. I
23 guess the important thing about this is just to show you
24 the overlay with the anchor trench locations, the toe
25 drains.

1 And I guess the best way to envision the flexible
2 membrane liner in the top cover, it's basically a bowl with
3 a geomembrane over the top that goes all the way down the
4 slopes and goes into those toe drains, so that any
5 precipitation events, that will be drained into these toe
6 drains and routed around, run-in and runoff around the
7 landfill facility. Okay.

8 Q. Okay.

9 A. Permitting requirements --

10 Q. Now here you're talking about permitting
11 requirements that are specific to landfills, in addition to
12 the ones Mr. Martin discussed; is that correct?

13 A. Yes.

14 Q. Continue.

15 A. For applications for a new or expanded landfill
16 application, the operator must submit a leachate management
17 plan that describes the anticipated amount of leachate that
18 will be generated and the handling, storage, treatment and
19 disposal of the leachate, including final post-closure
20 options.

21 And this is just that provision that we've
22 already talked about.

23 Q. Okay.

24 A. Go on?

25 Q. What about the external piping? Yes,

1 we --

2 A. External piping --

3 Q. -- we didn't discuss that.

4 A. -- we discussed that. We showed a photo of riser
5 pipes. We don't like pipes going through our liners, we
6 know those are areas that will compromise our geomembranes.
7 We like the sidewall riser pipe design.

8 Last item there worthy of mention is, where we do
9 go through geomembranes we recommend a flexible clamped
10 riser design that allows that pipe to go through a
11 geomembrane, but allows it the flexibility to give with
12 settling, with offgassing. It prevents tearing because it
13 allows the flexibility to adjust the clamps and check the
14 clamps for tears.

15 This is an illustration of a sidewall riser in a
16 leak detection system. The second diagram down below
17 basically shows a cross-section side by side of a leak
18 detection system with a geonet. And up above that is a
19 cross-section of a leachate collection geopipe, basically
20 coming up the cross-section. They're close together, they
21 come up, and they rise above the slope to their designated
22 destinations.

23 Q. And we would have the sidewall risers for both
24 the leachate collection system and the leak detection
25 system, would we not?

1 A. Yes.

2 Q. Okay, continue.

3 A. This is just a photo of a --

4 Q. Yeah, just tell us generally what it is.

5 A. Yeah, this is just the sidewall riser rising from
6 the sump area. I think that crane is just depositing the
7 leachate collection/removal system layer.

8 Q. Okay, go ahead.

9 A. This is another example of the different ways to
10 put pipe through geomembrane. The top one is kind of what
11 we're recommending, with the steel clamps along with the
12 welding that goes on, on the liner.

13 And the lower one is a flange option.

14 Q. Now as I understand, we have a provision that
15 pipes shall not go through the liners except for the gas
16 control system; is that correct?

17 A. Well, for the gas control systems or any
18 collection pipes. So that would include any sidewall
19 risers that rise up, that may -- we may have to have a
20 clamp up along the side where our riser pipe penetrates an
21 upper geomembrane.

22 Q. Now this pipe that's shown here as an
23 illustration, this is a gas pipe, correct?

24 A. It is, it extends down below the -- it extends
25 down into that gas layer above the waste zone. You can see

1 the horizontal extension of perforated pipe within that 12-
2 inch gas layer above the waste, and then it rises up
3 through the top geomembrane cover.

4 And I guess an example here for these -- this is
5 an example of a passive gas well. But you can also apply a
6 vacuum tube for gas collection and gathering --

7 Q. Okay --

8 A. -- if your emissions exceed --

9 Q. -- let's go ahead to leak detection systems then.

10 A. Between lower and upper geomembrane liners, two
11 feet of compacted soil, saturated hydraulic conductivity
12 greater than or equal to 10^{-5} centimeter per second.

13 Properly designed drainage, collection and
14 removal system. We need to make sure that everything
15 drains properly so that we will detect leakage, and that --
16 well -- It needs to be sloped to facilitate the earliest
17 possible leak detection, and I believe that's two percent
18 on our specifications. We'll have a diagram coming up.

19 Piping will withstand chemical attack, structural
20 loading, expansion and contraction.

21 Next, please.

22 It shall facilitate leachate -- or facilitate
23 cleanout maintenance. Any leak detection system, piping,
24 it shall facilitate cleanout maintenance.

25 Materials between the pipes and laterals must be

1 permeable, slope must be at least two-percent grade. We
2 require at least four-inch schedule 80 solid and perforated
3 pipe for geopipes or pipes, drainage pipes.

4 Solid drainage pipe must be sealed to convey
5 fluids to the sump and perimeter of the landfill for
6 observation.

7 Again, alternative designs may be considered.

8 Q. Now you mentioned about the soil within the
9 leachate -- within the leak detection system, and that's
10 where you have the 10^{-5} hydraulic conductivity requirement,
11 right?

12 A. Yes.

13 Q. Now the way this rule is written, F.(3).(c) on
14 page 15, it says the leak detection system shall be placed
15 between the membrane liners, et cetera, and shall consist
16 of two feet of compacted soil with a saturated hydraulic
17 conductivity, et cetera.

18 One of the commentors in this case has contended
19 that it's inappropriate to require compacted soil, that
20 this should simply say granular soil. What is your
21 response to that?

22 A. All engineered structures have to maintain
23 structural integrity on the part of the design. If we were
24 to loosely put soils into this and build this thing up, it
25 would be a candidate for failure. Structural integrity is

1 paramount when all of the components and the compaction and
2 building with water and compaction going on up is required.

3 The only instance where we slack off a little bit
4 on compaction and go from 90 percent to 80 percent is in
5 the top cover, where we want to prevent damage up there.
6 And I would just add that there is equipment that is made
7 just for this purpose. For example, Sheep's Foot might
8 have, you know, less of a spike on it, maybe a very flat
9 spike as opposed to a long spike.

10 Q. But in the leak detection system and the leachate
11 collection system, in your opinion, the soil should be
12 compacted?

13 A. Absolutely. And you lose no permeability from
14 compacting sand.

15 Q. Yeah.

16 A. However, when you compact clay, you decrease the
17 permeability and you obtain all of the desired low-
18 permeability aspects by compacting clay.

19 Q. But if you meet these permeability requirements,
20 then the compaction would not -- would the compaction not
21 prevent these systems from conveying moisture like they're
22 supposed to?

23 A. Well, they would convey moisture, but the
24 structural integrity would be a loose --

25 Q. Yeah.

1 A. -- like a chiffon napkin layers and settling and
2 piping that gets damaged from -- If you don't compact --

3 Q. If you did not compact --

4 A. -- layers coming up, you compromise the total
5 structural integrity of piping and all of the layers that
6 form a landfill.

7 Q. But my point is, if they're compacted as you
8 require and they have the hydraulic conductivity you
9 require, would they still convey moisture like they're
10 supposed to?

11 A. Absolutely.

12 Q. The compaction would not prevent that?

13 A. The sand layers would convey moisture, the clay
14 layers would not, would become less permeable.

15 Q. Yeah, but you're not going to be putting clay in
16 a leak detection system, are you? Because you want it to
17 convey moisture?

18 A. Well, that depends. In the Subtitle C landfill
19 where they had a leak detection, that was compacted clay.

20 Q. Yeah.

21 A. The purpose of that is to have a double composite
22 liner. And under the federal Subtitle C they would not
23 expect to see any leakage going into that leak detection
24 layer. And therefore they're perfectly happy with two foot
25 of compacted clay as part of the leak detection layer that

1 constitutes a double composite-lined barrier system for
2 their landfill.

3 Now for us, we've gone to 10^{-5} because, yes, we
4 do want to see leakage right away or as soon as possible.
5 But again, the oil and gas industry flexibility of getting
6 soils to bring in there that's going to be somewhat -- is
7 going to be somewhat impermeable. There may be some clay
8 in that --

9 Q. Okay --

10 A. -- with 10^{-5} --

11 Q. -- let us go on, then, to your next slide.

12 A. It still would be permeable.

13 This just shows the two-percent drainage, the
14 header pipe, the sump that's along the southern perimeter
15 here. This is just displaying, basically, the chevron. I
16 guess the important thing I would mention here is that our
17 pipes do go down in these depressions. They are covered by
18 aggregates, and that is to protect the pipe.

19 If the pipe is laying on a horizontal flat slab
20 and you have equipment over the top and you're compacting
21 and just the load-bearing, these pipes are going to fail.

22 However in our designs, these all go into chevron
23 flows, depressions, they're protected by aggregate, and
24 they are protective of the geopipe during the compaction
25 process.

1 Q. Okay, go ahead to the next slide.

2 A. This is just a picture of what I've said. The
3 lower depression there is a leak detection depression with
4 the geo- -- with the drainage pipe.

5 Above that is the compacted clay layer. This is
6 kind of illustrative of the Subtitle C hazardous waste.

7 And then the top depression is the leachate
8 collection and removal system, followed by the -- And
9 notice the aggregate shaped in a diamond-shape up above
10 that. Again, that forms an arc-base protection to the pipe
11 from any compaction going on up above.

12 These are examples of sump designs. For us, the
13 bottom way, the bottom illustration, is most important.
14 You basically have a geopipe running down a side angle into
15 the depression. You lower a pump, and you're able to
16 remove and extract leachate or leaking fluids from a side
17 riser pipe.

18 Q. Okay, before we leave leak detection systems and
19 leachate collection systems, I call your attention to page
20 15 of the Rule. Paragraph (3).(c) describes the leak
21 detection system, right?

22 A. Yes.

23 Q. And paragraph (3).(e) describes the leachate
24 collection system?

25 A. Collection and removal system.

1 Q. Right. And if you read through those paragraphs,
2 there's a lot of stuff that's very, very similar in those
3 paragraphs. However, in the leak detection system we just
4 pointed out that while it says on page 15, the third line,
5 10^{-2} centimeters per second hydraulic conductivity, you
6 have changed that in the proposed change sheet to 10^{-5} ,
7 correct?

8 A. We have lowered the permeability to 10^{-5} .

9 Q. But when you go down to (e) and have the same
10 provision, 10^{-8} , for the leachate collection and removal
11 system, it's my understanding you do not propose to change
12 that, that 10^{-2} is what you want there; is that correct?

13 A. That's correct.

14 Q. And could you explain why you have a different
15 hydraulic conductivity requirement for the leachate
16 collection system versus the leak detection system?

17 A. Well, the leachate collection and removal system
18 is the primary barrier of defense for our landfill. We
19 want it to be as permeable as possible to facilitate any
20 and all drainage of leachate from wastes. We want to be
21 able to remove as much leachate as possible.

22 Having said that, I mean, we do have action
23 leachate rates, if we get too much leachate we need to re-
24 examine our processes up above and how the waste is coming
25 in and why it's coming in so wet.

1 Q. Okay. Now the next subject is gas control
2 systems. Go ahead and bring up the next slide, but there's
3 something in the Rule I want to ask you about before you
4 discuss it, and that's on page 17, E.(5) -- I mean F.(5).
5 Would you read the first sentence there, beginning in
6 F.(5), down to where it says "the following", before it
7 starts (a)?

8 A. Means that will be implemented to --

9 Q. No. No, no. F.(5) on page 17, titled Landfill
10 Gas Control Systems.

11 CHAIRMAN FESMIRE: Not at (5).(f). F.(5).

12 THE WITNESS: Yes, I'm at Landfill Gas Control
13 Systems.

14 Q. (By Mr. Brooks) Yeah, read that sentence --

15 A. -- (f).

16 Q. -- the introductory sentence to Landfill Gas
17 Control Systems.

18 A. Oh. If the gas safety management plan or
19 requirements of the other federal, state or local agencies
20 requires the installation of a gas control system at a
21 landfill, the operator shall submit a plan for approval by
22 the Division which shall include the following.

23 Q. Okay. Now does that sentence -- under that
24 sentence, it is the applicant for the permit who writes the
25 gas safety management plan, subject to our approval,

1 correct?

2 A. Yes.

3 Q. And if they have studied their waste and they
4 have evaluated it and come to the conclusion that a gas
5 control system is not necessary, and if we review their
6 data and approve that, then there would not have to be a
7 gas control system, right?

8 A. I think the answer to that is maybe, because a
9 landfill -- it has a life to it. It has certain phases
10 where you have different maximum gas generation, for
11 example, from eight to 40 years.

12 So I would say that based on monitoring of gas
13 and emissions, there could be a situation where they may
14 need to submit one, but that would be based on monitoring
15 data --

16 Q. So even if their gas safety management plan
17 doesn't require it, what you're saying is, possibly if a
18 gas problem developed we might require them to modify it?

19 A. Yes.

20 Q. But generally speaking as far as this Rule is
21 concerned, it requires a gas control plan in two
22 situations, does it not? One is where the gas safety
23 management plan requires it, and the other is where there's
24 some kind of other regulatory requirement that requires it?

25 A. That's correct.

1 Q. And otherwise it's not frequent, there's no
2 general requirement that in every case they must have a gas
3 control plan -- a gas control system?

4 A. Yes.

5 Q. They have to have a plan in every case, but not
6 necessarily a gas control system, depending the parameters
7 of the --

8 A. And there is guidance for that, and it -- I would
9 simply refer the operator or the owner of the landfill to
10 the Clean Air Act and the new source performance standards,
11 emission guidelines, that were developed for non-methane
12 organic compounds, and that's under 40 CFR, part 60,
13 subparts Cc and WWW.

14 Herein lies the guidance for when a facility
15 might be required to have a gas collection --

16 Q. Okay, let's go on to your slides.

17 A. -- and consultation with NMED --

18 Q. Yeah --

19 A. -- air quality --

20 Q. -- let's go on with your slides, then.

21 A. Okay. The operator shall control litters and
22 odors, shall provide adequate cover for the landfill's
23 active face as needed to control dust, debris, odors and
24 others nuisances, or as otherwise required by the Division.

25 And I put some notes here that soils reeking of

1 odor will not be allowed as daily cover. For example,
2 mercaptan, sulfur-based-type mercaptans that are very
3 odoriferous, would not be an acceptable cover, a daily
4 cover nor an intermediate cover at a landfill.

5 Q. And we've gone into this with Mr. Price, but when
6 you say control odors, that means odors that may be
7 offensive as well as those that may be toxic, correct?

8 A. Yes.

9 Q. Continue.

10 A. Okay. The leachate collection and removal
11 systems with minimal leachate volume may serve a dual
12 purpose to collect leachate and as a gas collection and
13 control system.

14 And I guess what I'm getting at there is that if
15 we can bring in dry waste into our landfills, we can
16 prevent offgassing, and we have a dry leachate collection
17 and removal system, we can use it for both purposes. It
18 can be used to put a vacuum on it, to control vapors within
19 the landfill, and it can also be used to collect leachate.

20 Q. Okay, and what does this depict?

21 A. This is a municipal solid waste landfill where
22 four feet of top cover was, from methane gas, moved up to
23 the surface and compromised the structural integrity of the
24 municipal solid waste --

25 Q. Is that in here just to show what can happen if

1 you don't have an adequate --

2 A. It's to show that there is gas, whether it's
3 methane -- if you have small fractions of methane, you have
4 non-methane organic compounds, you're going to have gas
5 that we're going to have to deal with.

6 Q. Okay. And we've already talked about the
7 formation of gas -- possible formation of gas in oilfield
8 waste facilities, so I think I'm going to ask you just to
9 put the next slide on, but you don't need to discuss it.
10 If people have questions, they can ask --

11 A. I think this is an important slide to put up for
12 you. It's basically the reference from EMCON indicating
13 that all landfills containing organic, decomposable
14 materials will generate gas.

15 Q. Okay. Let's go ahead, then, to the next slide.
16 Go on with it.

17 A. Landfill Gas Control Systems. System design. If
18 you're going to have a gas control system, it's likely to
19 consist of, you know, locations and designs of vents,
20 barriers, collection piping, manifolds and other control
21 measures that will be installed. Gas vent or gas or
22 collection wells must have clamped and seamed pipe risers
23 through top cover liner. We talked about that. Have a gas
24 recovery system, gas processing plan, gas disposal plan,
25 means to prevent the generation and lateral migration of

1 gas, and a quarterly gas monitoring program.

2 Q. Okay, then let's go on to the next slide. Does
3 that represent a diagram of a very simple gas safety
4 system?

5 A. This is a passive gas vent well where, again, you
6 can see the -- at the base of that gas vent, horizontal
7 perforated pipe extending into the vent zone above the
8 waste, extending up through the permeable membrane. And
9 you can put suction on that gas vent, you can create vacuum
10 to control vapors as well there.

11 And a slight note is that you'll notice that it's
12 located at a top elevation --

13 Q. Yeah, and --

14 A. -- for maximum gas collection.

15 Q. And that's because gas tends to rise?

16 A. And it alleviates pressure on the liner systems.

17 Q. Yeah. Now the passive gas vent would be
18 adequate, would it not, unless you have a pretty serious
19 gas problem?

20 A. You'd have to have a rather large landfill, is
21 what I've learned from studying the previous Clean Air Act
22 guidance.

23 Q. Do you require a more complicated gas management
24 system, would require -- would be only in the large -- the
25 very large landfills? Is that what you're telling us?

1 A. You would probably have to have a landfill design
2 -- again, this is guidance from the Clean Air Act -- you'd
3 probably have to have a landfill design to receive about
4 3.3 million cubic yards of waste.

5 Q. Before you would need a more complicated
6 system --

7 A. Or --

8 Q. -- or is that before you would need any gas
9 control system?

10 A. Any gas collection control system.

11 Q. Okay.

12 A. And -- or if it emits 33 -- if it emits 55 US
13 tons per year of gas.

14 Q. So if their gas safety plan shows that they do
15 not meet those criteria, then they probably would not have
16 to have a gas --

17 A. Probably not --

18 Q. -- control system?

19 A. -- going to be a --

20 Q. All right.

21 A. Passive gas vent wells will still be required,
22 things like that.

23 Q. In some circum- -- in many circumstances anyway.
24 Okay, go ahead to the next slide then.

25 A. This just shows some examples of venting along

1 the sidewall there, three diagrams that just show how they
2 can key into that, to below the geomembrane in the top
3 cover, and gas rises up through the sides and they
4 naturally will collect the gas and off-vent it.

5 The diagram to the right is a typical gas vent
6 well that we would have along the side of our landfills
7 that would indicate -- we would sample for air quality to
8 determine whether we have any leakage from our landfills,
9 outside of our structure.

10 Q. Yeah. Okay, go ahead to the next slide then.

11 A. Landfill gas response. If gas levels exceed the
12 specified limits, the operator shall immediately take steps
13 to ensure protection of fresh water, public health, safety
14 and the environment, and notify the Division; within seven
15 days, record gas levels and a description of the steps
16 taken; within 30 days, submit a remediation plan for gas
17 releases; within 60 days of OCD approval, implement the
18 remediation plan and notify the OCD. And that's an
19 instance where we have a gas problem that could kick us
20 into a gas collection and gathering system --

21 Q. Okay. Then go on to the next slide where you've
22 got -- where you talk about closure requirements.

23 Before we go into that, your closure requirements
24 are considerably more -- particularly your post-closure
25 requirements are considerably more elaborate for landfills

1 than for any other type of facility, correct?

2 A. It is.

3 Q. And why is that?

4 A. A landfill poses the most risk to public health
5 and the environment, to fresh waters. It's a long-term
6 structure containing hazardous components that can over
7 time potentially degrade materials.

8 Q. Whereas a landfarm is a treatment facility that's
9 supposed to remediate the waste to where it's no longer
10 harmful, a landfill is a storage facility, is it not?

11 A. It's going to be taking on the most contaminated-
12 type wastes coming out of our oilfields.

13 Q. And is that why you require up to a 30-year post-
14 closure plan?

15 A. Yes.

16 Q. Okay. Now continue to describe what's on this
17 slide.

18 A. For (4) -- J.(4).(c).(i), post-closure care and
19 monitoring plan, maintenance of cover integrity,
20 maintenance and operation of the leak detection system and
21 leachate collection and removal system and operation of gas
22 and groundwater monitoring systems.

23 J.(4).(c).(ii), sample groundwater monitoring
24 wells annually and submit reports.

25 I think that we require quarterly sampling of

1 monitor wells during the active life of the landfill.
2 However during post-closure, when the cap is in place, we
3 go to an annual monitoring.

4 53.J.(4).(c), landfill post-closure shall be 30
5 years. I know there was recommendations for some options
6 there. I think there could be some options, but we would
7 be looking at leachate generation, gas generation and those
8 type of factors that would determine whether there would be
9 any type of flexibility from the 30-year.

10 Q. And during this post-closure period, they're
11 keeping these monitoring wells in operation, correct?

12 A. Yes.

13 Q. And our Rule requires annual reports to OCD on
14 the results of this monitoring?

15 A. Yes.

16 Q. Okay, go ahead.

17 A. Preventative maintenance, we're getting to the
18 end here, of the cover system. This gets into the post-
19 closure where we monitor vegetation, make sure that it's
20 adequate, the topsoil as needed, problem identification/
21 correction. These are just some things that you can see
22 that -- some of the things we'd be looking at from
23 operators in the post-closure phase, basically deals with
24 the integrity of the top cap, making sure that it continues
25 to drain precipitation away from the landfill.

1 MR. BROOKS: Okay. Mr. Chairman, if you'll
2 indulge a minute to confer with my client here --

3 CHAIRMAN FESMIRE: Okay.

4 (Off the record)

5 Q. (By Mr. Brooks) Mr. Chavez, are the materials
6 that appear behind Tab 10, that have been marked OCD
7 Exhibit 10, were these materials either compared by you or
8 compiled by you from sources which an engineer in your
9 field would normally rely on in conducting his work?

10 A. Absolutely.

11 MR. BROOKS: Submit Exhibit Number 10.

12 CHAIRMAN FESMIRE: Any objection?

13 MR. CARR: No objection.

14 MR. HUFFAKER: No objection.

15 MR. SUGARMAN: No objection.

16 MR. HISER: No.

17 CHAIRMAN FESMIRE: Exhibit 10 is accepted.

18 I'm assuming, Mr. Huffaker, you're going to take
19 more than 10 minutes, right?

20 MR. HUFFAKER: The more time I get before I start
21 my cross-examination, the shorter it will be --

22 CHAIRMAN FESMIRE: Okay.

23 MR. HUFFAKER: -- maybe.

24 (Laughter)

25 CHAIRMAN FESMIRE: Well, given that statement,

1 we'll break until the time equals pretty short, which ought
2 to be about 1:30.

3 And your witness -- did you want him here for
4 cross-examination?

5 MR. HUFFAKER: Pardon me?

6 CHAIRMAN FESMIRE: Did you want him here for the
7 cross-examination?

8 MR. HUFFAKER: Well ideally, but --

9 CHAIRMAN FESMIRE: What time is he going to get
10 here?

11 MR. HUFFAKER: Between 2:00 and 2:30, based on --

12 CHAIRMAN FESMIRE: Okay, so 1:30 will give you
13 time to get started, and then we'll take a break and --

14 MR. HUFFAKER: Yes.

15 CHAIRMAN FESMIRE: Okay. We'll resume at 1:30
16 this afternoon. Thank you all.

17 (Thereupon, a recess was taken at 12:23 p.m.)

18 (The following proceedings had at 1:52 p.m.)

19 CHAIRMAN FESMIRE: Okay, let's go back on the
20 record. Let the record reflect that this is a continuation
21 of Case Number 13,586, after the lunch break on Friday,
22 April 21st, 2006.

23 I believe Mr. Huffaker was about to begin his
24 cross-examination of Mr. Chavez.

25 MR. HUFFAKER: Thank you, Mr. Chairman.

CROSS-EXAMINATION

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BY MR. HUFFAKER:

Q. Mr. Chavez, what experience did you have with methane gas generation when you were working in Michigan?

A. Hands-on experience, none. But training in hydrogen sulfide, I think I was certified a couple of times from a gas company for hydrogen sulfide gas. And we were all familiar with the guidance in Michigan on methane gas.

Q. Do you have any experience with oilfield waste gas generation in Michigan or New Mexico?

A. Just from sampling. I did receive specialized training in photoionization detectors, multiple models, the concepts of offgassing of ionizable gases and detections with photo detectors. So I would say contaminated soils, yes, petroleum-contaminated soils --

Q. As you --

A. -- and brines, and brine.

Q. As you have just described?

A. Yes, for characterization, for cleanup, investigation.

MR. HUFFAKER: Mr. van Gonten, could you call up that slide that we were looking at a moment ago?

MR. VON GONTEN: Let me see if I can find it. The one where the bottom was not copied correctly?

MR. HUFFAKER: That's correct.

1 MR. VON GONTEN: Can you tell me what page number
2 that is?

3 MR. HUFFAKER: I don't in my set have pagination,
4 but it's very near the end.

5 MR. VON GONTEN: Okay.

6 CHAIRMAN FESMIRE: Let's see, what -- Mr.
7 Huffaker, can you show it to --

8 MR. PRICE: The page number should be on Carl --
9 on your document.

10 THE WITNESS: Oh, yeah.

11 MR. VON GONTEN: Well, I did find it just now.

12 MR. HUFFAKER: Thank you.

13 MR. VON GONTEN: If Bill Gates will allow me.

14 THE WITNESS: Can I add something?

15 MR. BROOKS: No, wait till he asks you a
16 question.

17 MR. VON GONTEN: Did you need the top of it as
18 well?

19 MR. HUFFAKER: If you can, please.

20 Q. (By Mr. Huffaker) All right, sir. First
21 question on this slide, Mr. Chavez. The bottom of the
22 slide is cut off. Do you know what that says?

23 A. It was a -- from what I can recall, it was like
24 one to 40 years, something like that. What happened is, I
25 made copies of a book that was not mine, and it got chopped

1 off. I believe that's one to 40 years --

2 Q. All right, sir.

3 A. -- from recollection.

4 Q. Now you testified substantially as -- you gave
5 your opinion substantially in the terms in the first
6 sentence on this slide as to the need for gas management
7 planning and the potential for gas control systems,
8 correct?

9 A. And my experience in Michigan with offgassing of
10 hydrocarbon-contaminated soils and using photoionization
11 detectors, yes.

12 Q. And you stated that one of the bases for that
13 opinion as well was this EMCON study that's referenced here
14 in this slide; is that correct?

15 A. This was the most immediate reference that I was
16 able to find to address a question from one of the
17 stakeholders that there is no gas. If there's no methane
18 source, there's no gas.

19 Q. And another reference that you based your opinion
20 on the need for gas management planning and the potential
21 for gas control systems in oilfield waste landfills was 40
22 CFR subparts Cc and WWW from EPA; is that correct?

23 A. That's correct, that's the Clean Air Act, New
24 Source Performance Standards, Emissions of Gas, 1986
25 guidance for non-methane organic compounds -- non-methane

1 compounds.

2 Q. I understand. Now would you turn to the proposed
3 Rules at page 15? I'm going to direct your attention to
4 Section 53.F.(3).(a).

5 A. Landfill design specifications?

6 Q. Yes, subparagraph (a), and in the second sentence
7 there, it begins "In areas where depth..." Would you read
8 that, please, into the record?

9 A. In areas where depth to groundwater is greater
10 than 100 feet, or where no groundwater is present, the
11 operator may propose an alternative base layer design,
12 subject to Division approval.

13 Q. The question is this. What's the basis for your
14 selection of 100 feet depth to groundwater as a potential
15 alternative to the prescriptive requirement for a base
16 layer?

17 A. Initially the 100 feet came from the New Mexico
18 Environment Department, 20 NMAC 9.1, Solid Waste
19 Regulations. And 100 feet seemed to provide a distance
20 where if we had a leak we could detect it in our gas
21 monitoring wells, perhaps even before it even reached
22 groundwater.

23 So it was a depth that seemed reasonable, but the
24 basis was New Mexico Environment Department.

25 MR. HUFFAKER: That's all the questions I have.

1 CHAIRMAN FESMIRE: Mr. Carr, do you have --

2 MR. CARR: No questions.

3 CHAIRMAN FESMIRE: Mr. Hiser?

4 MR. HISER: Thank you.

5 CROSS-EXAMINATION

6 BY MR. HISER:

7 Q. Mr. Chavez, you went through, at the beginning of
8 your presentation, a list of sources that you consulted to
9 look at the number of constituents that may be found in
10 oilfield waste; is that correct?

11 A. Yes.

12 Q. Did you undertake any evaluation as part of that
13 of the level of or concentration of those constituents of
14 concern that may be present in those waste streams?

15 A. Only from data available from leachate testing
16 from the textbooks and sources that I've cited.

17 Q. And do you remember or do you recall which of the
18 different waste constituents those test results are from?

19 A. Say again, please?

20 Q. You said that you had leachate testing data. Do
21 you recall which waste streams in particular that that data
22 was from?

23 A. It's just from the leachate collection and
24 removal system of a landfill.

25 Q. Of a landfill. Any particular type of landfill?

1 A. A Subtitle C and Subtitle D landfill.

2 Q. Okay, but not of an oilfield waste landfill or a
3 monofill which accepts only oilfield waste?

4 A. Data was hard to find in that -- for oil and gas
5 specific landfills.

6 Q. I think in your testimony you also addressed the
7 paint filter test, and you indicated that you believe that
8 was relatively easy to perform?

9 A. Five-minute test.

10 Q. Is it the Division's intent that each and every
11 load be tested with that, or only that a sufficient number
12 of loads be tested so that we have a sense of whether it
13 passes the paint filter test or fails?

14 A. I think it's -- the onus is on the operator to
15 ensure that that waste, whatever volume that's being
16 shipped, has to meet the criteria. If we're inspecting and
17 we see that it violates that, they're in violation. So the
18 onus is on the generator and the operator receiving the
19 waste.

20 Q. In the drainage layer, there's been some
21 discussion back and forth between the Division and industry
22 experts in particular on the 10^{-5} versus 10^{-2} number.

23 A. Yes.

24 Q. Why in the -- I don't remember which one -- one
25 of those you've now set to the 10^{-2} level. Is that the

1 collection?

2 A. There was never -- both the leachate -- initially
3 both the leachate collection removal system and the leak
4 detection system layers, two-foot layers, were at 10^{-2} .
5 The OCD changed the leak detection layer to 10^{-5} .

6 Q. And could you explain to us the technical
7 rationale for why we'd want 10^{-5} when that would slow the
8 time that we would learn about a leak?

9 A. Well, under the Subtitle C hazardous waste
10 landfill design they clearly had a barrier layer, 10^{-7} or
11 less, in fact making their design a double composite liner
12 system, whereas we had -- I like to think of ours -- the
13 way that I proposed it is a composite liner system with a
14 semi-composite liner system, because it's really a function
15 of the native soils that are available and the ability for
16 the oil and gas to tap a close source nearby that would
17 have soil that would be permeable, and 10^{-5} is permeable.

18 And it serves -- the basis of -- perhaps if it's
19 less permeable it would serve the purpose of a semi-
20 composite liner system. But in addition to that, if there
21 is leakage we're going to see it faster in our landfill
22 liner design than in a RCRA Subtitle C landfill.

23 Q. At the very beginning of your presentation you
24 talked about some of the intrinsic hazards, I guess, that
25 you believe are present in oilfield waste; is that correct?

1 A. Yes.

2 Q. Which of the following do you think would be more
3 protective? Eliminating the toxicity in the hydrocarbon-
4 impacted soils by bioremediation first, or simply sending
5 untreated hydrocarbons to a landfill?

6 A. If we're allowed the design that we've specified
7 here today, those wastes can go into our landfill as is,
8 without any preliminary processing treatment.

9 Which would I prefer?

10 Q. Yes.

11 A. Well, from a waste volume standpoint and finite
12 volume space available -- availability, it would be the
13 landfarms.

14 Q. Now as between putting material in a landfill
15 which would have -- exhibit toxicity characteristics, and
16 putting material into a landfill that may not exhibit
17 toxicity characteristics, which is more preferable from an
18 environmental perspective?

19 A. We would prefer to treat the waste and remove as
20 much contamination as we can before it would go into our
21 landfills. I think that's what our position would be.

22 MR. HISER: Thank you. Pass the witness.

23 CHAIRMAN FESMIRE: Dr. Neeper?

24 DR. NEEPER: Perhaps easier if I ask this --
25 bring up the chair --

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BY DR. NEEPER:

Q. Mr. Chavez, we understand from other witnesses that the purpose of a landfarm is to remediate waste. Is it the position of OCD that the purpose of a landfill is to be a repository for those wastes essentially for all of future humankind? That is, this is a repository forever, as far as we're concerned?

A. Could you state your statement again? I wanted to --

Q. Yes. We have heard, I believe, testimony to the effect that landfarms are intended to remediate waste. In contrast, then, would OCD regard a landfill as a permanent repository for wastes --

A. Absolutely --

Q. -- intended to remain there for all future humankind?

A. Absolutely, absolutely.

Q. So it should be secure, then?

A. Yes.

Q. Do you have one of your recent slides that you can put up which shows a schematic of the landfill and the waste? I remember the slide, I did not catch its number. It shows a little schematic of grass on the top, the slope, a schematic of the position of the waste. It does not

1 necessarily have details of the layers.

2 A. Is it --

3 Q. That slide will do. It's been a little unclear
4 to me from the language. Can you indicate for us on the
5 slide, when you say a 25-percent slope do you mean the
6 slope of the top surface of the ground after the landfill
7 is closed, where the grass would be growing?

8 A. Yes, 25 percent on the slope, on the ground where
9 the grass is grown, and 25 percent on the bottom liner
10 slopes coming up.

11 Q. Are you aware of the API guidance on slopes at
12 remediated facilities?

13 A. Perhaps not API guidance, but other guidance I
14 am, on friction angles and liners and soil stability.

15 Q. All right. So the API recommendations did not
16 factor into this recommended slope at the surface?

17 A. Not that I reviewed. I'm not sure about the
18 other engineers but --

19 Q. All right. What we notice, then, is that this
20 slope -- this facility is closed, let us say presumably on
21 a plain, a geologic plain that extends outward from the
22 drawing, and I notice that the wastes are above the level
23 of -- the original level of the ground. Would you agree
24 that that is what would be permitted by the Rule?

25 A. Yes.

1 Q. And would you feel as an engineer that if you
2 heaped up soil and the various layers that you have with a
3 25-percent slope out on a plain, that for all future
4 history those wastes would not become exposed?

5 A. At 25-percent slope?

6 Q. That's your slope, sir, I believe.

7 A. Yeah. Well, you can't guarantee that erosion
8 won't over time, 30 and 30 years' time, erode a slope. But
9 certainly the higher the angle of the slope, the more
10 erosion is going to occur. A 25-percent slope is about a
11 14-degree angle, and that seems to be the most conservative
12 prescriptive design by the New Mexico Environment
13 Department, and we agree with that lower slope than the 33-
14 percent.

15 Q. But I heard you say you couldn't guarantee that
16 in 30 years or some such time frame, you couldn't guarantee
17 that that would still be covered and protected?

18 A. I believe that 25-degree slope angle does provide
19 a factor of protection, a factor of safety, over a long
20 period of time, better than a 33-percent slope which is
21 much steeper and more likely to result in erosion sooner.
22 However, we will be monitoring the cap during the post-
23 closure period, et cetera.

24 Q. Would you feel that we're more secure if the
25 wastes were below ground level?

1 A. I would feel indifference to that. I mean, the
2 deeper they go and the lower the slope angles, yes. The
3 lower the slope angles, the less the drainage, the runoff,
4 the erosion. I would agree that the waste being below
5 groundwater with lower angle slopes would result in less
6 erosion and cap maintenance in the future.

7 Q. Very well. The next question is in response to a
8 previous question by Commissioner Bailey. She had brought
9 up the possibility of salts leaching upward. If there were
10 a capillary barrier as part of the top cover, would that
11 inhibit any upward leaching of salts?

12 A. A capillary barrier, as in a geomembrane or --

13 Q. Well, a geo- --

14 A. -- geotextile? What?

15 Q. Would you agree a geotextile has a finite
16 lifetime once it's buried? At some point it will degrade
17 and decay?

18 A. That's true.

19 Q. Would you agree that a capillary barrier is often
20 made of materials, geological materials like gravel, that
21 do not decay?

22 A. I would agree with that.

23 Q. Would you then agree that a capillary barrier as
24 a preventive for upward migration of salts might be a more
25 permanent type of barrier for this kind of potential

1 problem?

2 A. I don't think that I found any research towards
3 upward wicking on these landfills. I agree that if you
4 were to put a capillary barrier, such as a gravel layer,
5 that would prevent the ability of wicking to go through
6 that permeable capillary area, that that would be -- that
7 would reduce upward wicking. But I found nothing in my
8 studies here to show that that would be necessary, based on
9 our designs and the designs that I reviewed.

10 Q. I have heard in discussion with a landfill
11 operator that a capillary barrier would be an expensive
12 option. Have you looked at the potential cost of that to
13 the industry, or was it simply not considered?

14 A. It was not considered.

15 Q. Very good. A final -- two questions I'd like to
16 bring out. One regards simply clarification of the
17 leachate collection system.

18 You had mentioned that the leachate collection
19 system is there to catch any liquids that may emerge as a
20 result of compression of the wastes. Would it not also be
21 true that the leachate collection system is there to catch
22 the potentially large amounts of rainfall that may be
23 gathered by the waste facility while it is open and in the
24 process of collecting waste, and therefore avoid that
25 problem?

1 A. Very good point. Yes, during the construction of
2 a bona fide designed landfill, even in the active face area
3 where they're working on the active face, the are supposed
4 to have a drainage system that leads to a sump for leachate
5 recovery and removal during the active waste emplacement
6 phase.

7 Q. Yes, that's while the wastes are going into the
8 landfill.

9 A. And after, recap it.

10 Q. Very good.

11 A. Yes.

12 Q. Finally, there was a question bringing up that
13 some respondent had sent in a comment regarding there being
14 possibly no use of data from monitor wells. I may have
15 been that respondent, so I will clarify where that may have
16 come from.

17 (Laughter)

18 Q. I have a very particular sensitivity to requiring
19 the industry to provide data that nobody uses, and so it
20 was mentioned that the monitor wells are there, and under
21 Rule 116 and 19 you would get the data if necessary.

22 Would not a report under those rules be triggered
23 only if you had an exceedence of a groundwater standard?
24 That is, you wouldn't get a report or a signal if the
25 operator simply detected that perhaps chloride was leaching

1 downward?

2 A. I believe the way our regulations are, we
3 included a provision for reporting problems of detections
4 in the monitoring systems, perhaps in advance of the
5 monitoring report, but I would have to dig for that. I
6 don't know off the top of my head.

7 DR. NEEPER: Very good, no further questions.

8 CHAIRMAN FESMIRE: Mr. Brooks, do you have a
9 redirect?

10 Oh, I'm sorry --

11 MR. BROOKS: I have at least one.

12 CHAIRMAN FESMIRE: -- I'm sorry. Hang on, I
13 forgot the folks up here.

14 MR. BROOKS: Yeah, you don't want to forget the
15 members of the Commission.

16 CHAIRMAN FESMIRE: Commissioner Bailey, I
17 apologize again.

18 EXAMINATION

19 BY COMMISSIONER BAILEY:

20 Q. Slide 161 of your presentation, which is labeled
21 as Exhibit 5-3, Typical Elements of Maintenance Program,
22 was this developed for southeastern New Mexico, or was this
23 a typical example of climates outside of our desert lands?

24 A. This was put in a slide simply to show the type
25 of things that we were going to be looking at, but we were

1 going to handle them in the permit application review
2 process. It was not specific to southeast or northwest, it
3 was simply to show that these are some of the aspects of
4 the preventative maintenance program that we would be
5 looking at as part of our review of the landfill designs
6 submitted to us.

7 Q. Given the fact that the top slope, the top cover,
8 will have a 25-percent grade where water is discouraged
9 from ponding, do you expect the remediation to include
10 watering or bringing in water to re-establish the
11 vegetation, or are you going to ban watering so as to
12 prevent infiltration of additional amounts of moisture into
13 the site?

14 A. Well, the top cover will have 25 -- or 25-percent
15 slopes about, what, 14-degree angles. And then up at the
16 top top [sic] you'll have from two to five degrees of slope
17 up on top. The cap liner, the geomembrane liner, will have
18 a minimum of two-percent slope.

19 So I'm not sure whether you -- Is that what
20 you're --

21 Q. What I'm getting to is that you're preventing
22 ponding of water on this structure. The soil is only six
23 inches deep, with additional topsoil of 12 inches, giving a
24 rooting medium of, what, 18 inches?

25 A. Right.

1 Q. The normal rooting depth of native grasses is
2 oftentimes four feet or more, because in times of stress
3 and looking for water they're going to go as deep as they
4 can. But you're only providing 18 inches.

5 I don't want industry to be set up for failure
6 automatically, that there cannot be re-vegetation to the
7 standards that you're requiring of 70 percent of a
8 reference area more than -- two or more native species for
9 two consecutive years. I don't want them to be on the hook
10 forever and ever and ever, and never be able to recoup
11 their financial assurance.

12 A. Commissioner Bailey, I was not aware of the
13 significant depth. I had reviewed some presentations by
14 the Army Corps of Engineers, I believe, on root depths, and
15 my understanding was, is that if you're planting grasses,
16 plain grasses, that you're not going to be getting root
17 growth depth of grasses that deep.

18 And what I also saw in that presentation -- it
19 came in a CD -- was that when the root hits an impermeable
20 zone, the roots tend to slide sideways and move on sideways
21 and --

22 Q. Right, and --

23 A. -- and the growth becomes minimal at that point.

24 Q. And if there's no moisture for them to find at
25 depth, which is what we're trying to prevent, then they're

1 going to die.

2 Has anybody talked to the Lea County extension
3 agent for advice or a talk with your compatriots at MMB,
4 who are the reclamation experts, as far as native species
5 re-vegetation?

6 A. Commissioner Bailey, I don't believe that I did
7 talk about that specific topic.

8 I was just under the impression from reading the
9 literature that I had come across, on top covers for
10 landfills especially, that we go with grasses because of
11 the shallow root depth, as opposed to deep root growth-type
12 trees, shrubs, et cetera. So I had negated that as being
13 an issue for our landfill.

14 And no, I did not confer with the extension
15 agent. But I think I should, based on your --

16 Q. I would hope that you would, please, because if
17 we're making the requirement of 70 percent, two native
18 species and two consecutive years, I want there to be a
19 possibility that it can actually work, without artificial
20 watering.

21 A. Commissioner Bailey, do you feel that a two- to
22 five-percent -- well, I'll follow up on your --

23 Q. Please, thank you.

24 A. Thank you.

25 COMMISSIONER BAILEY: That's all I have.

1 CHAIRMAN FESMIRE: Commissioner Olson?

2 EXAMINATION

3 BY COMMISSIONER OLSON:

4 Q. Well, I'll follow up along on this, on re-
5 vegetation, in a little different way, I guess.

6 On page 15 of the Rule, under F.(1).(g), and then
7 it's got (ii), here you look at going and stabilizing
8 vegetation areas that are just, I guess, in some type of an
9 interim state where the -- it's not completely filled up
10 yet, but that area of it is not being used.

11 Is there some -- I guess I'm wondering what the
12 rationale is for some type of vegetation on that when you
13 might come back in the next month and start putting waste
14 in that area again -- I can see that happening -- and then
15 it seems like it's just a waste of money for the operator
16 to have to try to establish some vegetation which could
17 take quite a long time to establish, and then to come right
18 back in and put some waste right on top of that. Is that
19 -- What's the rational for that?

20 A. Commissioner Olson, the rational concern started
21 with the no size specification on a landfill cell. And Mr.
22 Brooks corrected me that the size specification for
23 landfill cells would be 500 acre. And the concern that the
24 engineers had in our Bureau were, landfill designs will
25 come with an elevation depth, the final -- when they reach

1 that elevation they stop.

2 Because there is not size limitation on cells, an
3 operator could effectively fill over here, go back over
4 here, for eternity until that -- not eternity but
5 throughout the active life of that landfill, without ever
6 bringing it up to the waste -- final waste elevation for
7 capping and covering.

8 So we did not want to give them the incentive to
9 perhaps start that practice of coming up to within a
10 certain footage of their waste elevation, moving on to
11 another area and forgetting about it. And again, we
12 recommend that intermediate cover, a thicker daily cover --
13 thicker than a daily cover, to minimize any type of
14 precipitation that might fall and to act similarly as any
15 type of cover would for dust, odor, nuisance, et cetera.

16 So I think the primary motivation for me in
17 looking at this was getting the operators to be efficient
18 in their operations when they're working on that active
19 face, they're efficient at bringing it up to the desired
20 elevation and preparing it for top cover and not moving off
21 to another acre and forgetting about it.

22 That's kind of the primary rationale for that.

23 Q. I guess I can see that if it's going to be some
24 period of time, but I guess in practicality it could also
25 be a short period of time as well, and it would seem kind

1 of a waste of money to have to kind of vegetate something
2 that is going to be just covered again, and --

3 A. And we do entertain alternative covers. We will
4 accept, you know, if they want to propose a different type
5 of intermediate cover. I would agree that having to re-
6 vegetate is a burden, but how else do you re-stabilize a
7 one-foot lift of soil that's going to remain there -- could
8 remain there for two, three years in their active life
9 operation?

10 A. Okay. Let me just make sure I had something
11 clear, I think this is what you had testified about. The
12 system you have in here for the leak detection system with
13 the compacted soil, two-feet of compacted soil, is not the
14 primary mechanism. I guess an operator or a person could
15 always use some type of geotextile fabric or something like
16 that, that could be used for the leak detection system
17 instead of a two-foot clay system; is that correct?

18 A. That's correct.

19 Q. Okay.

20 A. And it would be six inches rather than two foot.

21 Q. Okay. So is this, then, I guess your preferred
22 method? That's why I was wondering why it was listed this
23 way. Is that -- instead of as an option. Is this your
24 preferred method for a leak-detection system?

25 A. Our prescriptive method as described, the two-

1 foot -- preferred for a leak detection system?

2 Q. Yeah, for that layer of the leak detection
3 system, the compacted soils, is that your preferred method
4 over some type of geotextile fabric that could convey
5 fluids as well?

6 A. And the answer is yes because of the structural
7 stability. It thwarts the base of the -- you know, the
8 base of the landfill design and the integrity and structure
9 of it.

10 You need to remember that whenever we start
11 putting geotextiles against each other they have friction
12 angles and they have a tendency to slide past one another.
13 So in some cases, especially at the bottom of the landfill,
14 it would not be preferred to have more geotextiles as
15 opposed to our prescriptive design. However, we would have
16 to look at the specific type and kind of geotextiles that
17 they're putting over one another down there, before we can
18 say this would be preferred.

19 I agree with you that when you look at that, it
20 seems that that's the most efficient method, and it could
21 be the most -- more efficient than our two-foot sand, the
22 stability we get. However, there are friction angles on
23 those liners and liner-to-liner contacts that could
24 compromise the integrity of that leak detection system. So
25 what I'm going to say is that our prescriptive remedy is

1 the desired, an owner/operator can propose a geotextile-
2 type drainage system, but we'd be looking very closely at
3 the type of liners that they're using and what those
4 engineering designs will allow for on angles and contact to
5 contact, making sure that they're not going to breach,
6 create a problem.

7 Q. Okay. And then I think I just have one more
8 question.

9 On page 23 -- and this is now coming through to
10 the lined ponds versus the landfills. I think you
11 testified that you didn't want to have drainage from sumps
12 that were penetrating the liner system on the landfill, and
13 I'm looking now at I -- it's page 23, I guess, it's
14 I.(2).(i), and it looks like about the last sentence or
15 second to the last sentence where it talks about a -- for a
16 lined pond, having a solid drainage pipe conveying
17 collected fluids to a sump that's outside the perimeter.
18 And I'm assuming that should be -- it says landfill, but
19 I'm assuming that should be outside the perimeter of the
20 pond, I'm assuming. This is about having lined facilities.
21 That might be a typo there.

22 I guess -- is this --

23 A. Is this the last sentence under (i), The piping
24 collection network shall be comprised of solid and
25 perforated pipe having a minimum diameter of four inches, a

1 minimum wall thickness schedule 80. A solid drainage pipe
2 shall be sealed to convey any collected fluids to a
3 corrosion-proof sump... Is that where you're at?

4 Q. Yeah, I'm looking at that sentence that says a
5 solid drainage pipe, and it says here it's conveying -- to
6 convey fluids to a sump outside -- it says the perimeter of
7 the landfill. I'm assuming it's --

8 A. Yeah.

9 Q. -- it's outside the perimeter of the pond or pit.

10 A. There is a mistake here, because -- sumps are
11 within the perimeter of the landfill, and so I think that
12 -- for observation.

13 MR. VON GONTEN: Section (i), it's not about
14 landfills.

15 THE WITNESS: Okay, yeah, then there's a typo
16 just in this section. I --

17 Q. (By Commissioner Olson) Okay. But then my
18 actual real question, though, is -- because here you have a
19 drainage pipe. Is this a pipe that penetrates the liner,
20 that takes fluid outside the perimeter of the pond?

21 A. Based on our design, we would want a riser pipe
22 to go up above the liner. So if this is indicating -- if
23 this is indicating that it should go through the liner,
24 then there --

25 (Off the record)

1 THE WITNESS: Oh, it should go up the riser pipe
2 and into a collection area, either an evaporation pond --
3 route it to an evaporation pond for storage, treatment or
4 disposal.

5 Q. (By Commissioner Olson) Okay. Well, I think I
6 just had it pointed to me that it's in your -- the
7 Division's corrections where they have eliminated that
8 language and now have made it into the sidewall riser that
9 goes up, so I'll take that question back. It looks like
10 it's already answered.

11 CHAIRMAN FESMIRE: But it still says landfill.

12 COMMISSIONER OLSON: It still says landfill,
13 right.

14 CHAIRMAN FESMIRE: Should that be perimeter of
15 the pond?

16 COMMISSIONER OLSON: Of the pit --

17 THE WITNESS: Perimeter of the landfill, I think,
18 was the original intent there, from my recollection. We're
19 routing the leachate collected up the riser pipe and over
20 into some type of collection, either an evaporation pond --

21 Q. (By Commissioner Olson) Right, but I think this
22 section here, (i), is for requirements for ponds,
23 evaporation ponds. And so it looks like it's just a typo
24 that can be corrected, so --

25 A. Okay.

1 Q. That's the only other question -- Oh, I had
2 actually one more, because -- I don't know if you're really
3 the appropriate one for this.

4 I guess as the closure is going on, this is a
5 pretty intensive effort in the closure, and a lot of
6 activities occur and a lot of expense being occurred by the
7 operator and the closure. Is there a mechanism, then, for
8 -- as they complete elements of the closure for a reduction
9 in the financial assurance, that the remaining financial
10 assurance only covers the activities that are remaining at
11 the site?

12 A. I'd have to defer that to Ed Martin.

13 Q. Okay.

14 A. I'm not familiar with the financial assurance
15 methods --

16 COMMISSIONER OLSON: Okay. Well, I hadn't
17 thought of that when he was up here, so... That's all I
18 have, thanks.

19 EXAMINATION

20 BY CHAIRMAN FESMIRE:

21 Q. Okay, waxing back to one of Commissioner Olson's
22 questions, talking about the intermediate cover, is it one
23 of the purposes of the intermediate cover to encourage the
24 orderly fill and security of the waste in a partially
25 filled facility?

1 A. Well, areas of the landfill which are to remain
2 inactive for extended periods of time, we want to cover
3 those with more soil than is used for the daily cover, in
4 order to reduce the amount of rainfall infiltration into
5 the waste, to minimize odors, scavenging, litter, fire
6 dangers, similar to the daily cover.

7 Q. So --

8 A. But the thicker cover helps to prevent -- you
9 know, if there is rainfall, it will be absorbed in the soil
10 and will be evapotranspired back out, as opposed to
11 continuing to leach in through any waste that may be
12 underneath.

13 Q. Okay. So in the operation of the landfill, is
14 the operator going to be encouraged to concentrate the
15 waste and essentially fill from one end to the other, or
16 are they going to spread it out and build up?

17 A. Depends on how they begin their landfill.
18 They'll start with their construction design. What we've
19 seen is -- from what we've seen in talking to New Mexico
20 Environment Department is, many of these landfills will
21 begin with two to three cells at a time in the construction
22 process.

23 And they will have to know about waste
24 compatibilities for sure -- are wastes compatible or
25 incompatible? -- and in their tracking systems know where

1 to place wastes with, you know, their own management
2 system, on where they're going to place incompatible
3 wastes, compatible wastes.

4 So I don't know, I guess that's something that's
5 up to the operator's waste management procedure on how they
6 work with their working faces and how they stop, how much
7 waste they have coming in.

8 The question there might be, we give them 30 days
9 of being idle before they have to start with the
10 intermediate cover.

11 Q. So the purpose behind the intermediate cover
12 isn't to encourage one or the other, it's just to cover
13 what's out there, right?

14 A. It serves the purpose that I mentioned
15 previously.

16 And also as I've mentioned, it does create
17 another burden for the operator to bring in thicker lifts
18 of soil and re-vegetation, and it does give -- perhaps give
19 them the incentive to continue that working face up as fast
20 as possible and as efficiently as possible until they reach
21 the desired waste depth -- elevation.

22 CHAIRMAN FESMIRE: Mr. Brooks, I have no further
23 questions. I'm assuming you have some redirect?

24 MR. BROOKS: Really just one subject. Since you
25 were so good, Mr. Chairman, as to clear up the change about

1 the corrosion-proof sump, I won't have to go into that.

2 REDIRECT EXAMINATION

3 BY MR. BROOKS:

4 Q. Mr. Hiser asked you about -- on cross, about
5 wouldn't it be better to pre-treat these wastes before
6 putting them into a landfill, and I believe you said
7 something to the effect that it would, if I recall
8 correctly. Is that correct? That it would be a good idea?

9 A. Yes.

10 Q. Now our regulations don't actually require it,
11 they don't require any pre-treatment of hydrocarbon waste
12 before going into a landfill, do they?

13 A. They do not.

14 Q. Okay. Now I asked you on direct about NMED's
15 regulations for municipal waste landfills in that respect,
16 and you said you did not know. Have you had an opportunity
17 to refresh your recollection during the lunch hour?

18 A. Yes.

19 Q. And what is NMED's requirement for --

20 A. NMED, for special -- they consider petroleum
21 contaminated waste special waste. They will only accept it
22 into a municipal solid waste landfill if it is less than
23 1000 milligrams per kilogram.

24 Q. And what measure is that? 1000 milligrams per
25 kilogram of what?

1 A. Of total petroleum hydrocarbon.

2 Q. Now while we don't require pre-treatment, there's
3 nothing in our Rules that would preclude pre-treatment,
4 correct?

5 A. No.

6 Q. And even if the waste could not be reduced to our
7 closure standard for a landfarm for leaving it in place, it
8 could still be reduced and then moved from the landfarm to
9 a landfill, could it not?

10 A. Absolutely.

11 Q. Or reduced in a landfarm and moved out for use
12 somewhere else if they could find a use for it?

13 A. And we would evaluate that.

14 Q. Right. And I don't believe -- Have you had a
15 chance to review Mr. Hiser's -- or the industry committee's
16 proposed amendments to the landfill Rules?

17 A. Yes.

18 Q. And was there anything in their amendments that
19 would have required pre-treatment of hydrocarbon wastes
20 going into a landfill?

21 A. No.

22 MR. BROOKS: Okay, that's all I have.

23 CHAIRMAN FESMIRE: Limited recross on the -- what
24 I count as three subjects that were broached during the
25 redirect?

1 MR. HUFFAKER: No.

2 MR. CARR: No.

3 CHAIRMAN FESMIRE: Okay.

4 MR. HISER: No.

5 CHAIRMAN FESMIRE: Commissioners?

6 COMMISSIONER BAILEY: No.

7 COMMISSIONER OLSON: (Shakes head)

8 CHAIRMAN FESMIRE: Mr. Brooks, I think we're done
9 with this witness.

10 MR. BROOKS: Okay. At this time, Mr. Chairman, I
11 would like to ask about how the Commission would like to
12 handle a matter. It came up during Chief Price's
13 examination yesterday, but there is one issue, and it is an
14 issue on which Mr. Huffaker's client is concerned, where
15 we're making our recommendation to the Commission solely on
16 a matter of law which normally I would cover in my closing
17 statement, but if the Commission would like me to do so
18 before Mr. Huffaker presents his case, I will just state
19 very briefly the reasons -- the legal reason why we
20 recommend that particular change.

21 CHAIRMAN FESMIRE: Okay. Mr. Huffaker -- You're
22 assuming that his witness should hear this, or --

23 MR. BROOKS: No, I was just asking if that would
24 be the pleasure of the Commission. I have no need to do
25 that at this time if the Commission would prefer that it be

1 postponed to the conclusion of the proceeding.

2 CHAIRMAN FESMIRE: On a purely legal argument,
3 not a technical argument?

4 MR. BROOKS: It is a purely legal argument.

5 CHAIRMAN FESMIRE: I would see no reason to
6 address it now.

7 MR. HUFFAKER: I understand from Mr. Brooks the
8 basis of the argument, so I don't need any further
9 understanding --

10 CHAIRMAN FESMIRE: Okay.

11 MR. HUFFAKER: -- at this time.

12 MR. BROOKS: Very good.

13 MR. HUFFAKER: We won't be addressing it in our
14 presentation today --

15 CHAIRMAN FESMIRE: Okay, and I'm assuming you'll
16 be around on the last day to hear the argument and rebut
17 it?

18 MR. HUFFAKER: That is correct.

19 CHAIRMAN FESMIRE: Okay. I don't think there's
20 any reason to go into it.

21 MR. BROOKS: Very good.

22 CHAIRMAN FESMIRE: At this time we're going to
23 take a detour out of the Division's case and into Mr.
24 Huffaker's. So Mr. Huffaker, I'll turn it over to you.
25 Remember, your witness hasn't been sworn.

1 MR. HUFFAKER: I understand.

2 Mr. Chairman, first I'd like to state that I am
3 planning to forego an opening statement, on the
4 understanding that both I and/or my client, Mr. Marsh, will
5 have the opportunity to make a closing statement on, it now
6 appears -- on Saturday the 6th of May.

7 And with that understanding I'd like to call to
8 the stand Mr. I. Keith Gordon.

9 CHAIRMAN FESMIRE: Mr. Gordon, would you take the
10 stand please.

11 MR. BROOKS: We were asked to remind the Chair
12 that this witness has not been sworn.

13 (Thereupon, the witness was sworn.)

14 MR. PRICE: Glenn, take our stuff. Did you get
15 our stuff?

16 I. KEITH GORDON,
17 the witness herein, after having been first duly sworn upon
18 his oath, was examined and testified as follows:

19 DIRECT EXAMINATION

20 BY MR. HUFFAKER:

21 Q. Would you state your name, please?

22 A. My name is Ian Keith Gordon.

23 Q. Mr. Gordon, how are you employed?

24 A. I am president and chief engineer of Gordon
25 Environmental, Inc.

1 Q. Where is Gordon Environmental, Inc., located?

2 A. We are headquartered in Bernalillo.

3 Q. And have you provided to the Commission a copy of
4 your summary of qualifications which is in front of you
5 there as Exhibit C in CRI's exhibits?

6 A. Yes, I have.

7 Q. Without going over your ample qualifications in
8 great detail, could you summarize for the Commission your
9 education, training and experience that you're going to
10 bring to bear for your testimony here today?

11 A. Yes, I have a bachelor of science in civil
12 engineer with a geotechnical specialty from Northwestern
13 University. I have been working on engineering and design
14 of RCRA projects, which weren't RCRA when I started, but
15 since 1977. We have designed -- my firm has designed --
16 and I am the engineer of record for most of the regional
17 landfills in New Mexico, including the only two that have
18 active gas collection systems, the only two active MSW
19 landfills that have active landfill gas control systems in
20 compliance with NSPS.

21 I'm chairman of the facilities working group
22 assisting NMED. We write the solid waste plan and are
23 working with the department on re-writing their landfill
24 regulations currently as well.

25 MR. HUFFAKER: Mr. Chairman, two matters.

1 First, I move the admission of CRI's Exhibit C,
2 Mr. Gordon's qualifications.

3 CHAIRMAN FESMIRE: Any objection?

4 MR. BROOKS: No objection.

5 MR. HUFFAKER: Second, I tender Mr. --

6 CHAIRMAN FESMIRE: Hang on, will you? I'm not
7 quite finished.

8 MR. HUFFAKER: I'm sorry.

9 CHAIRMAN FESMIRE: Mr. Carr?

10 MR. CARR: No objection.

11 MR. HISER: No objection.

12 MR. SUGARMAN: No objection.

13 CHAIRMAN FESMIRE: Okay, Mr. Gordon's résumé and
14 qualifications -- or CV, I guess, and qualifications will
15 be admitted as Exhibit C.

16 MR. HUFFAKER: Thank you, Mr. Chairman.

17 And second, I move -- or I tender Mr. Gordon as
18 an expert in landfill and waste facility design, operations
19 and permitting.

20 CHAIRMAN FESMIRE: Any objection?

21 MR. CARR: No objection.

22 MR. HISER: No objection.

23 MR. BROOKS: No objection.

24 MR. SUGARMAN: No objection, Mr. Chairman.

25 CHAIRMAN FESMIRE: Mr. Gordon is so accepted.

1 let me spell that once, a-c-c-e-p-t-e-d, not the e-x.

2

3 Q. (By Mr. Huffaker) Okay. Mr. Gordon, have you
4 had a chance to review the OCD's draft surface waste
5 management facility Rules?

6 A. Yes, I have.

7 Q. Based on your education, training and experience,
8 do you have an opinion about the surface waste management
9 Rule?

10 A. I think they have -- I think the Division has done
11 an excellent job in identifying and adapting very well
12 established and proven technologies that have been in place
13 for many years at RCRA Subtitle D and Subtitle C
14 facilities.

15 The only exception I have in terms of that
16 opinion is that I believe that the landfill gas management
17 component and landfill gas control component are not
18 applicable to these types of facilities and are not
19 applicable to these types of waste streams.

20 MR. HUFFAKER: All right. Mr. Chairman, with
21 your permission, I'm going to invoke the privilege that Mr.
22 Brooks has invoked with his experts to ask this expert to
23 proceed by narrative so we may save some time.

24 CHAIRMAN FESMIRE: I think that's a fair way to
25 do it.

1 Q. (By Mr. Huffaker) All right. Would you
2 describe, please, to the Commission in your own words the
3 basis for your opinion --

4 A. Yes.

5 Q. -- on the gas management and gas control portions
6 of the draft Rule?

7 A. Yes. My perspective is based on the -- nearly 30
8 years of practical experience, but also the basis for the
9 other regulations that apply to solid waste facilities.

10 In particular, the types of materials that are
11 typically disposed of at MSW or Subtitle D landfill -- MSW
12 meaning municipal solid waste -- has a very high organic
13 component. It's like the trash that most of us throw out
14 at the curb. It includes food waste, a lot of paper and
15 things of that nature.

16 And the true concern with landfill gas is that it
17 is comprised almost entirely of methane and carbon dioxide,
18 two gases in about equal proportions. The methane is
19 potentially explosive if it's allowed to accumulate in
20 confined spaces, within a very prescribed limit of five to
21 15 percent in air, a concentration that makes it explosive.
22 Along with that, there are very minute quantities of trace
23 elements or NMOCs, non-methane organic compounds, that are
24 generated as part of the same process.

25 When we look at the types of waste that are going

1 into the oilfield landfills, they are not subject to
2 decomposition. They are not the types of materials that
3 are going to create the methanes and the related NMOCs. In
4 fact, the oilfield landfill environment would be a very
5 deadly place for the anaerobic bacteria or micro-organisms
6 that create the methane.

7 For methane to be created there has to be
8 moisture present. There has to be an organic feedstock,
9 which is the waste we talked about, the papers and the
10 food. There has to be an absence of air in order to have
11 an anaerobic environment. And there also has to be an
12 absence of poisons that would be lethal or that would
13 inhibit the micro-organisms from doing what they do.

14 So it is a combination of the types of wastes are
15 not going to be producing methane, and thus these
16 facilities should not have the same types of landfill gas
17 regulatory requirements. And quite frankly, any of the
18 monitoring, conventional or control systems that we do use
19 at our landfills -- I mentioned the two in New Mexico that
20 have active systems -- the oilfield wastes would not
21 transmit those gases. They would not be able to move
22 through that landfill environment to pipes, to probes or to
23 other mechanisms for either monitoring or control.

24 So what it boils down to is, while the landfill
25 gas management and control requirements look a lot like the

1 ones for MSW landfills, they don't belong in this set of
2 regulations.

3 Q. Do you have an opinion, based on your education,
4 training and experience, of what approximate volume of
5 organic waste subject to decomposition into methane waste
6 is contained in the ordinary waste stream for a municipal
7 solid waste landfill?

8 A. It would typically be in excess of 75 percent of
9 the total waste stream.

10 Q. And what would be the similar percentage of that
11 type of waste that you would expect to see in an oilfield
12 waste stream?

13 A. It is definitely less than five percent, and may
14 even be less than one percent.

15 Q. Do you have a recommendation to the Commission
16 with respect to the gas management plan and gas management
17 control system portions of the draft surface waste
18 management Rule?

19 A. Well, there is an element in the NMED 20, NMAC
20 9.1 Solid Waste Regulations that calls for implementation
21 of controls if there's evidence of migration. And I don't
22 think there would ever be evidence of migration at these
23 facilities, but that would be more appropriate than
24 applying what is essentially the whole array of US EPA
25 Title 5 and NSPS requirements, which are essentially for

1 mandatory landfill gas control.

2 Q. Are you familiar with the EMCON study that Mr.
3 Chavez referred to in his testimony, or his cross-
4 examination?

5 A. Yes, I was vice president with EMCON at one time.

6 Q. And Mr. Chavez relied on that study for the
7 statement that all landfills containing organic
8 decomposable materials will generate gas. Do you remember
9 seeing that on the slide that was projected up here?

10 A. Yeah, and I remember seeing it in the study as
11 well, yes.

12 Q. Do you agree with that statement as a basis for
13 gas management planning and potential gas control systems
14 in an oilfield solid waste facility?

15 A. Well, I think the key word there is
16 "decomposable", and I really think what they were trying to
17 do is, there's a lot of discussion right now about
18 construction and demolition debris landfills that can
19 potentially produce gas because they have yard waste and
20 things like that, leaves and trimmings and so on and so
21 forth, and the statement they're really making here is
22 about MSW landfills, and the key word is "decomposable".

23 Q. And why would you -- explain to the Commission
24 why you would suggest that the word "decomposable" isn't
25 application in --

1 A. Because the types of wastes that will be disposed
2 of in the oilfield landfills are not of the decomposable
3 definition that EMCON is using in that particular context.
4 And in fact, I believe that many of the constituents in the
5 oilfield wastes would be detrimental to the anaerobic
6 micro-organisms. Things like hydrogen sulfide and salts
7 would not create an environment where those micro-organisms
8 could either thrive or even survive.

9 Q. Did you hear Mr. Chavez confirm also that he was
10 relying for his selection of the gas management
11 recommendation on EPA documents, specifically those
12 contained at 40 CFR part Cc and 40 CFR part WWW?

13 A. Yes.

14 Q. Are you familiar with those documents?

15 A. Very.

16 Q. Are they contained in Controlled Recovery Exhibit
17 M that's before the Commission?

18 A. Yes.

19 Q. What do they tell you, Mr. Gordon, about the
20 potential for gas problems in oilfield waste landfills?

21 A. One thing that's very significant is that the
22 first thing you do as an MSW landfill, as part of your
23 compliance with the air quality requirements under US EPA
24 or the New Mexico Air Quality Bureau, is to evaluate your
25 potential emissions. And the very first step in that

1 process is to look at the capacity of your landfill and
2 then subtract out all of those things that are not readily
3 subject to decomposition.

4 So you take out soils, you take out pipe, you
5 take out muds, you take out anything that was not going to
6 decompose in the landfill environment. And if we did that
7 for an oilfield site, we would end up with less than one --
8 or less than five percent, or conceivably one percent, of
9 the volume available.

10 The second thing that you do for an MSW landfill
11 is evaluate your total capacity, and you trigger at 2.5
12 million megagrams, which equates to about 3.2 million cubic
13 yards of material of waste. That does not include any of
14 the cover material or so on. And there are only two
15 facilities in New Mexico that have triggered those, and
16 those are the largest landfills, one serving the City of
17 Albuquerque, and the one in Sunland Park serving El Paso,
18 Texas. And they take over 2000 tons per day of municipal
19 solid waste in order to qualify to be subject to those
20 regulations.

21 Q. And are you aware of the potential for any OCD-
22 permitted landfills to even approach those levels of waste
23 acceptance?

24 A. Not even in the same orders of magnitude.

25 MR. HUFFAKER: I move the admission of CRI's

1 Exhibit M.

2 MR. BROOKS: No objection.

3 CHAIRMAN FESMIRE: Mr. Carr?

4 MR. CARR: No objection.

5 MR. SUGARMAN: No objection.

6 MR. HISER: No objection.

7 CHAIRMAN FESMIRE: CRI Exhibit M will be
8 admitted. There are two parts here. Both parts?

9 MR. HUFFAKER: Yes, number 1 and 2.

10 CHAIRMAN FESMIRE: CRI Exhibits M1 and M2 are
11 admitted.

12 Q. (By Mr. Huffaker) Would it be a fair summary of
13 your testimony, Mr. Gordon, that the gas management
14 planning and the potential for gas control systems
15 contained in the draft rules address a problem that doesn't
16 exist?

17 A. Yes.

18 Q. Let me ask you a question about permitting of
19 solid waste facilities under the NMED solid waste regime.
20 You are familiar with that regime as you have testified,
21 correct?

22 A. I certainly am.

23 Q. And you have been involved in obtaining solid
24 waste facility permits under the NMED regs, correct?

25 A. Very many, yes.

1 Q. Can you describe to the Commission approximately
2 how long it takes to navigate the permitting process at
3 NMED for a solid waste landfill from start to finish?

4 A. They have recently tried to develop and adhere to
5 a timetable that places it at something just over a year,
6 but my experience is that it's typically in excess of 18
7 months or even two years.

8 MR. HUFFAKER: I pass the witness.

9 CHAIRMAN FESMIRE: Mr. Carr?

10 MR. CARR: No questions.

11 CHAIRMAN FESMIRE: Mr. Hiser?

12 MR. HISER: No questions.

13 MR. SUGARMAN: We have no questions, Mr.

14 Chairman.

15 CHAIRMAN FESMIRE: Mr. Brooks?

16 MR. BROOKS: A couple of questions.

17 CROSS-EXAMINATION

18 BY MR. BROOKS:

19 Q. I'm sorry, I didn't get your name.

20 A. It's Keith Gordon.

21 Q. Mr. Gordon, that's what I thought, but I didn't
22 want to call you that if it was something else.

23 (Laughter)

24 Q. Mr. Gordon, you were here and heard Mr. Chavez's
25 testimony, correct?

1 A. I heard his cross-examination.

2 Q. Okay.

3 A. I didn't hear his testimony.

4 Q. In his primary testimony, I believe it -- excuse
5 me. In his primary testimony it was brought out that the
6 gas control systems concerning which he testified would
7 only be required under this Rule if the gas safety
8 management plan, which was filed by the applicant in the
9 application, called for such a control system or if there
10 were some other applicable regulatory requirement that
11 required a control system.

12 Are you aware of that, that that's part of --
13 that that's what this Rule provides?

14 A. That's what I understand, yes.

15 Q. So that actually, to the extent that you're
16 correct about the projected operations of the landfill that
17 was established under this Rule, and to the extent that
18 other applicable regulatory requirements do not require a
19 gas control system, this Rule doesn't require anything more
20 than the applicant file an application that includes --
21 that addresses this issue and provides a technical
22 justification for not having such a control plan. Would
23 that be a correct summary of the Rule?

24 A. What I struggled with is, I wasn't sure how they
25 were going to administer that. What was the policy going

1 to be? If they made facilities submit landfill gas
2 management plans that I'm familiar with, that's a pretty
3 onerous undertaking and not applicable to these types of
4 facilities. If it was a paragraph, I don't think I'd have
5 a problem with it.

6 Q. And the Rule itself doesn't have any significant
7 specifications as to the gas management plan -- it doesn't
8 have any significant specifications. It does describe it
9 somewhat, but I believe -- let's see, that was in paragraph
10 A- -- paragraph C.(1) --

11 MR. HUFFAKER: May I approach the witness?

12 Q. (By Mr. Brooks) -- C.(1).(m) --

13 CHAIRMAN FESMIRE: You may, sir.

14 Q. (By Mr. Brooks) -- on page 8. C.(1).(m) on page
15 8. And I believe I was right the first time, it doesn't
16 really tell you anything about --

17 A. It just sends you to a different location.

18 Q. Right.

19 A. Yes, sir.

20 Q. Now Mr. Gordon, the solid waste landfills, as Mr.
21 Chavez testified in his cross-examination, would not be
22 allowed to accept non-treated hydrocarbon waste, correct?

23 A. Unless it was already at a level below 1000
24 TPH --

25 Q. Right.

1 A. -- yes, sir.

2 Q. Now, untreated hydrocarbon waste contains --
3 tends to contain a fairly significant amount of volatile
4 material, does it not?

5 A. It varies.

6 Q. But it may contain a fairly --

7 A. It may.

8 Q. -- significant amount of volatile material?

9 And one of the objects of treatment -- at least
10 that was testimony that's come in heretofore in the record
11 -- one of the objects of the treatment is to allow those
12 volatile materials to offgas?

13 A. Yes, sir.

14 Q. They evaporate?

15 A. Yes, sir.

16 Q. Would that process not go on in the landfill if
17 you put untreated hydrocarbon material into the landfill?

18 A. A variety of processes would take place,
19 depending upon whether it was an aerobic or anaerobic
20 environment.

21 Q. Would the evaporation of the volatile components
22 of hydrocarbon possibly create some gas concerns?

23 A. I think it's very unlikely.

24 Q. But you couldn't rule it out?

25 A. No.

1 Q. Okay. You had said something about the salts in
2 the hydrocarbon waste would tend to -- would be toxic to
3 the microbes that produce these gases?

4 A. Yes, they could be, particularly if they caused
5 an acidic environment.

6 Q. And what level of salts would be necessary to --
7 or would tend to cause that situation?

8 A. I haven't found any literature that has studied
9 that phenomenon. But it's the creation of the acids --
10 there has to be liquid to have an anaerobic environment,
11 therefore you now have liquid, and you've got chlorides,
12 and you could get hydrochloric acid and you could get
13 sulfuric acid.

14 Q. But you're not aware of any studies that would
15 tell us at what level that might occur?

16 A. No.

17 MR. BROOKS: I believe that's all my questions.

18 CHAIRMAN FESMIRE: Commissioner Bailey?

19 EXAMINATION

20 BY COMMISSIONER BAILEY:

21 Q. You spoke of methane as not being generated here.
22 What other gases are potentially possible?

23 A. Well, there's a whole family of non-methane
24 organic compounds, and again they're typically present in
25 very minute quantities, even in MSW landfills. I would

1 assume that the oilfield wastes would be -- that would be
2 potential -- the potential for minute quantities of gases,
3 depending upon their source and the characteristics of that
4 waste.

5 Q. So carbon dioxide, is that a potential release
6 from --

7 A. I don't think that oilfield waste would be
8 generating a lot of carbon dioxide. In fact, I don't --
9 I'm not sure they'd be generating a lot of other types of
10 gases.

11 Q. Hydrogen sulfide would not be --

12 A. No, that's --

13 Q. -- potential?

14 A. That is true, yes.

15 Q. And would hydrogen sulfide -- I believe the Rule
16 talks about a plan for management under the H₂S rule --

17 A. Uh-huh.

18 Q. -- but that doesn't preclude comments about gas
19 safety under this Rule for H₂S too, does it?

20 A. No, it doesn't preclude it.

21 Q. So this gas safety management plan should go hand
22 in hand with the H₂S rule, right?

23 A. Again, it -- what I felt, it was the wholesale
24 importation of a section of solid waste rules into the OCD
25 Rules that didn't really belong there. So without some

1 clarification as to what the expectation is on OCD's part
2 as to the contents and the magnitude of the plan, it's
3 really hard to comment.

4 If they were comfortable with, as I said, a
5 paragraph or a page that identified the types of waste and
6 those wastes not generating gases, and that was sufficient,
7 then I probably wouldn't have a problem with it.

8 But if they made these facilities adhere to the
9 types of landfill gas management plans that I'm used to,
10 that would be a burden.

11 Q. And so you're testifying that H₂S is the only gas
12 that we need to be concerned with?

13 A. No.

14 Q. So what is another kind of gas that we should be
15 concerned with here?

16 A. I would have to look at the types of waste that
17 were specific to that disposal facilities. I would look at
18 the characterization of that material, and then from that
19 determine the types of gases that might be produced.

20 Q. But if H₂S is not the only type of gas we should
21 be concerned with, then these other gases should fall under
22 this gas safety management plan, right?

23 A. Yes.

24 COMMISSIONER BAILEY: That's all I have.

25 CHAIRMAN FESMIRE: Commissioner Olson?

1 COMMISSIONER OLSON: I have no questions.

2 (Laughter)

3 EXAMINATION

4 BY CHAIRMAN FESMIRE:

5 Q. Mr. Gordon, while I've got you here under oath,
6 how the hell do you keep up with the continuing education
7 requirements for 25 state engineering licenses?

8 A. It is onerous.

9 Q. My questions are again along the same lines. In
10 the -- You've had a chance to review the proposed design
11 requirements for the landfills that OCD is proposing here,
12 haven't you?

13 A. Of course.

14 Q. Will that create -- with the leachate collection
15 system and the leak detection systems, will that create an
16 anaerobic environment? Will there be sufficient hydraulic
17 head on those two systems to prevent the introduction of
18 air into the system eventually?

19 A. That's an interesting question. I had assumed
20 that it would eventually go anaerobic with final cover on
21 it. And I also am curious about whether there's sufficient
22 moisture to even consider methane production in that
23 environment, and the inability of the moisture in the gases
24 and the microbes to move around in an environment that
25 consists primarily of soils and muds and pipe and things

1 like that.

2 Q. My concern would be the volatilization. I think
3 it was addressed to a certain extent by Mr. Brooks, but I
4 think you stated between five and -- if I'm misquoting you,
5 correct me, but five and maybe 20 percent of this waste
6 will be material that has the potential to volatilize some
7 sort of hydrocarbon gas?

8 A. Well, I think we were talking about anywhere
9 between -- or less than five or even less than one percent
10 of the material in the oilfield landfill being subject to
11 decomposition such that it would make methane.

12 Q. Okay, so it's a completely -- See, I'm not so
13 much worried about the decomposition as the volatilization
14 of the gases in the wastes in the landfill and the
15 potential that that would have to accumulate under the
16 cover.

17 A. And one -- an easy solution that we use in the
18 MSW field would be to sample the leachate collection risers
19 for gas on a quarterly basis. And if you ever started to
20 see anything that looked like an accumulation, then that
21 might be cause for additional monitoring.

22 Q. Would you recommend that that be part of the gas
23 plan that is submitted with the design?

24 A. I would think that ought to be evaluated on a
25 case-by-case basis, and so much of it depends upon the

1 waste stream.

2 CHAIRMAN FESMIRE: I have no further questions.

3 Mr. Huffaker, would you have --

4 MR. HUFFAKER: Back to me?

5 CHAIRMAN FESMIRE: -- redirect?

6 REDIRECT EXAMINATION

7 BY MR. HUFFAKER:

8 Q. You're not proposing any changes in the
9 provisions in the draft rules concerning hydrogen sulfide,
10 are you?

11 A. No.

12 Q. And as far as the issue of volatilization of
13 organics contained in oilfield waste, when in the life of
14 the generation and disposal of that waste does that
15 volatilization occur?

16 A. Before its disposal, in most cases.

17 MR. HUFFAKER: I have nothing further.

18 CHAIRMAN FESMIRE: Any recross- -- since there
19 wasn't much in the first place, any recross on those
20 subjects, Mr. Brooks?

21 MR. BROOKS: Well, I have one question on the
22 subject of volatilization.

23 RECROSS-EXAMINATION

24 BY MR. BROOKS:

25 Q. Is that not one of the reasons why municipal

1 waste landfills are required to pre-treat hydrocarbon
2 waste, concern about volatilization?

3 A. I think it would be that and the compatibility of
4 that type of waste with the other MSW.

5 MR. BROOKS: Thank you, that's all I have.

6 CHAIRMAN FESMIRE: Mr. Huffaker --

7 MR. HUFFAKER: No, sir.

8 CHAIRMAN FESMIRE: -- I don't believe we have
9 anything else for this witness.

10 MR. HUFFAKER: I do not.

11 CHAIRMAN FESMIRE: Okay. Thank you very much,
12 Mr. Gordon.

13 MR. GORDON: Thank you.

14 CHAIRMAN FESMIRE: We've got an option. Dr.
15 Neeper, we have an hour or more that we can either go home
16 and enjoy a Friday afternoon, or we can get started into
17 your case. How long is your case going to take?

18 DR. NEEPER: I had registered for two and half
19 hours. Given what's been going on, it's likely to be a
20 little longer than that. And since we had agreed that I
21 was on for next Friday or whenever, I didn't even bring the
22 slides.

23 CHAIRMAN FESMIRE: Okay, so that forecloses that
24 option.

25 If I don't hear an objection from counsel, then,

1 I think we will adjourn today and reconvene on Thursday,
2 the 4th of May, in this room at eight o'clock a.m. in the
3 morning.

4 We're adjourned today -- Oh, wait a minute,
5 before we adjourn I do need to give any member of the
6 public the option of making a statement on the record
7 today. Is there anybody that would like to do that?

8 MR. MARLEY: Can I ask a question?

9 CHAIRMAN FESMIRE: Surely, sir.

10 MR. MARLEY: Two questions?

11 CHAIRMAN FESMIRE: Surely, on the record.

12 MR. MARLEY: One about the air conditioning?

13 (Laughter)

14 CHAIRMAN FESMIRE: State your question.

15 (Laughter)

16 MR. MARLEY: You fill in the blank.

17 Two, those of us that have to come considerable
18 mileage, can we convene at 9:00 in the morning on Thursday?

19 CHAIRMAN FESMIRE: We get an awful lot done that
20 first hour.

21 MR. BROOKS: There's a concern, I would think --
22 Mr. Chairman, I would -- despite what I said to you in jest
23 yesterday afternoon, I would really rather convene at 8:00,
24 simply because I have some concern about whether three days
25 is actually going to be enough for us to get through with

1 this proceeding, the way it's been going.

2 CHAIRMAN FESMIRE: I share that concern.

3 Is there any objection from other counsel about
4 eight o'clock in the morning?

5 Okay, with that we will adjourn this cause, to
6 reconvene at eight o'clock in the morning on Thursday, May
7 4th. Thank you all very much.

8 (Thereupon, evening recess was taken at 3:15
9 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 May 1st, 2006.



STEVEN T. BRENNER
 CCR No. 7

My commission expires: October 16th, 2006