

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 ) CASE NO. 14,015  
CONSERVATION DIVISION FOR REPEAL OF )  
EXISTING RULE 50 CONCERNING PITS AND )  
BELOW GRADE TANKS AND ADOPTION OF A )  
NEW RULE GOVERNING PITS, BELOW GRADE )  
TANKS, CLOSED LOOP SYSTEMS AND OTHER )  
ALTERNATIVE METHODS TO THE FOREGOING, )  
AND AMENDING OTHER RULES TO MAKE )  
CONFORMING CHANGES; STATEWIDE )  
)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

COMMISSION HEARING

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

Volume X - November 16th, 2007

Santa Fe, New Mexico

RECEIVED  
2009 JAN 22 PM 5 12

This matter came on for hearing before the Oil Conservation Commission, MARK E. FESMIRE, Chairman, on Friday, November 16th, 2007, 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.

\* \* \*

## C U M U L A T I V E    I N D E X

Monday, October 22nd, 2007 (Volume I)  
 Commission Hearing  
 CASE NO. 14,015

## PAGE

## OPENING STATEMENTS:

By Mr. Brooks	13
By Mr. Jantz	27
By Ms. Belin	30

\* \* \*

Monday, November 5th, 2007 (Volume II)  
 Commission Hearing  
 CASE NO. 14,015

EXHIBITS	42
----------	----

APPEARANCES	43
-------------	----

## DIVISION WITNESSES:

<u>GLENN VON GONTEN</u> (Senior Hydrologist, Environmental Bureau, NMOCD) Direct Examination by Mr. Brooks	54
--	----

<u>WAYNE PRICE</u> (Environmental Bureau Chief, NMOCD) Direct Examination by Mr. Brooks	58
--	----

## PUBLIC COMMENTS:

<u>HON. PAUL BANDY</u> (New Mexico State Legislature, District 3: Aztec, Bloomfield, Blanco) Direct Testimony	111
---	-----

<u>HON. JAMES STRICKLER</u> (New Mexico State Legislature, District 2: Farmington and rural San Juan County) Direct Testimony	118
Examination by Commissioner Bailey	124

(Continued...)

## PUBLIC COMMENTS (Continued):

<u>HON. CANDY SPENCE EZZELL</u> (New Mexico State Legislature, District 58, southern Chaves County)	
Direct Testimony	126
Examination by Chairman Fesmire	129
<u>HON. DAN FOLEY</u> (Republican Whip, New Mexico House of Representatives)	
Direct Testimony	130
<u>DANA MCGARRH</u> (small business owner, Farmington, New Mexico)	
Unsworn Position Statement	145
<u>MIKE EISENFELD</u> (San Juan Citizens Alliance)	
Direct Testimony	150
Cross-Examination by Ms. Foster	152
<u>DEENA ARCHULETA</u> (Wilderness Society)	
Unsworn Position Statement	157
<u>JOHNNY MICOU</u> (Drilling Santa Fe)	
Unsworn Position Statement	160
<u>OSCAR SIMPSON</u> (New Mexico Wildlife Federation, National Wildlife Federation)	
Unsworn Position Statement	162

## DIVISION WITNESSES (Resumed):

<u>WAYNE PRICE</u> (Environmental Bureau Chief, NMOCD)	
Direct Examination (Resumed) by Mr. Brooks	165
<u>GLENN VON GONTEN</u> (Senior Hydrologist, Environmental Bureau, NMOCD)	
Direct Examination (Resumed) by Mr. Brooks	176
<u>WAYNE PRICE</u> (Environmental Bureau Chief, NMOCD)	
Direct Examination (Resumed) by Mr. Brooks	204
<u>WAYNE PRICE</u> (Environmental Bureau Chief, NMOCD) and <u>GLENN VON GONTEN</u> (Senior Hydrologist, Environmental Bureau, NMOCD) (Resumed)	
Cross-Examination by Mr. Carr	207
Cross-Examination by Mr. Hiser	227
Cross-Examination by Ms. Foster	248

(Continued...)

## PUBLIC COMMENTS:

<u>BILL HAWKINS</u> (BP America Production Company) Unsworn Position Statement	288
---	-----

REPORTER'S CERTIFICATE	290
------------------------	-----

\* \* \*

Tuesday, November 6th, 2007 (Volume III)  
Commission Hearing  
CASE NO. 14,015

EXHIBITS	296
----------	-----

APPEARANCES	297
-------------	-----

## MOTIONS:

To compel (by IPANM)	302
----------------------	-----

For alternative dispute resolution (by IPANM)	309
---	-----

To strike IPANM's prehearing statement, witnesses and exhibits (by OCD)	312
--	-----

## DIVISION WITNESSES (Continued):

WAYNE PRICE (Environmental Bureau Chief, NMOCD) and  
GLENN VON GONTEN (Senior Hydrologist, Environmental  
Bureau, NMOCD) (Resumed)

Examination by Ms. Belin	321
Examination by Mr. Jantz	324
Examination by Commissioner Bailey	328
Examination by Commissioner Olson	346
Examination by Chairman Fesmire	356
Further Examination by Commissioner Bailey	362
Further Examination by Chairman Fesmire	363
Further Examination by Commissioner Olson	363
Redirect Examination by Mr. Brooks	365
Recross Examination by Mr. Hiser	370

(Continued...)



## DIVISION WITNESSES (Continued):

WAYNE PRICE (Environmental Bureau Chief, NMOCD)  
(Resumed)

Direct Examination by Mr. Brooks	373
Cross-Examination by Ms. Foster	400
Cross-Examination by Mr. Hiser	404
Examination by Ms. Belin	416
Examination by Commissioner Bailey	417
Examination by Commissioner Olson	419
Examination by Chairman Fesmire	419

GLENN VON GONTEN (Senior Hydrologist,  
Environmental Bureau, NMOCD) (Resumed)

Direct Examination by Mr. Brooks	421
Voir Dire Examination by Ms. Foster	425
Direct Examination (Resumed) by Mr. Brooks	427
Cross-Examination by Mr. Carr	527

REPORTER'S CERTIFICATE	538
------------------------	-----

\* \* \*

Wednesday, November 7th, 2007 (Volume IV)  
Commission Hearing  
CASE NO. 14,015

EXHIBITS	546
----------	-----

APPEARANCES	548
-------------	-----

## DIVISION WITNESSES (Continued):

GLENN VON GONTEN (Senior Hydrologist,  
Environmental Bureau, NMOCD) (Resumed)

Cross-Examination by Ms. Foster	568
Cross-Examination by Mr. Hiser	625
Examination by Mr. Frederick	653
Examination by Commissioner Bailey	656
Examination by Commissioner Olson	663

(Continued...)

## DIVISION WITNESSES (Continued):

<u>EDWARD J. HANSEN</u> (Hydrologist, Environmental Bureau, NMOCD)	
Direct Examination by Mr. Brooks	675
<u>GLENN VON GONTEN</u> (Senior Hydrologist, Environmental Bureau, NMOCD) (Resumed)	
Examination by Chairman Fesmire	689
Redirect Examination by Mr. Brooks	700
Examination (Continued) by Chairman Fesmire	706
Further Examination by Mr. Carr	709
Further Examination by Ms. Foster	714
Further Examination by Mr. Hiser	720
Further Examination by Mr. Frederick	721
Further Examination by Commissioner Olson	722
<u>EDWARD J. HANSEN</u> (Hydrologist, Environmental Bureau, NMOCD) (Resumed)	
Direct Examination (Resumed) by Mr. Brooks	729
Cross-Examination by Mr. Hiser	765
Cross-Examination by Ms. Foster	771
Examination by Mr. Frederick	777
Examination by Dr. Nepper	783
Examination by Commissioner Bailey	786
Examination by Commissioner Olson	793
Examination by Chairman Fesmire	799
Redirect Examination by Mr. Brooks	802
Recross-Examination by Ms. Foster	806
Recross-Examination by Mr. Hiser	807
Further Examination by Mr. Frederick	812

REPORTER'S CERTIFICATE	816
------------------------	-----

\* \* \*

(Continued...)

Thursday, November 8th, 2007 (Volume V)  
 Commission Hearing  
 CASE NO. 14,015

EXHIBITS 824

APPEARANCES 826

DIVISION WITNESSES (Continued):

BRAD JONES (Environmental Bureau, NMOCD)  
 Direct Examination by Mr. Brooks 830

PUBLIC COMMENTS:

KEITH JOHNSON (City Manager, City of Bloomfield;  
 County Commissioner, San Juan County; task force  
 member)  
 Direct Testimony 1049  
 Examination by Commissioner Bailey 1055  
 Examination by Commissioner Olson 1056  
 Examination by Chairman Fesmire 1056

REPORTER'S CERTIFICATE 1060

\* \* \*

Friday, November 9th, 2007 (Volume VI)  
 Commission Hearing  
 CASE NO. 14,015

EXHIBITS 1070

APPEARANCES 1072

DIVISION WITNESSES (Continued):

BRAD JONES (Environmental Bureau, NMOCD)  
 Direct Examination (Continued)  
 by Mr. Brooks 1076

(Continued...)

## PUBLIC COMMENTS:

JOHNNY MICOU (Drilling Santa Fe)  
Unsworn Position Statement 1162

ZANE GALLOWAY (President, ORE Systems,  
San Juan County, New Mexico)  
Direct Testimony 1163  
Examination by Mr. Brooks 1167  
Examination by Ms. Foster 1168  
Examination by Mr. Baizel 1169  
Examination by Chairman Fesmire 1171

IRVIN BOYD (Lea County)  
Unsworn Position Statement 1178

## OPENING STATEMENT:

By Mr. Carr 1181

## INDUSTRY WITNESSES:

DANIEL B. STEPHENS (Hydrogeologist)  
Direct Examination by Mr. Carr 1183  
Cross-Examination by Mr. Brooks 1216  
Cross-Examination by Mr. Frederick 1268

## PUBLIC COMMENTS:

IRVIN BOYD (Lea County)  
Unsworn Position Statement 1303

JOHN OBERLY (In-Line Plastics)  
Direct Testimony 1312  
Examination by Mr. Brooks 1316  
Examination by Ms. Foster 1317  
Examination by Chairman Fesmire 1320

(Continued...)

## INDUSTRY WITNESSES (Resumed):

DANIEL B. STEPHENS (Hydrogeologist)

Examination by Dr. Neeper	1322
Examination by Commissioner Bailey	1338
Examination by Commissioner Olson	1343
Examination by Chairman Fesmire	1363
Redirect Examination by Mr. Hiser	1374
Recross-Examination by Mr. Frederick	1383
Recross-Examination by Mr. Brooks	1384
Further Examination by Commissioner Olson	1390

REPORTER'S CERTIFICATE	1395
------------------------	------

\* \* \*

Tuesday, November 13th, 2007 (Volume VII)  
 Commission Hearing  
 CASE NO. 14,015

EXHIBITS	1407
----------	------

APPEARANCES	1409
-------------	------

## OGAP WITNESSES:

THEO COLBORN (Environmental Health Analyst)

Direct Examination by Mr. Jantz	1415
Cross-Examination by Mr. Hiser	1432
Cross-Examination by Mr. Carr	1450
Cross-Examination by Ms. Foster	1452
Examination by Dr. Neeper	1470
Redirect Examination by Mr. Jantz	1471
Recross-Examination by Mr. Hiser	1475
Recross-Examination by Ms. Foster	1477
Examination by Commissioner Olson	1479
Examination by Chairman Fesmire	1480
Further Examination by Mr. Jantz	1485

MARY ELLEN DENOMY (Oil and Gas Accountant)

Direct Examination by Mr. Jantz	1487
Voir Dire Examination by Ms. Foster	1489
Direct Examination (Resumed) by Mr. Jantz	1491
Cross-Examination by Mr. Carr	1508
Cross-Examination by Ms. Foster	1526

(Continued...)

## PUBLIC COMMENTS:

<u>TWEETIE BLANCETT</u> (Blancett Ranches, San Juan County)	
Direct Testimony	1537
<u>AMY TREMPER</u> (Galisteo Basin)	
Unsworn Position Statement	1539
<u>ANN MURRAY</u> (Village of Cerrillos)	
Unsworn Position Statement	1541
<u>STEVE SUGARMAN</u> (Galisteo Basin)	
Unsworn Position Statement	1542
Transcript of various voices on CD-ROM presented by Tweetie Blancett	1544
<u>TWEETIE BLANCETT</u> (Blancett Ranches, San Juan County)	
Direct Testimony (Resumed)	1549
Examination by Commissioner Bailey	1549
Examination by Commissioner Olson	1550
<u>DAVID BACON</u>	
Unsworn Position Statement	1551

## OGAP WITNESSES (Resumed):

<u>MARY ELLEN DENOMY</u> (Oil and Gas Accountant) (Resumed)	
Cross-Examination by Ms. Foster	1554
Examination by Dr. Neeper	1579
Examination by Commissioner Bailey	1581
Examination by Chairman Fesmire	1583
Redirect Examination by Mr. Jantz	1596
Recross-Examination by Mr. Hiser	1602
Recross-Examination by Ms. Foster	1604

## DIVISION WITNESSES (Continued):

<u>BRAD JONES</u> (Environmental Bureau, NMOCD)	
Cross-Examination by Ms. Foster	1611
Cross-Examination by Mr. Hiser	1686

(Continued...)

## PUBLIC COMMENTS:

<u>PAUL THOMPSON</u> (Independent producer and consulting engineer, Farmington, New Mexico)	
Direct Testimony	1703
Examination by Mr. Brooks	1707
Examination by Mr. Hiser	1708
Examination by Mr. Carr	1708
Examination by Dr. Neeper	1710
Examination by Chairman Fesmire	1711
 <u>BUTCH MATTHEWS</u> (M&R Trucking, Inc., Farmington, New Mexico)	
Direct Testimony	1713
Examination by Mr. Brooks	1715
Examination by Ms. Foster	1716
Examination by Dr. Bartlett	1718
Examination by Chairman Fesmire	1719
 <u>BARRY WIELAND</u> (Weatherford International, Farmington, New Mexico)	
Direct Testimony	1722
 <u>JIMMY CAVE</u> (Cave Enterprises, Farmington, New Mexico)	
Unsworn Position Statement	1725
 <u>COLLEEN MCCANN</u>	
Unsworn Position Statement	1726
 <u>STEVE TALBOT</u> (Cerrillos)	
Unsworn Position Statement	1727
 <u>TOM AAGESON</u>	
Unsworn Position Statement	1727
 <u>CAROL AAGESON</u>	
Unsworn Position Statement	1729
REPORTER'S CERTIFICATE	1733

\* \* \*

Wednesday, November 14th, 2007 (Volume VIII)  
 Commission Hearing  
 CASE NO. 14,015

EXHIBITS 1747

APPEARANCES 1750

NMCCAW WITNESS:

DONALD A. NEEPER, PhD (Soil physics)  
 Direct Examination by Ms. Belin 1754

PUBLIC COMMENTS:

KENDALL LIVINGSTON (Sweatt Construction Company,  
 Artesia, New Mexico)  
 Direct Testimony 1862  
 Examination by Ms. Foster 1869  
 Examination by Chairman Fesmire 1870

RACHEL JANKOWITZ (Habitat specialist,  
 New Mexico Department of Game and Fish)  
 Unsworn Position Statement 1872

DWAYNE MEADOR (Landowner and dirt contractor,  
 northwest region)  
 Direct Testimony 1875  
 Examination by Chairman Fesmire 1879

MIKE LEONARD (Key Energy Services, Inc.,  
 Aztec, New Mexico)  
 Direct Testimony 1882  
 Examination by Mr. Brooks 1884  
 Examination by Ms. Foster 1885  
 Examination by Commissioner Bailey 1887  
 Examination by Chairman Fesmire 1888

DANNY SEIP (Blue Jet, Inc.,  
 Farmington, New Mexico)  
 Direct Testimony 1890  
 Examination by Commissioner Olson 1894  
 Examination by Chairman Fesmire 1895

(Continued...)



## PUBLIC COMMENTS (Continued):

RON FELLABAUM (San Juan Casing Service, LLC,  
Farmington, New Mexico)

Direct Testimony	1896
Examination by Commissioner Olson	1899
Examination by Chairman Fesmire	1900

## NMCCAW WITNESS (Continued):

DONALD A. NEEPER, PhD (Soil physics)

Examination by Mr. Brooks	1903
Examination by Mr. Hiser	1924
Examination by Ms. Foster	2006
Examination by Mr. Carr	2012
Examination by Commissioner Bailey	2018
Examination by Commissioner Olson	2021
Examination by Chairman Fesmire	2031
Redirect Examination by Ms. Belin	2032
Further Examination by Mr. Hiser	2034

## PUBLIC COMMENTS:

MARLYN WALTNER (Raven Industries,  
Sioux Falls, South Dakota)

Direct Testimony	2036
------------------	------

## REPORTER'S CERTIFICATE

2053

\* \* \*

Thursday, November 15th, 2007 (Volume IX)  
 Commission Hearing  
 CASE NO. 14,015

EXHIBITS 2068

APPEARANCES 2071

DIVISION WITNESSES (Continued):

BRANDON POWELL (Environmental Specialist,  
 Aztec District 3 office, NMOCD)

Direct Examination by Mr. Brooks	2076
Cross-Examination by Mr. Hiser	2096
Cross-Examination by Mr. Carr	2088
Cross-Examination by Ms. Foster	2109
Examination by Mr. Jantz	2121
Examination by Commissioner Bailey	2123
Examination by Commissioner Olson	2126
Examination by Chairman Fesmire	2128
Further Examination by Commissioner Olson	2130
Redirect Examination by Mr. Brooks	2130
Recross-Examination by Ms. Foster	2133

MIKE BRATCHER (Field Supervisor,  
 Artesia District 2 office, NMOCD)

Direct Examination by Mr. Brooks	2137
Cross-Examination by Mr. Hiser	2160
Cross-Examination by Mr. Carr	2161
Cross-Examination by Ms. Foster	2172
Examination by Mr. Jantz	2185
Examination by Commissioner Bailey	2189
Examination by Commissioner Olson	2191
Examination by Chairman Fesmire	2198
Redirect Examination by Mr. Brooks	2202
Recross-Examination by Ms. Foster	2203

BRAD JONES (Environmental Bureau, NMOCD) (Resumed)

Cross-Examination (Continued) by Mr. Hiser	2206
Cross-Examination by Mr. Carr	2324
Further Examination by Mr. Hiser	2351

REPORTER'S CERTIFICATE 2355

\* \* \*

Friday, November 16th, 2007 (Volume X)  
 Commission Hearing  
 CASE NO. 14,015

EXHIBITS 2371

APPEARANCES 2374

DIVISION WITNESSES (Continued):

BRAD JONES (Environmental Bureau, NMOCD) (Resumed)  
 Cross-Examination (Continued) by Mr. Carr 2378  
 Examination by Mr. Jantz 2390  
 Examination by Commissioner Bailey 2391  
 Examination by Commissioner Olson 2413

PUBLIC COMMENTS:

SCOTT TAYLOR (Cerrillos)  
 Unsworn Position Statement 2481

RANDY T. HICKS (Hydrogeologist, R.T. Hicks  
 Consultants, Ltd., Albuquerque, New Mexico)  
 Direct Testimony 2482  
 Examination by Commissioner Olson 2489

DIVISION WITNESSES (Continued):

BRAD JONES (Environmental Bureau, NMOCD) (Resumed)  
 Examination (Continued)  
     by Commissioner Olson 2491  
 Examination by Chairman Fesmire 2512  
 Redirect Examination by Mr. Brooks 2516  
 Recross-Examination by Ms. Foster 2528  
 Further Examination by Commissioner Olson 2546

CARL J. CHAVEZ (Environmental Engineer, NMOCD)  
 Direct Examination by Mr. Brooks 2551

REPORTER'S CERTIFICATE 2608

\* \* \*

## E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	163	163
Exhibit 2	163	163
Exhibit 3	-	-
Exhibit 4	(58)	205
Exhibit 5	(61)	205
Exhibit 6	(94)	205
Exhibit 7	-	-
Exhibit 8	421	-
Exhibit 9	(373)	399
Exhibit 10	(383)	399
Exhibit 10A	(385)	399
Exhibit 11	(176)	205
Exhibit 12	178	205
Exhibit 13	427	511, 527
Exhibit 13A	430	-
Exhibit 13B	430, 432, 832	834
Exhibit 13C	(345), 433	511
Exhibit 14	428, 449, 511	-
Exhibit 15	449	511
Exhibit 16	457, 459	511
Exhibit 17	450, 458, 484	511
Exhibit 18	484	511
Exhibit 19	676	764
Exhibit 20	677, 764	764
Exhibit 21	679	764
Exhibit 22	-	1159
Exhibit 23	842	1159
Exhibit 24	844, 846, 1109, 1156	1159
Exhibit 25	846, 1157	1159
Exhibit 26	1158	1159

(Continued...)

## E X H I B I T S (Continued)

Applicant's	Identified	Admitted
Exhibit 27	847, 1158	1159
Exhibit 28	(2551)	-
Exhibit 29	(2554)	-
Exhibit 31	(admitted on behalf of OGAP)	
	-	2574
Exhibit 32	2095	2096
Exhibit 33	2138	2160

\* \* \*

Industry	Identified	Admitted
Exhibit 1	1184, 1212	1216
Exhibit 2	1187, 1212	1216
Exhibit 3	1213	1216
Exhibit 10	1213	-

\* \* \*

OGAP	Identified	Admitted
Exhibit 1	1417	1417
Exhibit 2	1489	1490
Exhibit 3	1418, 1420	1486
Exhibit 4	-	-
Exhibit 5	1491	1607
Exhibit 6	1491	1607
Exhibit 7	1491	1607
Exhibit 8	1491	1607
Exhibit 9	1492	1607
Exhibit 10	1492	1607
Exhibit 11	1492	1607
Exhibit 12	-	1607

\* \* \*

(Continued...)

## E X H I B I T S (Continued)

NMCCAW	Identified	Admitted
Exhibit 1	1757	1861
Exhibit 2	1758	1861
Exhibit 4	1861	1861

\* \* \*

Additional submissions by the Division, not offered or admitted:

## Identified

OCD's Requested Changes to 9/21/07 proposal, 11/7/07	558
---	-----

e-mail from David Brooks to Kelly O'Donnell, 10/22/07	559
--	-----

\* \* \*

## A P P E A R A N C E S

## FOR THE COMMISSION:

CHERYL BADA

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

## FOR THE DIVISION:

DAVID K. BROOKS, JR.

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

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

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

(Continued...)

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

## FOR INDEPENDENT PETROLEUM ASSOCIATION OF NEW MEXICO:

KARIN V. FOSTER  
Independent Petroleum Association of New Mexico  
Director of Governmental Affairs  
17 Misty Mesa Ct.  
Placitas, NM 87043

## FOR CONTROLLED RECOVERY, INC.:

HUFFAKER & MOFFETT, L.L.C.  
155 Grant  
Santa Fe, New Mexico 87501  
P.O. Box 1868  
Santa Fe, New Mexico 87504-1868  
By: GREGORY D. HUFFAKER, Jr.

## FOR NEW MEXICO OIL AND GAS ACCOUNTABILITY PROJECT:

New Mexico Environmental Law Center  
1405 Luisa Street, Suite 5  
Santa Fe, New Mexico 87505  
BY: ERIC D. JANTZ  
and  
BRUCE BAIZEL

## FOR THE CITY OF LOVINGTON:

PATRICK McMAHON  
Heidel Law Firm  
Lovington, New Mexico

\* \* \*

(Continued...)



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

FOR NEW MEXICO CITIZENS FOR CLEAN AIR AND WATER:

BELIN & SUGARMAN  
618 Paseo de Peralta  
Santa Fe, New Mexico 87501  
By: ALLETTA BELIN

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2   9:00 a.m.:

3           CHAIRMAN FESMIRE:   Okay, let's go back on the  
4   record.

5           Let the record reflect that this is the  
6   continuation of Case Number 14,015, a number that will be  
7   forever etched in my mind. It is the Application of the  
8   New Mexico Oil Conservation Division for the repeal of  
9   existing Rule 50 concerning pits and below grade tanks and  
10   adoption of a new rule governing pits, below grade tanks,  
11   closed loop systems and other alternative methods to the  
12   foregoing, and amending other rules to make conforming  
13   changes; statewide.

14           Let the record reflect that this is Friday,  
15   November 16th -- Since I've fouled up most of the dates so  
16   far, is that correct?

17           COMMISSIONER OLSON:   Uh-huh.

18           CHAIRMAN FESMIRE:   -- it's nine o'clock in the  
19   morning, we are at Porter Hall, that Commissioners Bailey,  
20   Olson and Fesmire are present, we therefore have a quorum.

21           We were -- when we adjourned last evening we were  
22   towards the end of the cross-examination of Mr. Brad Jones  
23   by Mr. Carr.

24           Mr. Carr, are you ready to proceed?

25           MR. CARR:   Yes, sir, I am.

1 CHAIRMAN FESMIRE: Mr. Jones, are you ready to  
2 get proceeded?

3 (Laughter)

4 MR. JONES: Yes. Please.

5 CHAIRMAN FESMIRE: Also let the record reflect  
6 that Mr. Jones survived his birthday yesterday, and we will  
7 continue with the cross-examination.

8 BRAD JONES (Resumed),  
9 the witness herein, having been previously duly sworn upon  
10 his oath, was examined and testified as follows:

11 CROSS-EXAMINATION (Continued)

12 BY MR. CARR:

13 Q. Mr. Jones, during your direct testimony you  
14 commented about a comment provided by OXY in which they  
15 noted that organic constituent concentration standards in  
16 these rules are lower than the NMED SSLs, and they asserted  
17 that there should be consistency between New Mexico state  
18 agencies. Do you remember that? It's on page 13, footnote  
19 30.

20 A. I remember roughly about that, yes.

21 Q. And as I remember your answer, you stated that  
22 this had been considered in the development of these rules  
23 but that you decided not to try and hold these standards in  
24 line with other agencies, because agencies have different  
25 objectives. Was that your answer?

1           A.    That was part of my answer. I think I was trying  
2 to explain that different agencies are delegated to create  
3 different standards for different types of situations such  
4 as air quality. They deal with air issues, so their  
5 standard would be appropriate for this type of waste.

6           Q.    When we look at, say, the Water Quality Control  
7 Commission and its obligation to protect groundwater, you'd  
8 agree with me that your objective is the same, is it not?

9           A.    I think under the act we're delegated -- or we  
10 have under the -- I believe it's the enumeration of  
11 powers --

12          Q.    Uh-huh.

13          A.    -- that we're delegated to do that, yes.

14          Q.    And when we talked about the NMED SSLs, aren't  
15 these standards designed to protect human health?

16          A.    But we're delegated to consider things such as  
17 the Clean Water Act, not the ED requirements for soil  
18 screening levels, for other issues.

19          Q.    The concern that I have is, if you're regulating  
20 chlorides here to protect groundwater, wouldn't it make  
21 sense that those standards are the same as other agencies  
22 in the state whose obligations are to protect groundwater?

23          A.    Such as -- which other standards are you --

24          Q.    I'm talking about water quality.

25          A.    Well, my understanding is that the agencies

1 delegated to protect groundwater also fall up under the  
2 WQCC regulations or under their guidance, which is what  
3 we're following.

4 Q. And are your standards the same as those --

5 A. Which standards?

6 Q. -- as the Water Quality Control Commission?

7 A. Which standards?

8 Q. 3103?

9 A. Yes.

10 Q. And do you have the same dilution effect --  
11 you've got the same constituents, but are you applying the  
12 same standards, the same concentration levels?

13 A. I think we discussed this the other day. Are you  
14 -- I've been trying to get a clear understanding of your  
15 question.

16 Q. My --

17 A. It's an expanded question, so I want to make sure  
18 that I'm answering the right question.

19 Q. My question is, as you apply the 3103  
20 constituents to oilfield waste or pit waste to protect  
21 groundwater, are you using the same standards and applying  
22 the same concentration levels as are mandated under the  
23 Water Quality Control Act and the Commission's rules  
24 implementing that act?

25 A. Well, the 3103 constituents only apply to the

1 burial of waste on site, so I'd like to make that  
2 clarification first, so that everyone has an understanding  
3 of what we're talking about. And yes, we are applying  
4 those standards.

5 Q. In this situation -- and you would agree with me,  
6 would you not, that 1000 milligrams per kilogram chloride  
7 from an oil and gas operation is the same as 1000  
8 milligrams per kilogram of chloride out of, say, a dairy  
9 farm?

10 A. Well, I like to look at it this way. Under part  
11 36 for landfarm operations, they must demonstrate that they  
12 have not exceeded the 3103 constituents below the treatment  
13 zone. It's the same standard.

14 Q. Or background?

15 A. Or background, yes.

16 Q. And background could be below those standards?

17 A. It's whichever is greater, is the way part 36  
18 reads.

19 Q. So if you have a greater standard, your  
20 background is greater, then you have a higher standard than  
21 3103; is that what you're saying?

22 A. For part 36.

23 Q. And -- but my question is, aren't we applying  
24 these standards differently here than are being applied at  
25 the Water Quality Control Commission and through their

1 regulations?

2 A. I'm trying to understand. What way are you  
3 talking about applying --

4 Q. My question is simply this: Are you not coming  
5 up with more stringent standards for oil and gas than would  
6 apply to dairy farms?

7 A. I don't know if -- I'm not sure if dairy farms  
8 fall up under WQCC. I'm unclear about that understanding.

9 Q. Do mines, do you know?

10 A. I don't believe mines do. But discharge does,  
11 discharge at the surface does, for any type of liquids. So  
12 this is a limit at the surface that you have to discharge,  
13 so this is surface contamination, and these limits are set  
14 for that discharge at the surface, regardless of the depth  
15 of groundwater.

16 Q. When you were developing these rule, the pit  
17 rules, Rule 17, and the standards that are set forth in  
18 these rules, did you consider the impact these standards  
19 would have on the production of oil and gas?

20 A. I guess for clarification, what do you mean by  
21 production of oil and gas?

22 Q. What do you think that means?

23 A. It's your question. I'm trying to understand  
24 your question.

25 Q. Production of oil and gas is going out and

1 drilling a well and producing a volume of oil and gas.

2 A. Okay, we're talking about --

3 Q. Do you understand what that term means?

4 A. Yes, I --

5 Q. Okay, and I'd like you to answer the question,  
6 which is, did you consider the impact of your rules on that  
7 when you were developing --

8 A. Well, we're talking about closure standards or  
9 burial of waste, we're not talking about permitting a pit  
10 or a closed-loop system or use of a below-grade tank.  
11 Those standards don't apply to those.

12 Q. Don't you understand that anything that you do  
13 here can impact the cost of producing a barrel of oil or an  
14 MCF of gas?

15 A. Anything the operator chooses to use, the method,  
16 the construction of the pit, will impact that.

17 Q. And if what the operator is required to do, and  
18 his decisions are based on compliance with rules and  
19 regulations, if to comply with your rules and regulations,  
20 as costs go up, do you understand that affects the  
21 production of oil and gas?

22 A. Well, my understanding of the testimony that's  
23 been presented here is that cost doesn't necessarily have  
24 to go up, depending on the method you choose to drill. So  
25 it's up to the operator to choose if they want to implement



1 a method that will increase their cost.

2 Q. Is it your testimony, then, that you just passed  
3 the cost issue and said, Let the operator decide?

4 A. It's up to the operator how they want to utilize  
5 this rule.

6 Q. Did you talk to any operators about what the  
7 impact of this particular -- these -- this particular rule  
8 proposal would be?

9 A. Personally, I did not talk to any operators.

10 Q. During your discussions, did anyone indicate they  
11 had?

12 A. I read a lot of articles from publications and  
13 newspapers indicating the increased costs, but they didn't  
14 state why it would increase, they didn't state how it would  
15 increase or what those costs represented.

16 Q. And I guess my question is, are you aware of any  
17 contact with anybody who actually has to go out and spend a  
18 dollar to try and produce oil and gas, what impact these  
19 rules would have on the number of dollars he has to spend?

20 A. Well, during the task force committee meetings  
21 that we had cost was not really brought up, and these  
22 options were discussed.

23 Q. Have you in developing these rules looked at the  
24 burden these proposed rules may, in fact, impose on the  
25 agency?

1 A. We've discussed the burden, yes.

2 Q. And have you tried to estimate the number of  
3 applications you may have to process under the rule?

4 A. Well, we look at it this way: With the new  
5 language and the recommendations that we have -- I think  
6 Mr. Bratcher summed it up yesterday, it should make -- the  
7 implementation of these regulations should make certain  
8 things easier and more efficient.

9 So we think that -- It's our opinion that it  
10 won't be such an undue burden.

11 Q. If we -- an operator goes out and wants to permit  
12 a pit under the Rule 17, is the operator permitted to go  
13 forward and construct and use the pit prior to OCD  
14 approval?

15 A. No.

16 Q. If we go to the transition provisions in  
17 19.15.17.17.D, that provision provides that, An operator of  
18 an existing below-grade tank shall comply with the  
19 permitting requirements of 19.15.17 NMAC within 90 days  
20 after -- and it's the effective date of this rule. Do you  
21 see that provision? Page 24, yes.

22 A. And you're referring to D?

23 Q. Yes, I am.

24 A. Yes.

25 Q. If the rule is adopted as written, would the

1 operator of an existing below-grade tank have to have an  
2 approved permit within 90 days?

3 A. Well, there's -- we discussed this yesterday. I  
4 believe Mr. Hiser asked the same question or a similar  
5 question. He asked if the submittal of an application  
6 would suffice for that, and I did say yes.

7 If you look further in E, it also talks about  
8 operators of existing pit or below-grade tank. They can  
9 continue to operate under E.(3), the operational closure  
10 requirements, until that issue is resolved.

11 The problem that we have is, is it -- does it  
12 have secondary containment and leak detection? That's what  
13 we're trying to resolve.

14 Q. And so my question really is, if I'm an operator  
15 and I have a below-grade tank, am I going to have to have  
16 an approved permit from you to continue to use that within  
17 90 days of the effective date?

18 A. Well, I think we have a bigger issue here. Under  
19 the current rule, those operators -- This would be in the  
20 case of an operator of an existing below-grade tank that  
21 doesn't have a permit. Under Rule 50 they had until  
22 September 30th, 2004, to resolve that issue. This means  
23 they're currently out of compliance. They are in violation  
24 of the current rule.

25 Q. And so for all of those tanks, however many there

1 may be, they're going to have to come in with permits  
2 within 90 days --

3 A. Or close, close --

4 Q. -- or close? And I'm going to call a witness  
5 later that's going to testify that since 2004 their  
6 company, to comply with the rule that went into effect in  
7 2004, has had to go out and retrofit 5000 of these tanks at  
8 a cost of over \$100,000,000.

9 A. I think we brought that up yesterday, and for  
10 clarification my understanding is that this retrofit was to  
11 close a permanent pit and use a tank in the replacement of  
12 that permanent pit. So the retrofit doesn't comply with  
13 Rule 50, the retrofit takes them out of Rule 50. They are  
14 not permitted under Rule 50.

15 Q. And of these 5000 tanks, to comply with Rule 17  
16 the cost would be \$18,000 each.

17 A. I don't know what the cost would be.

18 Q. Okay, but the question --

19 A. I don't know what they plan to --

20 Q. -- the question is, can you handle 10,000  
21 applications in 90 days?

22 A. We didn't say that we would have to have them  
23 permitted in 90 days. We requested that they -- you know,  
24 as it states, that they apply to the Division for a permit  
25 in 90 days.

1 Q. So they then, if they apply, can go forward  
2 without it being approved?

3 A. I think there's -- there are some provisions that  
4 would allow that, and that also is in E.(3). I think we  
5 will allow that.

6 You know, there are other provisions if we go  
7 back to closure in section 13, and this kind of covers it  
8 as well. This is page 12, and this would be A --  
9 subsection A.(4), An existing below-grade tank that is not  
10 equipped with secondary containment or leak detection shall  
11 close within five years, or -- if not retrofitted.

12 And if we go back to the provisions for  
13 construction and design under 11 --

14 Q. Which is page --

15 A. I'm trying to find -- make sure I have the right  
16 one here. It's page 9, and we're looking at I.(3),  
17 paragraph (3), The operator of a below-grade tank  
18 constructed prior to the effective date that does not have  
19 secondary containment or leak detection shall test its  
20 integrity annually. If the existing below-grade tank does  
21 not demonstrate integrity, the operator shall comply -- or,  
22 I'm sorry, shall properly install a below-grade tank that  
23 complies with paragraph (2) of subsection I of 19.15.17.11  
24 NMAC. In any event, the operator shall equip or retrofit  
25 such below-grade tank with secondary containment and leak

1 detection or close within five years.

2 So they have a five-year period that -- the issue  
3 is, they're currently not permitted --

4 Q. Correct.

5 A. -- so they would have to have a permit. They  
6 have a five-year period to retrofit and come into  
7 compliance.

8 Q. But they have to file within 90 days?

9 A. Yes.

10 Q. And if they file within 90 days, your testimony  
11 is, they still have five years to come into compliance?

12 A. That is my understanding.

13 Q. And so just the act of filing is all the operator  
14 will have to do to not be subject to not be in violation of  
15 the act?

16 A. That is what we're trying to do here. Right now  
17 these tanks are not permitted at all. They are not  
18 registered with the agency. They are out there being used  
19 and not regulated.

20 Q. And so I guess Mr. Price can have a 10,000-  
21 application stack in his office, but he has five years to  
22 get through them; is that --

23 A. Well, these are -- go to the district office.  
24 Below-grade tanks are permitted through the district  
25 office, so you'll have four offices handling these tanks.

1 Q. And so Mr. Bratcher's share will be what he  
2 thinks it will be easier to deal with?

3 A. Well, there's three people in that office. And  
4 my understanding, these tanks are not common in the  
5 southeast, they are more common in the northwest.

6 MR. CARR: Thank you, that's all I have.

7 CHAIRMAN FESMIRE: Mr. Jantz, do you have any  
8 questions of this witness?

9 MR. JANTZ: One quick line of questioning, Mr.  
10 Chairman.

11 EXAMINATION

12 BY MR. JANTZ:

13 Q. Mr. Carr's cross-examination, he asked about the  
14 costs of compliance with these rules to operators; is that  
15 right? Do you recall that?

16 A. Yes.

17 Q. You participated in the task force, did you not?

18 A. Only in two of the meetings. One was a subgroup  
19 meeting, and I was involved in the last, final task force  
20 meeting.

21 Q. At either of those meetings did industry  
22 representatives bring up the issue of cost of compliance?

23 A. Not in my presence.

24 Q. Have you read any of the task force documents  
25 where they brought up those -- brought up that concern?

1           A.    Only in the submittal after we posted the rule  
2 and submitted it to the hearing officer for this  
3 proceeding.

4           Q.    So only post-task force?

5           A.    Yes.

6           MR. JANTZ: Thank you. That's all I have.

7           CHAIRMAN FESMIRE: Mr. Huffaker, do you have any  
8 questions of this witness?

9           MR. HUFFAKER: Nothing, Mr. Chairman.

10          CHAIRMAN FESMIRE: Thank you.

11          And Ms. Foster, just to make sure, you've already  
12 had your turn, haven't you?

13          MS. FOSTER: I have, thank you.

14          CHAIRMAN FESMIRE: Okay.

15          Mr. Brooks, do you have any redirect of this  
16 witness?

17          Oh, wait a minute --

18          (Laughter)

19          CHAIRMAN FESMIRE: If looks could kill, I'd have  
20 passed away by now.

21          (Laughter)

22          CHAIRMAN FESMIRE: Commissioner Bailey.

23                               EXAMINATION

24          BY COMMISSIONER BAILEY:

25          Q.    Mr. Hansen, Dr. Neeper and Dr. Stephens all



1 stress the importance of vegetation in their models.

2 A. Yes.

3 Q. In fact, Dr. Neeper said it was vitally  
4 important, the role that vegetation can and has to play in  
5 the foundation of your arguments for this rule.

6 The lack of specificity for soil recontouring,  
7 reclamation, re-vegetation -- what was the reasoning on why  
8 the surface is being essentially ignored as part of the  
9 environmental for protection?

10 A. Well, I think we do have some specificity,  
11 especially for the backfilling, the prescribed soil cover,  
12 we are requiring compaction, re-establishment of -- and I  
13 have to find it here, it's on page 18, it's G.

14 We've got, Specification [sic] shall consist of  
15 background thickness of topsoil or one foot of suitable  
16 material to establish vegetation, whichever is greater. We  
17 do use those terms.

18 We also state that, The operator shall construct  
19 the soil cover to the site's existing grade and prevent  
20 ponding of water and erosion of the cover material. So as  
21 the cover itself, we do add that, and we specify those  
22 things.

23 Part of this language, the thickness of the  
24 topsoil or one foot of suitable material -- that's the  
25 background thickness for clarification, whichever is

1 greater -- is based on the site. You may be in an area  
2 that has, you know, six inches of topsoil, you may be in an  
3 area that has no topsoil and has no vegetation.

4 The question that came up in the task force, is  
5 it reasonable to require someone to vegetate something  
6 beyond what currently exists in the surrounding area, and  
7 is it possible? So that's why we chose this language.

8 As then for the re-vegetation standards, we use  
9 terms like substantially restore the impacted area, because  
10 we're looking at two successive growing seasons. When you  
11 compare it to the unimpacted area, is it reasonable to  
12 think that you can establish the same vegetation within  
13 those two seasons? And based on the conditions, if there  
14 is no vegetation at that surrounding area, what can you do?  
15 If you say 70-percent coverage, is that a reasonable  
16 expectation?

17 So that's why we didn't use percentages. We  
18 didn't use the specification that we did for part 36.

19 Q. After listening to excruciating detail on liners,  
20 my opinion --

21 (Laughter)

22 Q. -- and the reason given for this incredible  
23 detail on liners was that it was difficult for the OCD to  
24 enforce performance-based standards. Do you not consider  
25 these performance-based standards that will not be able to

1 be enforced either?

2 A. Which ones, the re-vegetation or the liner  
3 standards?

4 Q. I'm sure you can enforce the liner standards as  
5 they're written.

6 A. Yes.

7 Q. I'm talking about sections G and H on page 18.

8 A. Well, G is pretty straightforward. It's going to  
9 be the background thickness. And we're asking -- we have  
10 provisions inside here under construction design as the  
11 general provision, they push that aside and stockpile that  
12 soil, and that's -- that is page 6, and it's 11.B.

13 So we're already put provisions to require the  
14 operator to utilize best management practices so that soil  
15 would be available for the backfilling and establishing  
16 this cover. So we do have that in here, we're trying to  
17 point them in the right direction so we can accomplish what  
18 we need in G of 13 on page 18 for the design -- or  
19 specified, prescribed soil cover. So we're trying to  
20 educate and instruct the operator what they need to do to  
21 accomplish this task.

22 Q. But is this a performance-based standard that OCD  
23 will be unable to enforce as it says it cannot enforce  
24 current Rule 50?

25 A. Well, current Rule 50 has no closure standards,

1 they have no soil standards for a cover, there's no cover  
2 standard. So -- so this is a step beyond what's in current  
3 Rule 50.

4 Q. Let's look at 19.15.17.9.B. That's page 3. The  
5 last sentence of paragraph (2) says that, An engineering  
6 design plan -- which is specified in number (1), paragraph  
7 (1) -- may incorporate by reference a standard design for  
8 multiple temporary pits.

9 Is there confusion that a hydrogeologic report  
10 can be submitted for multiple temporary pits when in other  
11 areas you say it has to be site-specific?

12 A. No, this has nothing to do with a hydrogeologic  
13 report. This is the design of the pit, in this case a  
14 temporary pit. They may have a footprint of the pit --  
15 let's say it's 125 feet by 150 and it's 10 feet deep, and  
16 they have this drawn design.

17 The idea here is that instead of reconstructing  
18 and submitting a different design every time, if this  
19 design works for the location -- the hydrogeologic report  
20 is something separate that's required as part of this  
21 engineering design plan, much like the closure plan. But  
22 the standard design we're referring to is the design of the  
23 pit, and so this came up in task force.

24 What they wanted to do instead of resubmitting  
25 this every time, they wanted -- if a company came up with a

1 design, they could reference that design, which would speed  
2 up the process.

3 The thing that we have to have is hydrogeologic  
4 report to determine if that depth in that standard design  
5 is appropriate.

6 Q. So should language be added to that sentence that  
7 indicates that we're not talking about all of the elements  
8 that are listed in the engineering design plan that are  
9 listed in paragraph (1)?

10 A. That could be incorporated. We thought the  
11 standard design -- it says, An engineering design plan for  
12 a temporary pit may incorporate by reference a standard  
13 design for multiple temporary pits that the operator files  
14 with the application or has previously filed with the  
15 appropriate district office.

16 This -- when we talked with task force -- If you  
17 notice, this is in green. This is task force language.  
18 They had a clear understanding, even industry had a clear  
19 understanding of what that meant at that time.

20 Q. Okay, to somebody who's not been involved in  
21 that, by saying a standard design, referencing an  
22 engineering design implies that all (a) through (n) are  
23 required, so it's just a matter of formatting here?

24 A. Yes.

25 Q. The current Rule 50.F.(1) says that as a

1 condition of a permit the Division may require the operator  
2 to file a detailed closure plan before closure may  
3 commence.

4 A. Yes.

5 Q. Do you know how many the Division has already  
6 required under F.(1)?

7 A. I don't work in the district office, I can't  
8 answer that question.

9 Q. Okay. So even though this has been as a part of  
10 the rule, as an option of the Division to require, you  
11 don't know if that's been enforced or not?

12 A. Well, Mr. Bratcher discussed this the other day.  
13 It seems like they have been requesting those in some  
14 cases. My understanding of Mr. Powell's testimony, it's  
15 not always the case.

16 Q. There are setbacks from watercourses. Rule  
17 50.C.(2) also requires setbacks. Let's see that.

18 A. This is Rule 50.

19 Q. Yes, Rule 50.C.(2), No pits shall be located in  
20 watercourse, lake beds, sinkhole or playa lakes. Pits  
21 adjacent to such watercourse or depression shall be located  
22 safely above the ordinary high water mark, et cetera. The  
23 Division may require additional protective measures for  
24 pits located in groundwater sensitive areas.

25 A. Yes.

1 Q. Do you know if the OCD has already invoked that  
2 paragraph, or have you been requiring special protection?  
3 Because Mr. Powell indicated that there was no harm, no  
4 foul for a pit that was adjacent to a watercourse.

5 A. Well, it met the provisions of Rule 50, the  
6 location of that pit, I think, is what he was testifying  
7 on. The -- and it was actually that photo, if I'm not  
8 mistaken, that's the one where the side of the pit blew out  
9 into a watercourse eventually, or into a tributary that  
10 would lead into a watercourse.

11 And what we're trying to do is prevent those from  
12 occurring by establishing an additional setback from the  
13 watercourse, and that's a good example. That had to be  
14 addressed -- If I'm not mistaken, he said -- I thought he  
15 said that it did reach the watercourse at some point. So  
16 it did have an impact. It wasn't a big impact, but it was  
17 an impact.

18 What we're trying to do is to prevent those  
19 scenarios by establishing a setback from a watercourse, not  
20 the high water mark from that watercourse, which is what  
21 Rule 50 stipulates.

22 Q. So even though you haven't had any problems, you  
23 still want to have -- what is it, 300 feet?

24 A. 200 feet.

25 Q. 200 feet.

1           A.    And to say that we -- I'd like to clarify. I  
2    didn't say we didn't have any problems. The photos that  
3    Mr. Powell had showed that there is a problem, because of  
4    the way that pit was located. It met the siting criteria  
5    of Rule 50, but due to it being so close to the watercourse  
6    -- it wasn't in the watercourse, it was above the high-  
7    water mark -- it still -- once the sidewall blew out, it  
8    entered that watercourse. And what we're trying to do is  
9    not have them that close, where those instances will not  
10   occur again.

11           Q.   Did you all talk about the fact that a pit that  
12   must be closed within six months, that -- can we foresee  
13   that there will be a backlog of laboratory testing and OCD  
14   approvals for a closure that would lead to the unnecessary  
15   length of time for these open holes, which would be  
16   available for illegal dumping?

17           A.   I think in any regulation, even like the surface  
18   waste management regulations, there's always the  
19   opportunity for people to do things in violation of the  
20   regulation. That can be the nature of people. We can't  
21   predict those things.

22                   But what we can do is, since we do have  
23   regulations that stipulate where that waste needs to go,  
24   such as in this regulation, proposed rule, such as 17 and  
25   in part 36, if we were to identify those parties and what



1 they have done, we do have regulations in place to enforce  
2 against them.

3 Q. The trick is finding them.

4 A. Exactly, that's always the trick.

5 Q. Are monitor wells a viable option, rather than  
6 dig-and-haul?

7 A. And you're referring to in-place closure?

8 Q. Right.

9 A. I would say no, and the reason why is because  
10 that would -- my understanding from industry is that they  
11 do not want long-term obligations to this buried waste.  
12 The question would be, how long do they monitor it? Do  
13 they monitor it as long as it remains there?

14 If groundwater is at 150 feet, then they're  
15 installing -- how many wells is adequate? Usually three  
16 wells are appropriate for any type of monitoring, because  
17 depending on where you're located, wells in the surrounding  
18 area and what's being pulled from those wells, groundwater  
19 direction can change. So that may require them to put  
20 additional wells at the site. Our intent is not to have  
21 them incur those additional costs for that long-term use.

22 Q. You talked about stabilizing the pit contents  
23 after removal of fluids. Could you please define exactly  
24 what you mean by stabilize?

25 A. Well, there's different techniques that operators

1 use. Sometimes they attempt to solidify or stabilize.

2 Kiln dust, adding kiln dust, can accomplish that.

3 Sometimes to -- just to stabilize or make it geotechnically  
4 stable would just be adding clean dirt inside there.

5 Q. So in a sense, that is removing free liquids that  
6 may be in kind of free fluid --

7 A. Well --

8 Q. -- is what you're talking about for  
9 stabilizing --

10 A. Well --

11 Q. -- and solidifying?

12 A. -- if you look at our closure requirements --  
13 well, in operation, we want to make sure this is clear,  
14 because you may not be implementing your closure methods  
15 yet, so we actually have requirements for them to remove  
16 the free liquids within 30 to 15 days, depending if it's a  
17 drilling pit or operat- -- or a workover pit, after the rig  
18 is released from the site. So the free liquids are  
19 automatically removed.

20 If you continue into our closure requirements,  
21 each closure requirement specifies that all liquids have to  
22 be removed when you implement any closure method So we've  
23 backed it up, realizing that there may be a period of four  
24 months before they have to close -- they actually implement  
25 the closure. It could happen immediately, or else it could

1 be delayed because of a backup of certain things, but they  
2 still have to ensure before they implement the measure, the  
3 closure method, that they have to make sure additional --  
4 if there are any additional free liquids from rainfall or  
5 if they come out of the mud, they have to remove those  
6 before they start that process.

7 Q. If an operator has stabilized and solidified the  
8 pit contents, that's removing the hydraulic head that Mr.  
9 Price has said if you remove the head you remove the  
10 contamination.

11 A. Well, the hydraulic head is more the free liquids  
12 that we require them to remove within 30 or 15 days of when  
13 they are done drilling and move -- the rig has been  
14 released. And that's in the operational requirements on  
15 page 11, and it's B.(4) and (5).

16 Q. I understand that, but if you have solidified the  
17 contents of the pit, then you have removed migration of  
18 fluids, of any kind of fluids?

19 A. Well, yes and no. The -- In order to have  
20 consideration to bury waste on site, you have to pass the  
21 paint filter test. You can solidify to a certain extent  
22 and still not reach that point. So it's -- you would have  
23 to add another stipulation into that, if that was the case.

24 Q. And without vegetation requirements to any  
25 standard, it seems to me like the -- a house of cards is

1 falling apart here --

2 A. I -- I don't understand that statement.

3 Q. Vegetation is vital to the models.

4 A. It is --

5 Q. Fluid migration is a part of the contamination to  
6 groundwater that you've protected. If there's no fluid and  
7 no vegetation, then the models don't seem appropriate.

8 A. Well, I guess -- I'm looking more at the rule,  
9 and in order to bury in place, you have to put in a new  
10 liner, the contents have to meet the paint filter test, the  
11 liquid test, and that's basically -- a simple explanation  
12 of that is that if I had a coffee filter and I put that  
13 content in there, I shouldn't be able to squeeze out any  
14 free liquids. It doesn't mean that's not saturated, it  
15 just means I can't squeeze out any free liquids.

16 And then on top of that, we're going to overlap  
17 the liner to add a level of protection. Then we're going  
18 to put a geomembrane liner on top of that. That's supposed  
19 to shed water away from the pit, or the trench, because  
20 it's already wrapped up like a burrito. And then we're  
21 going to compact -- at least -- well, we're going to  
22 backfill and compact it, that soil, to reduce the  
23 infiltration of any water that may get down into it. And  
24 then it's going to have to have either the background  
25 thickness of the topsoil or at least one foot of suitable

1 material to establish re-vegetation.

2 And I -- the thing I've seen, especially in  
3 landfills -- I used to permit landfills, oversee the  
4 closure of landfills, and I worked for the Solid Waste  
5 Bureau for four years and that was my job, permitting of  
6 landfills and closures. In a lot of areas, you'll see  
7 native vegetation take hold. And as time goes by, you'll  
8 have stuff establish on that.

9 So what we're looking at in the modeling is  
10 things occurring 80 years later, 250 years later. That's  
11 different than the two successive growing seasons that we  
12 have set up in the regulation to establish vegetation.  
13 We're not saying you have to make sure vegetation is  
14 established over 250 years, but native vegetation will  
15 establish if it naturally establishes at the site. So  
16 there will be some vegetation that will occur during that  
17 time period.

18 Q. I'm glad to hear your experience with landfills.  
19 Have you experienced landfills where an anaerobic situation  
20 was developed and then a release of either methane or H<sub>2</sub>S?

21 A. Well, not H<sub>2</sub>S. It's -- Based upon the  
22 constituents that you put into a landfill, the municipal  
23 waste, the -- more of the stuff like food waste that you  
24 put inside there, you have a different generation of gases  
25 than you would with this type of waste.

1 Q. With this type of waste, based on disposal, had  
2 H<sub>2</sub>S problems because of the anaerobic conditions?

3 A. Yes.

4 Q. With the burrito effect, are we developing  
5 anaerobic conditions and, since there are organics  
6 involved, there's the potential for H<sub>2</sub>S generation?

7 A. Well, Basin Disposal, they have an evaporation  
8 pond. And what happens, they have this water and it has  
9 some stuff that settles out at the bottom, and they have  
10 microbes present. Well, what happens when the temperature  
11 changes? You have this turning of the environment. And  
12 when that turns, you may have algae plume or something of  
13 that nature.

14 That's where they add a lot of chlorine to it, to  
15 counter those things, to control those microbes from  
16 allowing them to produce that H<sub>2</sub>S.

17 It's a natural cycle. It can happen in just a  
18 simple pond that has nothing to do with oil and gas. It's  
19 a natural occurrence. If you have an extreme temperature  
20 change, such as temperature goes up, this naturally occurs.

21 Q. But my question is, we have developed a burrito,  
22 we've developed anaerobic conditions, we have organics  
23 enclosed within the burrito, we have bacteria. Do we have  
24 generation of H<sub>2</sub>S?

25 A. I honestly -- We're talking about something

1 that's buried four feet under the ground, so I don't know  
2 how to relate that to this. You're going to have aerobic  
3 and anaerobic, because there is some oxygen in that  
4 material. At some point that oxygen may be depleted. So  
5 depending on the concentration of oxygen, you're going to  
6 have different bacteria doing different things at different  
7 periods during the lifetime of that burrito.

8 So some are going to be consuming carbons, so  
9 your TPH concentrations may be impacted, then when it  
10 becomes anaerobic that may change somewhat. So I can't  
11 answer your question.

12 Q. How many cases were on the floor? 400 for Mr.  
13 Price?

14 A. I don't -- I don't know what's in his office. I  
15 have my own stuff. I've heard him --

16 (Laughter)

17 Q. With the limited number of staff members that you  
18 have here in Santa Fe -- and clearly you're already  
19 overwhelmed if you've got piles of cases on the floor --  
20 what changes in your processes will you institute so that  
21 you can timely process APDs?

22 A. Well, we don't process APDs, that --

23 Q. Exceptions and permanent pits.

24 A. Well, I'd like to clarify. I've been here for  
25 approximately 15 months. In my time here, I've been -- in

1 the latter part of the hearings of part 36, the rulemaking  
2 proceedings, once we reached a point -- I believe that went  
3 into effect in February, 2007. February 14th, Valentine's  
4 Day, exactly.

5 And soon after that, we were asked to start this  
6 process. Actually, I believe the task force part of this  
7 proceeding for this rulemaking had already been initiated.  
8 We've been tied up in rulemaking processes, which has --  
9 we've created our backlog.

10 We also had a scanning project to make our files  
11 available. Due to budget we had the money, so we  
12 implemented that because we had the opportunity, which  
13 makes all our records public.

14 So we've had a lot on our plate that's not a  
15 normal-type thing. We believe that once we get past this  
16 point we can go back to doing our regular work and catch  
17 up, and it will be back on track. The problem that we've  
18 had is that we haven't been on track, we've been on all  
19 these other tracks.

20 Q. No more rule changes, is that --

21 (Laughter)

22 A. I think Mr. Price testified on that wish, right  
23 there.

24 MS. FOSTER: I would support that motion.

25 (Laughter)



1           Q.    (By Commissioner Bailey) How was the 100-mile  
2 figure arrived at? Is that a number out of the air?

3           A.    In all honesty, I can't remember how it came  
4 about. I think what we were looking at is the practicality  
5 of viable options being within a certain range, viable  
6 disposal options.

7                   Our mantra, even in Rule -- during the  
8 proceedings for part 36, was proper waste management. We  
9 can't quite figure out why someone within an appropriate  
10 distance would not choose to use that method, proper waste  
11 management, and use a facility to dispose at, rather than  
12 bury it on site. It just doesn't make a lot of sense. I  
13 mean, if you're five miles away from the facility and you  
14 have a disposal option, why wouldn't you use it? If you're  
15 10 miles, why wouldn't you use it? If you're 50 miles, why  
16 wouldn't you use it?

17                   We look at other agencies like the Solid Waste  
18 Bureau. That is not really a consideration in those cases.  
19 They're required to take it to a facility and dispose of  
20 it.

21                   So we're trying to say, why doesn't this apply  
22 for this waste stream? You know, if you have hazardous  
23 waste you're not really allowed to bury it on site. You  
24 have to find an appropriate option.

25                   The WIPP site is an excellent example.

1     Regardless of which state you're in, if you meet that  
2     criteria for that waste, you may have to haul it to New  
3     Mexico to dispose of it. And that's nationwide, because  
4     there is no other option.

5             And so we're looking at the big picture here of  
6     other regulations, other regulatory agencies, and waste  
7     disposal in general.

8             Q.     In general, don't most counties have landfills?

9             A.     No, they do not. The concept for a while was to  
10    create regional landfills throughout the state for the  
11    Solid Waste Bureau as part of their solid waste management  
12    plan. It was one of their goals.

13            Now a lot of counties or municipalities choose to  
14    create a landfill in their area because they realize it's a  
15    moneymaker for them. And so -- and they do have that  
16    option. But they also have to consider, depending on the  
17    type of landfill, is there a viable option within their  
18    range? And that's a consideration, depending on which type  
19    of landfill they're looking at trying to get.

20            Q.     17.11.E discusses netting, and it talks about  
21    rendered nonhazardous to wildlife. Are we talking  
22    antelope, or are we talking skinks?

23            A.     What was that last part?

24            Q.     Lizards.

25            A.     Oh, lizards. I thought you said mosquitoes.

1 (Laughter)

2 A. Oh, my gosh -- I just wanted to make sure I heard  
3 that correctly.

4 MR. CHAVEZ: Page number?

5 THE WITNESS: It's 6 --

6 COMMISSIONER BAILEY: Page 7 --

7 THE WITNESS: -- 7 --

8 COMMISSIONER BAILEY: -- top of page 7.

9 THE WITNESS: -- at the top.

10 I think our intent is similar, if not the same,  
11 as that in the current rule.

12 Q. (By Commissioner Bailey) But the current rule  
13 doesn't talk about wildlife.

14 A. It -- It does. It says, In issuing a permit the  
15 Division may impose additional -- Oh, I'm sorry, this is  
16 fencing. Let me try the netting part of this.

17 Q. It says, All pits shall be fenced or enclosed to  
18 prevent access by livestock and fences shall be maintained  
19 in good repair.

20 And then the netting talks about nonhazardous to  
21 migratory birds.

22 A. Yes.

23 Q. But the current proposed rule just says wildlife,  
24 and everything from lizards to elk --

25 A. Well, it says -- also it says, Including

1 migratory birds.

2 Q. Right.

3 A. I guess -- I wasn't in the discussion of when  
4 wildlife was incorporated, and this is task force language.  
5 This included members of industry. And when they came up  
6 with this original language, I wasn't present so I don't  
7 know what they considered when they decided to use  
8 wildlife.

9 I think there was a lady here the other day from  
10 Fish and Wildlife --

11 Q. Uh-huh.

12 A. -- and she didn't even think the fencing  
13 requirements were adequate enough -- she didn't really  
14 criticize the netting -- or -- requirements.

15 Q. Right, she didn't offer any kind of size or --

16 A. No, but she --

17 Q. -- or configuration or anything.

18 A. -- where they had issues, they did bring that up,  
19 and my understanding, based upon the things that they did  
20 identify, they thought the netting was appropriate, because  
21 they didn't have any recommendation stating that it wasn't  
22 inappropriate.

23 Q. But this leaves it wide open for enforcement,  
24 whether an OCD inspector is going to say, Oh, well, it  
25 restricts the access by birds but it doesn't restrict

1 access by --

2 CHAIRMAN FESMIRE: -- mosquitoes.

3 (Laughter)

4 Q. (By Commissioner Bailey) -- mosquitoes -- or  
5 skinks, they were --

6 A. Yes, I think we're looking at the practicality of  
7 the language, so I don't know if they would take it to the  
8 extremes of the mosquitoes.

9 CHAIRMAN FESMIRE: So if I understand correctly,  
10 Commissioner, you're offering an amendment to make it  
11 mosquito netting?

12 (Laughter)

13 COMMISSIONER BAILEY: No, I'm just saying that,  
14 once again, here is performance-based language that's  
15 unenforceable, making it no different from Rule 50 -- it --

16 THE WITNESS: Well, I --

17 COMMISSIONER BAILEY: -- it follows Rule 50.

18 THE WITNESS: -- I believe there is a difference,  
19 and the difference is the additional language there. It  
20 says, Where netting is not feasible, the operator shall  
21 retoon -- reteen -- routinely inspect for and report  
22 discovery of dead migratory birds or other wildlife.

23 So there is an assessment that's going to be  
24 taking place, and they have to report this to the  
25 appropriate wildlife agency and to the appropriate Division

1 office in order to facilitate assessment or implementations  
2 of measures to prevent incidents from reoccurring.

3 I guess the way I'm looking at this, if your  
4 netting is inadequate, if it's determined it's inadequate,  
5 we're finding dead animals in your pit -- and this is  
6 permanent pit and permanent open-top tanks -- we have some  
7 provisions which -- the current rule doesn't allow for us  
8 to assess this.

9 So it does -- the idea is that it talks about the  
10 prevention of that and assessment. So we do add additional  
11 language to address those issues.

12 COMMISSIONER BAILEY: That's all I have.

13 CHAIRMAN FESMIRE: Commissioner Olson?

14 EXAMINATION

15 BY COMMISSIONER OLSON:

16 Q. Let's see, I've got some general questions I'd  
17 like to -- when some of those will be covered, and then  
18 maybe run through the rule itself.

19 Coming back to an issue that was brought up  
20 earlier about -- I think that was being brought up on  
21 general plans, wouldn't general plans being submitted be  
22 something that would be easier for the Division to process  
23 if you've gone through and approved the general plan the  
24 first time for -- say -- I think you were mentioning it for  
25 design criteria. Is this the intent, that you don't have

1 to sit here and worry about detailed review of the  
2 engineering each time; is that correct?

3 A. Yeah, and we're talking about the design --  
4 construction design of a pit or below-grade tank or -- and  
5 I do believe it's -- we've used that language for temporary  
6 pits, below-grade tanks and closed-loop systems.

7 So if a company has submitted such a plan, we  
8 have some knowledge of it. And it would be the same  
9 company requesting to use a plan -- that design of that pit  
10 or that closed-loop system or below-grade tank, and we know  
11 the dimensions of those, we have them on file, it should  
12 speed things up.

13 I think there has been recommendations from other  
14 parties to allow references from one company to another  
15 company's plan. I think that's where it gets confusing,  
16 because then you've got to figure out who's got the  
17 original plan.

18 And I think I did testify that if I were an  
19 applicant, I would submit that just speed it up. You know,  
20 submit the design plan. You've got it. All it is is a  
21 drawing, it's a one-page drawing.

22 Q. So general plans that are -- are a mechanism to  
23 reduce the burden on the operator, as well as the Division?

24 A. I would say it's more so on the operator, because  
25 we would still have to make sure we have that reference.

1 We would have to go look for it, regardless, to make sure  
2 it's adequate.

3 Q. But I guess you were saying that only applies to  
4 the engineering design specifications?

5 A. No, it's only -- The standard design is for the  
6 design of the temporary pit, for a closed-loop system, or  
7 for a below-grade tank. And this would be the design of  
8 those items.

9 The engineering design plan includes operational  
10 maintenance plans, closure plans, hydrogeologic report and  
11 so forth.

12 We're looking at the -- just the design of what  
13 you're proposing.

14 Q. But couldn't someone have a standard closure plan  
15 as well?

16 A. They could. I mentioned that. I -- actually, I  
17 mentioned that for the operational maintenance of your  
18 temporary pit. The -- It's based upon the requirements.  
19 Once you create that, it becomes a template. You could use  
20 it in that case.

21 The idea of submitting it in the application is  
22 that if they -- if -- like most of the projects I've -- to  
23 private consulting, you always carry it out to the field  
24 with you. So if there's any question -- we'll say a  
25 regulatory agency person shows up -- they're going to ask



1 you, Do you know you're in violation? If you don't have  
2 that plan on site, then ignorance is not bliss. The idea  
3 is, if they submit it as part of the application they  
4 should be providing it to the person drilling so they know  
5 what the operational maintenance requirements are as well.

6 But for the closure, if the closure is  
7 something -- once you establish you may have to modify it  
8 slightly, but it should act as a template as well.

9 Q. I guess I'm just trying to think in terms of a  
10 permitting burden, something that's trying to set up a  
11 mechanism so you'd reduce the burden on both the operator  
12 and the Division, I guess, for the review and the operator  
13 for what they're submitting. So is the idea, then, that  
14 the only thing that's really changing much are the site-  
15 specific conditions of the hydrology and geology that have  
16 to be addressed for each site?

17 A. Well, that's one of the major things. The  
18 problem that you run into with the closure plan is the 100-  
19 mile radius, because that site is not always the same.

20 And the other thing is the written consent from  
21 the surface owner, which is not always the same.

22 And then also the siting criteria is not always  
23 the same. That impacts your on- -- if you're proposing on-  
24 site closure.

25 So those things have to be considered by the

1 closure plan.

2           You can create a plan and change it, change those  
3 details in that plan, and resubmit it. We're not asking  
4 you to rewrite it from scratch ever time, but you can  
5 modify a plan. I mean, that's commonly done.

6           But the hydrogeologic report is something that  
7 will always change.

8           Q. And I've got a question I was asking of a few  
9 other witnesses. What percentage of the lands do you think  
10 will fall within the 50-foot-depth-to-water criteria?

11          A. Well, if I'm not mistaken Mr. von Gonten had a  
12 slide indicating those areas that would meet that  
13 requirement, I thought. I thought he had a slide  
14 indicating where wells from -- that the state -- or the  
15 State Engineer's office had wells permitted, and he pulled  
16 that data and he put it up on a slide and he showed all  
17 locations -- or locations where wells were at greater than  
18 60 feet.

19           We're assuming that a pit is 10 feet deep. So if  
20 they're greater than 60 feet, that would indicate all areas  
21 where you could meet the 50-foot separation with a 10-foot-  
22 depth pit.

23          Q. Well, I guess do you -- does the Division know  
24 what percentage of the current oil and gas operations areas  
25 are going to be affected by that 50-foot-depth-to-water

1 criteria?

2 A. I think there's going to be a lot of areas  
3 available for drilling. The concern was 100 feet. That's  
4 where it becomes difficult.

5 Q. And let's see here -- I think it might be simpler  
6 just to run through the rule itself. And I'll probably  
7 confuse everybody because I was using the more simple  
8 version of, I guess, Exhibit 3, which is just the proposed  
9 language itself, without all the other consensus statements  
10 that are put in the prior exhibit I guess you're referring  
11 to, so I might -- I'll just try to work through that, or  
12 use whichever one --

13 A. That's fine, I can point those pages out so we  
14 can have that up on the screen.

15 Q. As appropriate. I guess maybe we'll just start  
16 with the -- in the definitions.

17 A. Uh-huh.

18 Q. When I come into the definition of -- in  
19 17.7.E --

20 A. Page 2, Carl.

21 Q. -- which is the definition of a permanent pit --

22 A. Yes.

23 Q. -- if I look towards the end of that first line  
24 of that definition, it talks about the permanent pits only  
25 for the storage of produced water or brine.

1 A. Yes.

2 Q. Is that broad enough to cover the types of  
3 permanent pits that are used in the oilfield?

4 A. Well, this was generated -- if you -- and -- if  
5 you notice up here, it is in green. This is a task force  
6 definition, it was generated by people in the industry.  
7 This was their proposed language.

8 We tried our best to stay true and count on their  
9 knowledge of the use of these pits as well.

10 Q. What if somebody wanted to put in a permanent pit  
11 for clean pipelines? You -- essentially you're dealing  
12 with more than just potentially -- well, I don't know if  
13 you'd really classify that as produced water at that point.

14 A. Yeah, that may be not our exempt -- or nonexempt  
15 waste, that --

16 Q. Would it be more appropriate, maybe, just to say  
17 oilfield wastes?

18 A. Well, we want to make a clarification between  
19 this and the pits that are used under part 36. So if we  
20 say oilfield wastes, those pits, under part 36, deal with  
21 that type of waste. We don't want to create confusion on  
22 those.

23 Q. But they also deal with produced waters as well?

24 A. Yes, at that point it is a waste material.

25 Q. I was just wondering whether that -- the way

1 you've got that defined, whether that's broad enough to  
2 cover the range of activities that you're going to have in  
3 the field?

4 A. I don't know what to say about that. It's --  
5 Like I said, this was generated from the task force from  
6 industry members were present, and this was their  
7 conclusion of what these pits were used for under this  
8 rule.

9 Q. So I guess, then, according to this definition  
10 you couldn't have a permanent pit for anything other than  
11 produced water or brine? Do I understand --

12 A. Yes.

13 Q. -- that correctly, then?

14 A. That's what it states.

15 Q. And since we're on definitions, I guess I'll go  
16 to the -- I guess this is in the OCD's proposed prehearing  
17 filing on the other definitions that are in Exhibit 3. I  
18 think we had a lot of discussion on the definition of  
19 below-grade tank. It's in 15.1.7.B.(5).

20 A. Yes.

21 Q. I guess -- Do you understand that the -- when  
22 that definition was originally put in there, that was  
23 allowing them to have tanks with -- essentially in a pit  
24 with visible sides, it was trying to provide an incentive  
25 for them to put in tanks at that point?

1           A.    Like I said, I've only been here since July of  
2   2006. I don't know what the intent -- I don't know what  
3   the definition was proposed in 2003 when Rule 50 was  
4   established. I don't have that knowledge.

5                   What was the below-grade tank definition proposed  
6   at that time? I don't know.

7           Q.    Well, I guess like -- I come back to looking at  
8   -- I think what some of the industry folks are bringing up.  
9   There was -- there's not a requirement for -- or real  
10   concerns, I guess, on above-ground storage tanks, then, is  
11   there? Isn't that similar -- isn't this -- Isn't a pit  
12   where the sides are visible similar to an above-ground  
13   storage tank?

14          A.    Well, I think our concern is, previously there  
15   was a permanent pit there, and permanent pits fall up under  
16   -- they're considered disposal and -- trying to make sure I  
17   use the right words -- they're considered disposal and  
18   storage pits under Rule 50.

19                   My understanding is that they closed those pits  
20   and put in these tanks to be used for the same purpose as  
21   those -- a permanent pit would have been used. That's our  
22   concern, that they're using something that's not regulated  
23   under Rule 50 for the same purpose, that they replaced it  
24   with -- with this tank.

25                   So they're -- they don't fall up under any

1 integrity testing that's required, because they're not  
2 considered a below-grade tank. There's nothing to verify  
3 if they're leaking or not.

4 Under current Rule 50 for a permanent pit, you're  
5 talking a double lined pit with leak detection. And now  
6 you're -- now what's been allowed through the definition --  
7 the current definition of below-grade tank is a tank that  
8 has no secondary containment, that is not -- has -- is not  
9 double walled. It's not indicating, it's not being  
10 monitored to see if it's being -- it leaks or not.

11 So our concern is the equivalent factor of those  
12 operations.

13 Q. Well, I think I understand your idea of having  
14 them all, you know, registered and having some knowledge of  
15 them and looking at some kind of sampling under them at  
16 closure. But otherwise they seem similar to an above-  
17 ground storage tank.

18 A. I guess --

19 Q. As long as the sides are fully exposed and if  
20 they put it on a gravel pad in the bottom of the pit, then  
21 obviously I think that's what -- I think you were talking  
22 about what some of the practice has been. Obviously, you  
23 may not see some of the leaks from the sides -- or from the  
24 bottom, but it should come out within the pit if you're  
25 seeing fluids in that --

1 A. Well --

2 Q. -- excavation area that it's sitting in.

3 A. Yes, if they're using gravels, which I read a lot  
4 of comments, you might not -- you're creating a very  
5 permeable subsurface for these tanks.

6 Our biggest concern is, is that tank the  
7 equivalent of a disposal storage pit under Rule 50? Does  
8 it -- based on design, is it the same? Because it's being  
9 used as the same, it's being -- basically, you took the  
10 existing pit and you replaced it, but the operation is the  
11 same. Is it the same as an equivalent protection, a  
12 single-walled tank? And it's not.

13 Q. How about if you had a double bottomed tank?  
14 That would --

15 A. It would have secondary containment --

16 Q. -- have secondary containment.

17 A. -- and leak detection. Yes.

18 Q. I guess does the Division have the same concerns  
19 over above-ground storage tanks? Because essentially you  
20 have the same construction on above-ground condensate  
21 storage tank?

22 A. Well, the --

23 Q. It's not open topped, it's got a -- it's closed-  
24 top.

25 A. Yes, I think the difference is, those tanks



1 aren't replacing and being used in the same areas the  
2 previous permanent pit was. That's the difference.

3 Q. But that's just for the idea that -- what you  
4 need to do upon closure, I guess, because the -- you then  
5 have a pit that was never really closed. Is that the  
6 problem?

7 A. Can you state that again?

8 Q. Well, a lot of the tanks were placed in prior old  
9 pits because they already have the excavation dug, and the  
10 drainage is just gravity drainage to the pit at that point,  
11 so what they did was place the tank, then, in the pit so  
12 they'd still maintain gravity drainage. But the pit -- in  
13 some cases the pit was never formally closed at that point.

14 A. Well, my understanding is that under Rule 50 they  
15 were supposed to close those pits. My -- undoubtedly,  
16 the -- my understanding is, when you read Rule 50, they  
17 were to, at a certain timeline in 2004 -- I believe it was  
18 either April or May -- they were required to register those  
19 or provide lists of those to identify if they were going to  
20 close those types of pits or permit them.

21 This is a clear indication they chose not to  
22 permit them, so my assumption is that they were closed.

23 Q. Well, what about in the exempt areas and the  
24 vulnerable area in the south San Juan Basin?

25 A. No --

1 Q. They're still allowed to have pits at that point.

2 A. They -- Exactly, they are allowed to have unlined  
3 pits, and they're exempt from that liner provision. I  
4 wouldn't unders- -- I guess I would be confused if they  
5 used a tank, if they were still allowed to use those pits.

6 Q. Well, some operators may have just gone through  
7 and put in tanks, just to try and reduce their  
8 environmental liability and getting -- stopping using them  
9 anyway, because I know some operators that have done that.

10 A. Yeah, and our new proposed rule is to eliminate  
11 even those unlined pits that are currently out there.

12 Q. Okay. Well, I'll move on from that, because that  
13 may come up again in the other part of the rule.

14 I just want to come through, I guess, on page 2  
15 I'm looking at, under 17.8 -- this is of Exhibit 3 --

16 A. Page 2 --

17 Q. -- 17.8.A, and it talks about -- I want to just  
18 make sure if I have this clear, if I understand this. The  
19 last sentence talks about after some effective date an  
20 unlined permitted pit is prohibited and the Division shall  
21 not issue a permit for an unlined permanent pit.

22 But what about unlined temporary pit? I don't  
23 see that mentioned there.

24 A. Well, there's a reason that we put this in this  
25 area. We wanted to address the unlined permanent pits, and

1 I believe if I'm not mistaken, Mr. Carr and Mr. Hiser, they  
2 agree with this. It's under part 8, permit required,  
3 proposed. This is not open to exception.

4 If you go to section 17 at the end, the  
5 transitional provisions, and it's 17.A, and it's on page  
6 24 --

7 Q. You'll have to excuse me because I wasn't using  
8 that one.

9 A. Oh, okay, I'm sorry. It's up here, if you want  
10 to look at it up there.

11 17.A says, After the effective date unlined  
12 temporary pits are prohibited.

13 Now the transitional provisions are open to  
14 exceptions.

15 Q. So you're saying the -- essentially, the  
16 prohibition, then, on that is in the transitional  
17 provisions --

18 A. Yes.

19 Q. -- and not in the permit requirement?

20 A. Yes.

21 Q. Okay, thank you. And then in 17.9.B -- and  
22 that's in B.(1), before all the numbering -- you're talking  
23 about a registered professional engineer shall certify the  
24 engineering design plans.

25 A. Yes.

1 Q. And down below, then, you'll have them providing  
2 essentially hydrogeologic reports.

3 Are registered professional engineers qualified  
4 to provide hydrogeologic reports on the geology and  
5 hydrology of the site?

6 A. No, I think -- this is -- once again, it's in  
7 green, it's task force language. The majority of this  
8 language comes straight out of part 36, which includes the  
9 geologic -- hydrogeologic report as well. I believe it's  
10 verbatim, except for the quality control/quality assurance  
11 construction, installation plan. This language does  
12 currently exist in part 36.

13 What we're looking at is the -- once again, the  
14 design for that part. The design of the double lined, leak  
15 detection permanent pit should be designed by a registered  
16 -- let me make sure I've got this right -- a registered  
17 professional engineer.

18 Q. Well, I understand that, but the way this reads  
19 it says that the engineering design plan shall include --  
20 and then there's the list of (a) through (n), and one of  
21 them is the hydrogeologic report. So the professional  
22 engineer is having to certify something he may not be  
23 qualified for, providing the geology and hydrology of the  
24 site? Does that -- I mean, I had the same thoughts when --  
25 with Rule 36 myself, but --

1           A.    Yeah, it's -- it might be confusing.  Like I say,  
2   I've done private consulting.  If you're smart you can  
3   probably get a hydrologist or geologist to certify that to  
4   cover you, and then you can stamp your drawings.

5           Q.    Because I've seen engineers stamp a lot of  
6   hydrogeologic information, which was --

7           A.    Yes.

8           Q.    -- very much incorrect.

9           A.    Yes, that is true.

10          Q.    And I guess following that, if a registered  
11   engineer has to certify this engineering design plans, does  
12   OCD require a PE to review the hydrogeologic report, since  
13   it was stamped by an engineer?  Isn't a hydrologist or  
14   geologist on staff at the OCD able to actually perform  
15   reviews of something that's certified by a professional  
16   engineer, even though he may not have the expertise for  
17   what he's stamping?

18          A.    Well, when we went through the siting criteria  
19   and the examples that we gave for the information, it  
20   wouldn't take a hydrologist or geologist to compile that  
21   information.  So I think we could assess that.  I currently  
22   assess those type of submittals myself.

23          Q.    Well, I was just wondering, because we've had  
24   problems with this in the Environment Department with the  
25   engineering board the last several years on liquid waste

1 systems and whether a registered engineer is required to  
2 certify that, and then whether a registered engineer has to  
3 be able to be the person to review it on behalf of the  
4 Environment Department as well.

5 So it was a concern for me that if we're  
6 providing hydrologic information that obviously is not  
7 engineering that in -- that what -- the information that's  
8 being provided here, why would that be -- need to be  
9 certified by an engineer?

10 A. That could probably be clarified that only the  
11 design -- there could be some language, clarifying  
12 language.

13 We did extract this language from part 36. It  
14 was expressed to us during the task force meetings that the  
15 requirements for the ponds that are permitted under part 36  
16 be incorporated in this rule to address as permanent pits,  
17 so we followed that. So that -- so this language is from  
18 part 36, for the most part.

19 Q. So it could be clarified just that they'll be  
20 certifying the engineering design specifications, if you  
21 want to call it, for --

22 A. Any type of construction or design aspect --

23 Q. Okay.

24 A. -- yes, because there's things pertaining to dike  
25 protection and structural integrity and so forth, they

1 would have to assess those.

2 Q. Thank you. On -- Let's see here where I'm at.

3 I just want to look at your language on page 3  
4 under 17.9.C -- C.(1) --

5 A. Page 4, Carl, at the top.

6 Q. -- and the end of that line talks about, If  
7 applicable, other on-site closure standards that the OCD  
8 approves.

9 What are you -- what kind of things are you  
10 thinking of there?

11 A. Well, I guess what we're looking at, there's --  
12 there can be a multitude of things to consider. We have --  
13 under the exceptions, we have alternative methods. We  
14 don't know what those are going to be. It's up to industry  
15 to propose them.

16 A good example, something that we've heard in the  
17 past is, I think Cimarex came in with a proposal when they  
18 were looking at things, they were actually doing research  
19 on it. Due to their ability to extract the drill cuttings  
20 through their method of closed-loop, they were looking at  
21 possibilities of maybe creating a lined, bermed area,  
22 putting those cuttings inside there and creating a pad in  
23 order to put their tanks on, but also having a collection  
24 system so if it did rain it might flush the chlorides out  
25 and they could collect those chlorides and dispose of them

1 properly.

2 So we would have to assess these type of  
3 scenarios. And maybe there might be some testing required,  
4 we don't know. We -- you know, these are things -- it's  
5 open to consider, but we have to assess each one by a case-  
6 by-case-type scenario of what they're proposing. So since  
7 we don't know what those are, we're leaving it open to  
8 address.

9 Q. Okay. And then coming down to the siting  
10 requirements in 17.10 under A.(1).(d) -- actually, I guess  
11 maybe it's -- it's A.(1).(c) --

12 A. Okay.

13 Q. -- this talks about siting requirements from  
14 permanent residences, schools, hospitals, institutions or  
15 churches. Where do businesses fall in that? Somebody's  
16 got a restaurant or -- Is that considered an institution?

17 A. Institution -- I'm trying to think this morning,  
18 because I would consider that kind of a school, church. It  
19 could fall under things that may not be considered, a  
20 hospital, it could be considered a college, it could be a  
21 lot of things. Yeah, businesses were not included in this.

22 This is one of the siting requirements from part  
23 36 as well. Maybe the distance is a little bit different.

24 We did not include businesses, and I think part  
25 of it is, when you look at permanent resident, you look at



1 a school, hospital, institution or a church, you're looking  
2 -- in permanent resident, you're looking at long-term  
3 exposure, you're looking at someone possibly being there  
4 all day, you're looking at children.

5 Looking at schools, you're looking at mass  
6 volumes of people, lot of children in one centralized  
7 location five days a week.

8 Hospitals, it could be someone 24/7, people being  
9 there all the time.

10 Institution, if it's such a thing as another type  
11 of institution other than a hospital or a college, once  
12 again, you're talking large volumes and people being there  
13 quite a bit.

14 Church, another instance where you're going to  
15 have a large volume of people concentrated in one place at  
16 one time.

17 A business may have just a couple of people  
18 present. You may have infrequent visitation to that  
19 business. You're -- you know, you may not have the  
20 consistency of the volume or presence of the other  
21 possibilities.

22 Q. Well, I'll think about that. Thank you.

23 And then just a question, I guess, on -- when I  
24 get down to 17.10.A.(1).(d). So this is a different  
25 definition than we currently have for our wellhead

1 protection area.

2 A. I didn't think so, I thought it was the same.

3 Q. Is it?

4 A. I believe it's the same language, directly from  
5 that. Instead of stating a wellhead protection area as it  
6 states under Rule 50 --

7 Q. Uh-huh.

8 A. -- I believe we used the dividing language under  
9 Rule 50. I could be wrong, let me double-check here.

10 But we did change a distance, then. I'd like to  
11 clarify, I thought it was the same. It's predominantly the  
12 same. The only difference is the -- it looks like the --  
13 it's been expanded from 200 feet to 500 horizontal feet.  
14 So we did add some additional language. I stand corrected  
15 on that.

16 Q. And so where, then, is the wellhead protection  
17 area again used now? So why didn't you just change the  
18 definition of a wellhead protection area, versus writing a  
19 separate --

20 A. Once again, this is task force language. This  
21 was developed before my involvement. They came up with  
22 these numbers, so I -- I cannot -- I was not involved in  
23 those conversations, so this was actually from the task  
24 force. It's -- If you notice, that is in green.

25 The only thing that we did was add that this

1 would be a consideration at the time of the application,  
2 because things are subject to change, and we can't always  
3 -- Well, say you get permitted, and then someone goes out  
4 and put a well, and that falls within the setback. We  
5 permitted it at the time when they met the siting criteria.

6 Q. Yeah, I guess I was just confused why the  
7 Division wouldn't just come back and modify its wellhead  
8 protection area to say this is -- seems to be the  
9 indication is, is that the definition was not adequate.  
10 But then we still have a definition of a wellhead  
11 protection area back in the definitions, which is only  
12 defined by 200 horizontal feet.

13 A. Yes. As I stated earlier, I was not involved in  
14 the conversations that led to the 500-foot consideration,  
15 and the task force -- this is task force language, and we  
16 tried to stay true to their recommendations.

17 Q. Well, would it make, maybe, more sense just to  
18 say that it won't be within a wellhead protection area, and  
19 then change the distance and the definition, instead of  
20 having conflicting language in the definitions and the  
21 rule?

22 A. I would say yes. The -- Maybe the only  
23 difference is, since wellhead protection area is used  
24 throughout all rules under title -- I believe it's title 15  
25 -- that it might be argued that the impact of that for --

1 let's say things permitted under part 36 or other items  
2 where we use wellhead protection area, that it might be  
3 argued that they do not want that change, because then  
4 there would be a new siting criteria that wasn't there  
5 previously. It would have a larger impact, changing that  
6 definition.

7 Q. So it would have an impact on the facilities  
8 under Rule 36 and potentially abatement plans? I guess  
9 that's probably the other place it's used.

10 A. Possibly. I don't know if it's used there, I do  
11 know that it's used in part 36.

12 Q. Well, it was just a concern of mine that we were  
13 having some conflicting language through the rule and the  
14 existing definition, so I'll move on from that.

15 And I guess when I come back to a similar thing  
16 on siting under 17.10.A.(2).(c), here we have the 1000 feet  
17 again from permanent residences. This wouldn't apply to a  
18 -- somebody could have a permanent pit within a short  
19 distance from a business?

20 A. Possibly, yes.

21 Something I would like to point out, in part of  
22 my exhibits I believe I've provided a copy of the City of  
23 Aztec code, so some of these areas that are impacted are  
24 establishing their own siting criteria for these  
25 conditions. And if I'm not mistaken, the City of Aztec

1 requires 400 feet for a drilling pit or reserve pit, and  
2 it's in that document.

3 Q. But if it wasn't located within a city limits  
4 that's affected by some ordinance, it -- something could be  
5 located within -- a permanent pit could be located within  
6 1000 feet of a business?

7 A. Possibly. There's other things to consider. If  
8 you're -- if -- my understanding of what you're suggesting,  
9 it could be in a rural area.

10 Q. Uh-huh.

11 A. If they have a well, it may impact. It may be  
12 greater than the proposed 300 feet because of the setback  
13 for wells. So there's other things to consider with that,  
14 that may be more protective.

15 Q. And then I guess I'll move on to 17.11 under  
16 D.(3), the fencing requirements.

17 A. That's page 6.

18 CHAIRMAN FESMIRE: Before we start that, why  
19 don't we go ahead and take a 15-minute break and reconvene  
20 at a quarter to 11:00?

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

22 (The following proceedings had at 10:53 a.m.)

23 CHAIRMAN FESMIRE: Okay, let's go back on the  
24 record. This is Case Number 14,015, this is a  
25 continuation. Let the record reflect that it is five

1 minutes to 11:00 on Friday, November 16th. We were in the  
2 middle of the examination of Mr. Brad Jones by Commissioner  
3 Olson -- I say you -- hopefully the middle, but that may  
4 not be correct.

5 Mr. Jones, are you ready to proceed?

6 THE WITNESS: Yes, sir, I am.

7 CHAIRMAN FESMIRE: Commissioner Olson?

8 Q. (By Commissioner Olson) Yeah, I'll continue.  
9 You'll have to excuse me, Mr. Jones, but you're the only  
10 one that's really testified on the language, so --

11 A. Oh, that's fine, that's fine.

12 Q. -- that's a point of -- big point of concern for  
13 me, just the actual language of the rule.

14 So I guess I'll come where I left off, is on  
15 19.15.17.11.D.(3), which is where I left off with a  
16 question. And I come into here, and this requirement is  
17 requiring -- is going towards fencing of pits and below-  
18 grade tanks to exclude wildlife and livestock, but it's  
19 going into the standard to be four strands of barbed wire  
20 between one and five feet above the ground.

21 A. Yes.

22 Q. Do you understand that standard livestock is  
23 probably more like around four feet?

24 A. Once again, I'd just like to clarify. This was  
25 proposed by the task force, we tried to -- tried to stand

1 by what was proposed at the task force consensus language  
2 that was presented. We felt they, of all people, would  
3 have a clear understanding. If I'm not mistaken, we had a  
4 representative from the -- I want to make sure I get the  
5 organization right. The New Mexico Cattle -- Cattle  
6 Association?

7 COMMISSIONER BAILEY: -- Cattle Growers  
8 Association.

9 Q. (By Commissioner Olson) -- Cattle Growers?

10 A. -- Cattle Growers Association, I apologize if I  
11 stated that incorrectly. And we thought with their  
12 involvement we would -- this language would be  
13 representative of what they used and consider for  
14 containment of their cattle.

15 Q. But for ranching purposes and containment of  
16 cattle, they don't have five-foot fences?

17 A. I -- Personally, I don't know. We were counting  
18 on their expertise in this.

19 Q. Well, I guess, then, what's the intent of a five-  
20 foot fencing criteria if -- it must not be for purposes of  
21 livestock, then, because that's not a standard livestock  
22 fencing that's used in the ranching industry.

23 A. If it's not, I guess there is an additional  
24 consideration here. It is wildlife. Having an additional  
25 foot would be a method to address certain wildlife that

1 could attempt to try to jump over such fence, such as deer  
2 or elk.

3 Q. Are you aware that even elk would go over a five-  
4 foot fence?

5 A. I think elk would probably go over a six- to  
6 seven-foot fence.

7 Q. And then if it's -- well, I can see that the --  
8 obviously a five-foot fence is higher than standard  
9 ranching fences and would just keep out livestock. But  
10 when you come towards wildlife, a four-strand barbed wire  
11 fence is not going to keep out rabbits and other types of  
12 wildlife that -- the category of wildlife is rather broad,  
13 isn't it?

14 A. It definitely is. I guess what we're trying to  
15 do is to expand upon the language that is currently in Rule  
16 50. It states, All pits shall be fenced or enclosed to  
17 prevent access of livestock, and the fences shall be  
18 maintained in good repair.

19 It also allows the Division to impose additional  
20 fencing requirements for the protection of wildlife in  
21 particular areas. The thing it doesn't do is specify any  
22 type of fencing requirements, other than those provisions.

23 So we're trying to at least establish a minimum  
24 standard of fencing.

25 Q. Uh-huh. Well, I understand that, but I wonder if



1 it's practical for the purposes that you're listing,  
2 because in the first line it talks about excluding wildlife  
3 and livestock, and I don't know if you believe that's  
4 physically possible to exclude wildlife with a four-strand  
5 barbed wire fence?

6 A. It's a starting point. If you look at the last  
7 sentence of that provision it also states that, The  
8 appropriate Division district office may impose additional  
9 fencing requirements for the protection of wildlife in  
10 particular areas.

11 So it does grant the OCD the opportunity to make  
12 an assessment of that fencing to see if it's appropriate,  
13 so we can impose additional requirements if -- if it's  
14 deemed necessary.

15 Q. Wouldn't it make more sense, then, if -- then, to  
16 keep it with a standard livestock fencing, and then if  
17 that's not appropriate, to -- you know, you still have the  
18 language that the Division may impose fencing requirements,  
19 additional fencing requirements for the protection of  
20 wildlife in particular areas, and leave that up to the  
21 Division for certain areas. Because I don't think you'd  
22 need to have a -- There'd be loss potential for the need  
23 for a five-foot fence in -- you know, in Jal versus  
24 something up on National Forest land in the San Juan Basin.

25 A. Yes, I think -- I'll go back to my original

1 response. If you notice, it is in green. I think the only  
2 thing we did was include below-grade tanks. We tried to  
3 stay true to our commitment to the task force. The task  
4 force proposes language, it was consensus language. We  
5 were trying to show our commitment to the task force in our  
6 involvement in that, that's why we proposed it.

7 Q. I understand that. I'm just wondering about the  
8 practicality of it for -- as a statewide requirement. I  
9 could see it maybe in some areas, which -- more problems  
10 with livestock or with wildlife that can jump a four-foot  
11 fence.

12 A. Yes.

13 Q. But I guess the other part would be, then, on --  
14 would it be -- the current language goes towards preventing  
15 access, and this one goes towards excluding.

16 A. Well, for clarification it's preventing access  
17 for livestock only, the current language.

18 Q. All right, but I'm focusing on the -- just the  
19 word exclude, versus prevent. Wouldn't it maybe make -- be  
20 more practical just to say to prevent --

21 A. It could be.

22 Q. -- wildlife, because I don't think it's going to  
23 be practical to -- if you can exclude wildlife with a four-  
24 strand barbed-wire fence.

25 A. I don't see where that -- you know, that's --

1 that would be fine, to use prevent as well.

2 Q. Yeah, I guess -- Well, I'll kind of think about  
3 that five-foot requirement. I'm just -- I'm not sure about  
4 the practicality on a statewide basis. I'll have to think  
5 about that a little more.

6 I guess I'll move on, then, to 17.11.E on the  
7 netting.

8 A. Okay.

9 Q. Down in the second sentence you have a  
10 requirement for reporting the discovery of dead birds and  
11 wildlife, and you have it to both the wildlife agency and  
12 to the Division district office.

13 I guess -- When do they report that? There's  
14 no --

15 A. Well, there's --

16 Q. Should there be a time --

17 A. Well, there's routine inspections --

18 Q. -- required?

19 A. -- to make this determination of the discovery of  
20 the dead migratory birds and other wildlife. It would be  
21 upon that discovery that they should be notifying such  
22 agencies.

23 Q. But it doesn't say that, does it? It just says  
24 that they'll report it.

25 They could report it a month later, is that -- It

1 seems to me that that's a potential problem for enforcement  
2 because the operator can say, Well, I just -- you know, it  
3 didn't say when I had to report it --

4 A. Well --

5 Q. -- I'm reporting it a month later.

6 A. -- I guess the flip side of that is if an OCD  
7 representative went out there and discovered dead birds and  
8 they had it documented and they hadn't reported it, they  
9 could fine them for not reporting. It could be looked at  
10 two different ways.

11 Q. Would it be logical to maybe have some kind of  
12 time frame for reporting?

13 A. In this case, it -- there could be a practical  
14 matter of that, yes.

15 Q. And that would help with enforcement of the rule?

16 A. Yes.

17 Q. And then coming down to 17.11.F.(2), just the  
18 last full line. It's a typo in there, but it should be  
19 temporary -- operate the temporary pit in a safe manner.  
20 So that's minor.

21 I don't know if you can answer this question.  
22 The next one comes up on 17.11.G.(3), and it was -- maybe  
23 the next Division witness can maybe address this. I'm not  
24 sure if you're the appropriate one for this. But when  
25 Raven Industry was here the other day, they did not

1 recommend -- this is under 17.11.G.(3), at the end it talks  
2 about complying with EPA SW-846 method 9090-A. As a liner  
3 installer, he did not recommend that method, and I was  
4 wondering if the Division had any --

5 A. I -- I --

6 Q. -- comment on why that method was being required  
7 and what the potential problems with that are?

8 A. Yeah, I -- I'm going to defer this to Mr. Chavez  
9 for his presentation. But I would like to say that this  
10 language comes directly out of part 36 as well --

11 Q. Uh-huh.

12 A. -- so...

13 Q. Okay, I'll save that for Mr. Chavez --

14 A. Yeah, just --

15 Q. -- maybe he can answer some questions on that.

16 And I come down to 17.11.G.(7). It talks about  
17 the leak detection system being -- consisting of compacted  
18 soil. Is there any allowance for any type of geotextile  
19 fabric that could convert -- or could convey fluids as  
20 well, besides just being a soil system?

21 A. Yes, there is. It would be requested under the  
22 exception provision for this. In that case they would have  
23 to demonstrate that it's equivalent or better, meaning that  
24 in this case it would be equivalent or better to the  
25 performance of the two feet of compacted soil with that

1 hydraulic conductivity -- saturated hydraulic conductivity  
2 rate.

3 So there are protocols in the proposed rule under  
4 the exceptions that would grant such a replacement of  
5 material. And that should be easily obtained.

6 Q. Is that an actual exception to the rule, or that  
7 has to potentially go through public hearing, or is that an  
8 alternative method that would be administratively approved?

9 A. As it stands now, it would be an exception under  
10 the rule. Not all exceptions require hearings. I believe  
11 if there's no comments, and written waivers are provided,  
12 then it could be done administratively.

13 Q. Well, I guess -- aren't geotextile fabrics  
14 commonly used for --

15 A. Oh --

16 Q. -- leak detection systems, instead of a soil  
17 system?

18 A. Yes, and forget my previous answers. If you look  
19 at the last sentence in that provision, The operator may  
20 install alternative methods that the Environmental Bureau  
21 and the Division's Santa Fe office approves.

22 I guess I missed that in our discussion. I just  
23 saw that.

24 That allows for administrative approval without  
25 an exception, so I'd like to clarify that.

1 Q. Okay.

2 A. So there is that opportunity.

3 Q. Thank you, that helps.

4 And then I come down to 17.11.H.(2), just make  
5 sure I'm not confused on this. It talks about an operator  
6 of a closed-loop system that uses temporary pits, but  
7 doesn't a closed-loop system -- is defined as steel tanks,  
8 so isn't -- this is a little confusing to me.

9 A. Well --

10 Q. It seems to me you're implying that the closed-  
11 loop system has temporary pits.

12 A. Well, what we've seen, we've seen operations of  
13 both. We've seen -- we've seen some operators that still  
14 use pits, we've seen operators that use drying pads, and  
15 we're considering both of those. So if you use a temporary  
16 pit, you must comply with the temporary pit requirements.

17 With that, sometimes they'll have tanks and pits  
18 out there that will recirculate those muds through both.  
19 So they may not have a centrifuge-type unit to extract the  
20 solids out. So sometimes they're using the pit in  
21 conjunction with tanks.

22 Q. Well, it just seems to me that's not a closed-  
23 loop system, then, is it?

24 A. Well, we're looking at the -- Like I was trying  
25 to get at in our definition, our distinction of the closed-

1 loop system is the management of fluids only. It has  
2 nothing to do with the solids.

3 The fact that you're recycling, you're reusing  
4 those fluids, reclaiming those fluids to continue use at  
5 the site -- that's what a closed-loop system is to us.  
6 That's why we had to clarify in our regulations, if you're  
7 going to use a drying pad or a temporary pit that's  
8 required, because we're addressing in this portion of it  
9 the management of solids. And in the case with a temporary  
10 pit, it would be the management of solids and fluids.

11 Q. So it's some kind of a hybrid system, then, is  
12 what you're saying?

13 A. Yes.

14 Q. It's not -- Okay.

15 A. It's not one distinct system that only uses a  
16 drying pad.

17 Q. Okay, because I was thinking of it -- you say --  
18 and a closed-loop system is a distinct system to me, that's  
19 what I was thinking, which --

20 A. Well, I guess if you don't mind if we go back to  
21 the definition of a closed-loop, the proposed definition is  
22 a system that uses above-ground steel tanks for the  
23 management of drilling or workover fluids without using  
24 below-grade tanks or pits.

25 There may be a case where they're using both,



1 like you were talking about a hybrid. There's -- It was  
2 brought to my attention yesterday -- I didn't realize this  
3 -- there's some where they actually have kind of above-  
4 ground tanks even for the solids, which they don't have to  
5 construct a drying pad.

6 So there's multiple uses of these systems.

7 Q. Okay. Well, I guess I was -- when I looked at --  
8 That was my problem. When I looked at the definition of  
9 closed-loop system it excluded pits, so -- And here you're  
10 saying that a closed-loop system uses pits, so therefore it  
11 wasn't a closed-loop system.

12 A. Yeah, we might want to clarify that in the  
13 definition.

14 Q. So I was wondering if that provision was even  
15 necessary, because if it has a temporary pit it must meet  
16 the requirements of the rule, regardless of whether you're  
17 using a closed-loop system or not.

18 A. I guess --

19 Q. And to me, that seems like a closed-loop system  
20 is a very specific thing, according to your definition,  
21 that doesn't include pits.

22 A. Yes, and we may want to clarify that with that  
23 definition and maybe remove "pits" from that.

24 Q. Okay. And then we're going to get back to  
25 everybody's favorite topic again, which we were talking

1 about earlier, below-grade tanks. And I guess I'm -- I  
2 still get confused when I get into some of these  
3 requirements for the below-grade tanks. If I look at, you  
4 know, 17.11 -- this is I.(1), seems to be conflicting with  
5 I.(6). You have -- in I.(1) you talk about the tank's  
6 bottom is below grade, and so the sidewall has got to be  
7 open for visual inspection for leaks. But then down in  
8 provision (6) you've got to have a double wall system with  
9 the capability to detect leaks.

10 So if you have a double wall system, why would  
11 you need the sides to be open for visual inspection. If  
12 you had double wall tank, it's similar to a double lined  
13 pit, and I would think the -- really it doesn't matter  
14 whether the sides are open at that point. In a double  
15 lined pit you don't see the exterior walls of the pit, and  
16 that's -- and that's allowable.

17 A. Well, I guess we have a lot of scenarios to  
18 consider for a below-grade tank, and we're trying to  
19 address them all under this provision. In some cases we  
20 will have situations where the sidewalls are visible and  
21 they can be inspected. In other cases, we won't.

22 So I guess what -- I think there's some  
23 overthinking of the proposed language, because we're trying  
24 to address all scenarios, and they're not all the same.  
25 And maybe that's where people are getting confused. You

1 need to apply the appropriate or the applicable part of the  
2 regulation, depending on what your below-grade tank is.

3 So if you had a below-grade tank where your  
4 sidewalls were visible and where the tank is -- the bottom  
5 of the tank is below grade, then it shall be open for  
6 visual inspection for leaks.

7 In certain cases you may have, and it's allowing,  
8 a double wall system with the capability to detect leaks.  
9 So we're trying to address as many scenarios as possible in  
10 this.

11 Q. I understand that, but when I look at the  
12 language which starts at I, it says you'll design and  
13 construct it in accordance with the following requirements.  
14 So the way that reads to me is that you must meet all of  
15 those requirements of I, not just whichever one is -- is  
16 applicable.

17 A. I think maybe we should provide some additional  
18 language, such as acable -- acapable -- I can't even say  
19 it.

20 Q. Applicable.

21 A. Applicable.

22 Q. Because I know I understand how it's used quite  
23 well, and it was confusing for me. So I know if it's  
24 confusing for me, it will be confusing for the operators as  
25 well.

1           A.    Yeah, we were trying to address all scenarios,  
2           and since there's a bunch out there -- especially with the  
3           definition change, we have to address them all.

4           Q.    So this is -- so from what you're saying, then,  
5           the Division's position is that these are -- are more of  
6           various options, so you could have a tank in a -- I don't  
7           know if you want to call it -- open pit for lack of a  
8           better word, open depression, with the sidewalls exposed,  
9           as long as it's on some type of impermeable barrier, is  
10          what you're -- I think you were saying earlier?

11          A.    Yeah, our concerns, though, if you look at the  
12          tank placed within a geomembrane lined collection system,  
13          there is a provision that that liner must be secured to the  
14          tank to prevent collection of rainwater. If you have just  
15          a liner beneath that tank, if it rains it's going to be  
16          difficult to determine if it's rainwater or if the tank is  
17          leaking.

18                So there are some considerations when you combine  
19          those two aspects to make your secondary containment with  
20          leak detection. And these were recommendations from the  
21          guidelines.

22                So there's some considerations to be applied to  
23          that if you're going to do such a retrofit.

24          Q.    Well, I understand that. That actually comes to  
25          another question I had, and now since you've brought it up

1 I'll jump ahead to that, that -- where you talk about  
2 securing that secondary liner, if you're using some type of  
3 a geomembrane, to the tank to prevent the rainwater, and  
4 are you aware that it's very difficult -- there's been a  
5 lot of installations of systems in that manner in the past?  
6 And that was originally -- came out of the 1980s, and a lot  
7 of tanks were installed in that manner, and a lot of them  
8 ended up with fluids in the leak detection because they  
9 could not properly band the liner to the tank to prevent  
10 rainwater from --

11 A. Yeah --

12 Q. -- it was virtually impossible to prevent  
13 rainwater from getting into secondary containment system  
14 with that type of a system.

15 A. Yeah, I -- well, this came -- this language came  
16 directly from the 2004 guidelines that were based on  
17 additional recommendations to Rule 50. So they were  
18 generated in 2004.

19 Q. Well, actually it did come before 2004, that's  
20 just what the latest version --

21 A. Oh, okay.

22 Q. -- was. Make a comment.

23 But in practicality, it was very difficult for a  
24 system to actually prevent rainwater from getting into it,  
25 because what would be the mechanism for securing it to the

1 tank? It's usually banding; isn't that correct?

2 A. That could be one method, yes.

3 Q. And then if rainwater just comes and builds up on  
4 the band, it's going to leak into the leak detection  
5 system.

6 A. Possibly. The other consideration is some type  
7 of adhesive, and I think there's plenty of adhesives  
8 present out -- that will allow that to occur.

9 Q. Okay. Well, I -- maybe on another side is -- are  
10 there still -- I know in the past operators had started  
11 getting away from those types of systems and started going  
12 to double walled tanks or double bottomed tanks. Are there  
13 still operators that are installing those -- these types of  
14 systems?

15 A. I don't know. I -- under my job description, I  
16 pretty much enforce Rule -- part 36, and not this one. The  
17 district office, they handle these approvals and  
18 applications. So I'm not directly involved in that.

19 Q. Because I'd just be concerned about putting  
20 something out there that, you know, seems to indicate that  
21 this is going to be a working system, and the operator goes  
22 and puts it in and we don't have confidence that it's going  
23 to work in the first place, so why would we put it in the  
24 rule? Seems like a disservice to the operator. At that  
25 point they might as well have gone and put a double walled

1 tank in, so...

2 But I'll pass on that for the moment and go to --  
3 back up a little bit. You had -- I think you had a bunch  
4 of questions on the -- how do you test the integrity of an  
5 open-top below-grade tank, and that's the requirement  
6 that's in 17.11.I.(3). It talks about testing its  
7 integrity annually.

8 A. Yes. Under the current Rule 50, this is a  
9 requirement as well, and it's not specified -- it hasn't  
10 been specified since implementation of that rule either.

11 I guess we're looking at the operators to come up  
12 with opportunities to demonstrate a proper method. Certain  
13 methods could be measuring constant observation of levels  
14 inside there over a certain time period, limited time  
15 period, to see if there are liquids inside there, that  
16 they're not drastically being reduced. And since they are  
17 designed to hold liquids, that would be appropriate type  
18 assessment.

19 Q. But then these below-grade tanks are not  
20 something that usually is in an operat- -- in continual  
21 operation, it's usually getting fluids added to it on a  
22 regular basis, some daily discharge usually into a tank  
23 system. How would you test its integrity if it's  
24 continually receiving fluids?

25 A. Well, I'm sure there's some type of -- at some

1 point, be it for 10 minutes or for half an hour to an hour,  
2 there would be some stabilizing factor to be considered.

3 I realize there's probably influx at times during  
4 operation, but they would not be -- as I've seen some,  
5 they're not consistent influx. Or else they would  
6 overfill, they would not be able to contain at that point.

7 Q. Well, they're regularly receiving fluids in there  
8 also on some regular basis, pumping out the fluids --

9 A. Yes --

10 Q. -- so it's a --

11 A. -- and --

12 Q. -- it's in constant flux. That's what I was  
13 wondering. It just -- It doesn't seem very practical to do  
14 that.

15 Now maybe going for the -- along the same lines  
16 of this is, if it's -- these types of pits, these are for  
17 -- or, I'm sorry, tanks, below-grade tanks, these are for  
18 tanks that are constructed prior to the rule; is that  
19 correct?

20 A. The ones that would require the integrity testing  
21 would be existing, yes.

22 Q. But then within five years they're going to have  
23 to be somehow double lined with leak detection?

24 A. Or retrofitted, yes.

25 Q. So this would just be in the interim period



1 between whenever this rule is approved and five years?

2 A. Yes. As it currently stands, tanks that were  
3 permitted -- that were previously existing under -- prior  
4 to the implementation of Rule 50, all they required were --  
5 to become registered, if I'm not mistaken -- and require  
6 integrity testing annually and never replaced or upgraded,  
7 unless there was damage to the tank where the integrity  
8 test failed.

9 Q. But I thought maybe within five years they would  
10 have to retrofit these anyways, wouldn't they? They didn't  
11 have secondary containment?

12 A. Not under the current rule. Under our rule we're  
13 making them upgrade.

14 Q. Right. But I was wondering -- I think the --  
15 under the original rule they were going to be allowed to  
16 use -- so they needed some mechanism to show their  
17 integrity, but here it's just for -- there's an interim  
18 period of five years until they -- going to have to replace  
19 this tank anyways, isn't that correct?

20 A. Yes. Or retrofit it.

21 Q. Is there a high potential for groundwater  
22 contamination and leaks within just this five-year period?

23 A. Well, as the current rule stands, that concern  
24 currently exists. If my reading of Rule 50 is correct,  
25 there is no testing beneath those pit -- or those tanks

1 anyway, even if they close. So we never know under the  
2 current rule if there's been any leaks or contamination  
3 released from those tanks.

4 Under our current rule this five-year period,  
5 since -- if they can demonstrate the integrity is adequate  
6 for that tank, it creates two things. It creates a time  
7 period so they don't have to automatically convert their  
8 tanks all at once and incur the costs all at once, that's  
9 one thing.

10 With the closure requirements that we require,  
11 they are required to test underneath those tanks if they  
12 close them, so we can make that determination if a release  
13 has occurred, and it can be addressed at that time.

14 Q. Well, when they remove these tanks in five years,  
15 aren't they going to have to -- under this proposed rule,  
16 wouldn't they test under those tanks at that time to see  
17 that there were -- there's actually a release from those  
18 tanks?

19 A. Yes, our proposed language requires that.

20 Q. Well, I guess because my concern is, I don't  
21 think I've seen a lot of evidence from the Division that  
22 there's been contamination instances from below-grade  
23 tanks, so my question would be, then, would it be  
24 reasonable just to let them ride for the five-year period?  
25 They're going to have to replace it anyways.

1           A.    Well, they can.  The problem that we have about  
2   the confirmation of contamination below the tank is that  
3   it's never been required.  So if we've never tested below a  
4   below-grade tank or required it, how would we know if a  
5   release has occurred?

6           I think Mr. --

7           MR. PRICE:  -- Bratcher.

8           THE WITNESS:  -- Bratcher testified yesterday on  
9   the behalf that tanks have leaked in his district, and they  
10   have been confirmed.  So we do have documentation of  
11   leaking tanks, and it's due to their district policy that  
12   they've discovered those.

13          Q.    (By Commissioner Olson)  Well, I thought you were  
14   saying right now under Rule 50 they're required to test  
15   their integrity annually.  They have been between 2004  
16   until now; isn't that correct?

17          A.    Yes, but we -- as you brought to our attention,  
18   it's not defined how they do that, even in Rule 50.

19          Q.    Right, and it's not defined here either?

20          A.    No, it's not.  But they are required to replace  
21   it after five years.

22          Q.    Well, I'm just guessing.  Can't we assume, since  
23   they've technically been testing it annually until now,  
24   that the ones that are out there have already been shown to  
25   have integrity, so wouldn't they be -- isn't -- it's

1 probable that they would be okay for the next five years  
2 until they have to replace them?

3 A. Well, it goes back to the question, when were  
4 they originally installed? Since they preceded the  
5 initiation of Rule 50, they're already several years old.  
6 Now we've given them an additional -- we're -- that was  
7 2003, we're -- they've already had an additional four years  
8 added to that, they've aged quite a bit.

9 We're giving them an additional five years to  
10 correct that if they could still maintain that, but at that  
11 point it would be somewhere over 10 years old, that tank.  
12 So the lifespan of that tank is a concern. They could be  
13 10, 20 years old at that point, in the ground.

14 Q. Well, wouldn't it just make more sense to say,  
15 okay, you're going to replace it in five years, why don't  
16 you -- in five years when you retrofit the tank, why don't  
17 you just test underneath it, and if you've got something  
18 there, obviously then you're going to need to clean it up?

19 A. Well, I guess the -- if you retrofit it, you've  
20 already demonstrated through the testing, the annual  
21 testing, that there is an integrity to the initial tank.  
22 If you use that initial tank for your secondary  
23 containment, you would be -- to retrofit might require you  
24 to put a tank within a tank, so your primary tank can  
25 become new.

1           If you did it the opposite way, and make your new  
2 tank the secondary tank, then you've already created  
3 another level of protection.

4           The thing is, in the retrofit you may not remove  
5 the initial tank, you may not have the opportunity to test  
6 underneath. That's only done at closure, required at  
7 closure.

8           Q.   But if you're going to retrofit the tank, aren't  
9 you -- most likely have to pull the tank out?

10          A.   Not necessarily. If I had a tank that passed the  
11 integrity test, I could put a tank within that tank. It  
12 would not require any removal of the initial tank. The  
13 original tank becomes the secondary containment and leak  
14 detection.

15          Q.   But then when you retrofit it, aren't you going  
16 to have to put the tank in the tank? You're going to have  
17 to clean it out --

18          A.   You would have to remove the fluids.

19          Q.   -- to be able to inspect the tank at that point,  
20 to see if it had leaked within that five-year period.

21          A.   Well, you're testing it annually for its  
22 integrity, so you've already tested the tank.

23          Q.   Okay. Well, maybe I'll just move on. I kind of  
24 -- it seems like what that is, it's putting in something  
25 that's going to be very difficult for the Division to

1 enforce, since there's no real specific standard, it's more  
2 of a performance standard of just testing it annually. I  
3 don't think it gives good direction for the -- I mean, I  
4 think the original rule is the same way, I don't think it  
5 gave good direction for how do you do this and how do you  
6 enforce it? And if we've got things like that, and the  
7 purpose of this is to -- of this rule is to try to get  
8 things like that and correct those, it seems like a good  
9 opportunity to try to correct this one as well.

10 A. Yeah, I think part of it is, if we define  
11 something, we may restrict some future application for  
12 integrity testing. Someone may choose, since they do have  
13 to pump these tanks on a regular basis, to do a visual  
14 inspection of their tank. That would be a good integrity-  
15 type testing at that point.

16 If they were realizing that they're not losing  
17 fluids in that tank, that may be adequate as well. Maybe a  
18 combination of the two. There may be something that can  
19 test the material itself that comes out in the future that  
20 may be applicable.

21 If we restrict it and define that, then we've put  
22 a restriction on the operator of how they can do it at some  
23 point.

24 Q. But I guess I still come back to the same thing.  
25 This is just an interim testing, four- or five-year

1 period --

2 A. Yes.

3 Q. -- it's not a long-term testing procedure that's  
4 going to be used?

5 A. Yes.

6 Q. Okay. And then when I come down to 17.11.I.(5),  
7 I just want to see if I understand something. You're  
8 talking about that the foundation will be free of rocks,  
9 and is -- I guess this eliminates the systems that the  
10 Division has approved in the past of placing the tank on a  
11 gravel pad in an open depression and --

12 A. Well, I wouldn't say that. If you look, it  
13 states to prevent punctures, cracks or indentations of the  
14 liner or tank bottom.

15 A good example is Mr. Bratcher's testimony  
16 yesterday, is that the -- one of the tanks he discussed was  
17 punctured at the bottom due to being placed on top of  
18 rocks. Such a requirement would prevent the installation  
19 -- that type of installation.

20 Q. That was probably, maybe then, a fiberglass tank,  
21 I guess, or --

22 A. In that case, I think he did say it was  
23 fiberglass.

24 Q. Okay. But I want to make sure, then, that I  
25 understand, then, what you were saying a little while ago,

1 that a below-grade tank that the Division had approved in  
2 the past as having essentially a secondary containment and  
3 was placed on a gravel pad with a liner underneath it, so  
4 that the -- supposedly that would transmit the fluids out  
5 to the side, and you see if it's leaking, that would no  
6 longer be an approved below-grade tank?

7 A. Part of what you described is part of (7).(a),  
8 which would allow coarse material to be used with drainage  
9 pipes to facilitate that drainage and to collect it and  
10 become a leak detection system with a riser pipe. So I --  
11 I'm not clear on what you're describing, if you're talking  
12 about the same thing or something similar.

13 Q. Well, you seem to be thinking of something that's  
14 going to come up and lap up the sides, versus something  
15 that might have been just placed flat across the bottom  
16 with, you know, a gravel base, and then the tank placed on  
17 it, so that it was designed, then, to transmit fluids  
18 horizontally, but there was no potential sides to it, to  
19 catch those fluids.

20 A. Yeah, the problem that you run into with such a  
21 system that is laid out -- it does create secondary  
22 containment, it does create leak detection -- the problem  
23 that you run into is, is collection of rainwater. And the  
24 distinction of rainwater and a leaking tank, that could  
25 create the problem, making that distinction.



1           In an inspector went out to the site and saw  
2 water in that lined area, it would -- I would imagine it  
3 would be a difficult task for the operator to state, My  
4 tank is not leaking, that's just rainwater. And we're  
5 trying to prevent those complications.

6           Q.   And then I guess I'll move on to 17.11.J, under  
7 J.(1). Maybe you can clarify this for you [sic]. I come  
8 down to -- looking at that sentence there it says, The  
9 operator shall locate the trench to satisfy the siting  
10 criteria specified in subsection C of 17.10, and then it  
11 lists in subparagraph (e) of paragraph (2) of subsection F  
12 of 13 -- I didn't think that was a siting requirement.  
13 Maybe I'm -- Am I wrong on that?

14          A.   Well, indirectly it is. The general siting  
15 criteria for any on-site burial or on-site closure are  
16 specified in subsection C of 10, and this is a general  
17 siting criteria for on-site closure.

18           The -- subparagraph (e) of paragraph (2) of  
19 subsection F of section 13 refers to deep-trench burial,  
20 on-site deep-trench burial, and the location of the deep  
21 trench in proximity of the initial pit, temporary pit or  
22 drying pad. It's 100 feet.

23           The idea is that if there's several drilling  
24 operations occurring on a piece of property, that they  
25 should not be depositing these -- relocating them from the

1 initial site to a different location and centralizing them.

2 Also it allows an opportunity that if you have a  
3 well present, you should know within 100 feet of that well,  
4 if there's waste buried, where you should be looking.

5 There are additional provisions that if that  
6 location -- let's say it's within the setback of a  
7 residence -- especially for the temporary pit, which would  
8 be 300 feet, and the residence there, since it takes  
9 landowner approval for that to occur, says, I'd rather not  
10 have it that close to my house; I've got a road up here,  
11 I'd like to bury it under this road that we're constructing  
12 so that it's out of the way. There are opportunities for  
13 that type of removal, based upon the surface owner's  
14 recommendation or concern.

15 Q. Okay. Well, I think I was confusing you, because  
16 the -- I was looking at -- all the siting requirements are  
17 kind of located in one place, and you're saying there are  
18 siting requirements there, as well as a siting requirement  
19 in F, 13.F. Okay.

20 Moving on to 17.11.J.(4) in your liner  
21 requirements --

22 A. Yes.

23 Q. -- this is for the on-site, deep-trench burial.  
24 Isn't that essentially landfilling of a high-strength  
25 waste?

1           A.   Well, it could be viewed as that. We do have  
2 certain standards specified for that waste to be rendered  
3 prior to this type of application for closure, so we have  
4 -- there's certain, you could say, treatment standard for  
5 the contents prior to burial, which is not required for a  
6 landfill. Anything that goes into a landfill could go in  
7 at any concentration.

8           Q.   So is that the distinction why you're looking at  
9 a 20-mil liner versus a 30- or 60-mil liner as you have in  
10 Rule 36?

11          A.   That's definitely one consideration, plus it has  
12 to pass the paint-filter test. I believe that landfill  
13 only has to be -- there has to be no free liquids. Those  
14 two are quite different.

15          Q.   So it's those additional requirements of a lower-  
16 strength waste and some type of treatment that the Division  
17 believes would allow lower -- require -- lower liner  
18 requirement?

19          A.   Yes.

20          Q.   And maybe just a point of clarification here in  
21 -- again in 17.11.J.(9), you talk about installing a  
22 geomembrane cover over the excavated material. Wouldn't  
23 that be more of a fill material, a waste material, not --  
24 It sounds like it's material that you've excavated out of a  
25 pit.

1           A.    If you read that to its entirety, The operator  
2 shall install a geomembrane cover over the excavated  
3 material in the lined trench.

4                   That would mean that it would be the excavated  
5 material that's been placed in the lined trench, which is  
6 part of the deep trench.

7           Q.    Wouldn't it make more sense just to say the waste  
8 material in the lined trench than it is wastes?

9           A.    I guess what we don't want to create confusion is  
10 -- and part of it is proposals for -- I believe it's called  
11 closure in place. Those pits, what they're recommending is  
12 taking the existing pit and trying to stabilize or  
13 geotechnically stabilize that material and bury it in place  
14 without a new liner. We don't want to create that  
15 confusion. So the material would have to be excavated from  
16 the original pit or drying pad for that consideration.

17          Q.    I understand that, but I thought I'd just -- it  
18 didn't sound correct, sounded confusing, but -- I'll just  
19 move on.

20                   (Off the record)

21          Q.    (By Commissioner Olson) Yeah, it was just  
22 pointed out to me by our counsel that right at (8), right  
23 above, it talks about waste material in the trench, though,  
24 so it seems like it's just not being -- it's not  
25 consistently used. But that's -- That's all.

1           A.    Yes, we were trying to make sure it's understood  
2           that it's the material and the new-lined trench.  It's kind  
3           of --

4           Q.    I understand what their intent is.

5           A.    Yes.

6           Q.    Uh-huh.  Yeah, it just doesn't seem like it's  
7           consistently used, but that's -- can be dealt with.

8                   Coming to -- Let's see, I'll move on to 17.12,  
9           item number (5), and maybe I've missed something somewhere.  
10          It has a requirement for fixing leaks in liners.  Is there  
11          another place, maybe that I missed, where it talks about  
12          notifying the OCD of leaks in the liners?

13          A.    Well, two things come into play here.  One thing  
14          that comes into play is, we want them -- without impeding  
15          them, we want them to address the situation, which would  
16          mean removing of liquids to repair it.  So we were trying  
17          to address that aspect of it.

18                   The other thing is, if they do have a release  
19          there are provisions that currently exist under Rule 116  
20          and 19 that requires notification and a determination of  
21          what a release is.  So we do feel that there are  
22          regulations that they are mandated to follow, regardless of  
23          this activity.

24          Q.    But then if I follow that logic, then why weren't  
25          liner leaks in all the pictures that were shown here at

1 this hearing reported to the Division under Rule 116?

2 A. Well, ideally that would be something that we  
3 would wish for. We have no control over the operator and  
4 what they choose to do. If they choose not to report it,  
5 all we can do is go out to discover it. That's -- You  
6 know, they're in violation of the regulation at that point.  
7 Even under current Rule 50, they're in violation. The fact  
8 that they choose not to comply with Rule 50 is not our  
9 choice, it's theirs.

10 Q. Well, I guess what concerned me -- because in  
11 provision (5) you have the liner leak is occurring below  
12 liquid surface, so then obviously you've had a release --

13 A. Yes.

14 Q. -- from the -- which is different than  
15 17.12.A.(4) where it's, you know, above the liquid surface.  
16 I can see that just being something that's repaired and  
17 moved on, but if it's something where there's an actual  
18 release from a lined pit system with no -- I don't see how  
19 the operator could have any knowledge of the actual volume  
20 that was lost.

21 It seems like that should be reported to the  
22 Division, wouldn't you think?

23 A. Well, there is a provision (6) that requires them  
24 to have a level measuring device in their -- in their use  
25 of such a pit, to monitor any unanticipated change in

1 volume of fluids. So based upon that requirement, they  
2 would have some knowledge of how much they lost.

3 Q. But if you have a 100 -- well, let's take an  
4 example, 100 -- 100-by-100-foot pit and you lost five  
5 barrels, which is the reporting amount, would you see that  
6 in a measurement from the pit? I wouldn't think that you  
7 would.

8 A. Well, if you had eight feet of water in it and  
9 you came back the next morning, you had four feet of  
10 solids, I think you could calculate how much you actually  
11 lost out of that area.

12 Q. I agree, but that's a larger volume than -- most  
13 likely going to be, than five barrels, which is the  
14 reporting limit under Rule 116.

15 A. Then they would have to report it under 116,  
16 because they had a release at the site. I do agree that  
17 maybe a time limit would be appropriate for this.

18 Once again, I'd like to point out, it is a task  
19 force-proposed language, and we tried to stay true to that  
20 language.

21 Q. Well, I don't think I -- actually, I do have one  
22 issue with the language itself. This is just for a lined  
23 pit. Shouldn't there also be some similar requirement for  
24 a below-grade tank? It says here just for a lined pit.  
25 This is a general specification. Shouldn't the same

1 requirements for leaks below the liquid surface apply to a  
2 below-grade tank, as well as a lined pit?

3 A. Well, I'd like to clarify. This -- Well, you're  
4 correct, it is for a lined pit. It should be -- But there  
5 is a provision under A.(1) and it states, The operator  
6 shall operate and maintain a pit, closed-loop system,  
7 below-grade tank or sump to contain liquids and solids and  
8 maintain the integrity of the liner, liner system or  
9 secondary containment system, to prevent contamination of  
10 fresh water and protect public health and the environment.

11 We thought that would cover those other  
12 operations.

13 Q. Well, wouldn't that also cover the lined pit,  
14 then?

15 A. I guess the difference between a lined pit and a  
16 below-grade tank is, the lined pit is the only --  
17 especially a temporary pit, a temporary pit is the only  
18 operation that does not require secondary containment of  
19 some form or fashion, or some type of leak detection.

20 Q. But according to your proposed rule you'd still  
21 have single-lined pits that are out there that would need  
22 to be tested annually, which don't have the secondary  
23 containment that the Division is proposing, so --

24 A. Exactly, and they do have a method under the  
25 construction part that they're supposed to be tested



1 annually for the integrity, and if they fail they have to  
2 be either -- they have to be upgraded at that point if they  
3 fail, to have secondary containment. So they are required  
4 to be addressed under that provision.

5 Q. Right, but the difference under this provision,  
6 there's a time limit that they'll be done within 48 hours,  
7 they'll repair the leaks and not wait some length of time  
8 to -- they'll -- just say that they'll do it.

9 It seems -- Would it be logical just to add to  
10 this to say, if a lined pit or a below-grade tank, and have  
11 the same requirements apply to the containment systems?

12 A. It would have -- It could be modified. The other  
13 modification required for that is that all below-grade  
14 tanks may not have liners involved, so it had to be maybe a  
15 separate provision addressing those specifically.

16 Q. Well, it could just say, could it not, that --  
17 you know, if a lined pit or below-grade tank develops a  
18 leak, and then it talks about penetration of the liner  
19 or --

20 A. -- secondary containment or something, or any  
21 type of containment? Because -- I guess what I'm getting  
22 at is, it really addresses the liner repair.

23 In the case -- actually in the case of a below-  
24 grade tank, if that integrity of that tank fails, that has  
25 to be replaced, not repaired. So there's a difference in

1 that.

2 For a temporary pit or a pit, it can be repaired  
3 and not totally replaced. So there's a slight distinction  
4 between the two.

5 Q. Couldn't a below-grade tank be repaired just by  
6 welding?

7 A. If it is a single-vessel tank without secondary  
8 containment, we want it upgraded at that point. We do not  
9 want the continued use of a single vessel below-grade tank  
10 with no secondary containment or leak detection.

11 Since they have to do it within five years since  
12 the initial tank -- I mean, they could actually repair that  
13 tank and use it, and the incorporation of the upgrade. But  
14 it should be upgraded to the specifications of that  
15 section, meaning secondary containment and leak detection.

16 Q. But if that tank starts leaking and getting  
17 fluids in its leak detection, that would be repaired, most  
18 likely, not replaced, wouldn't it?

19 A. Yes.

20 Q. Okay.

21 A. I thought we were talking about those that were  
22 existing that didn't have those features.

23 Q. And then looking at 17.12.B.(1), I guess I can  
24 come back to the long discussions you had about measurable  
25 oil. And I guess -- Does the only instance this would

1 really apply is where we have a clear condensate, then,  
2 that's maybe -- that you don't see? Because I guess I got  
3 confused by that, thinking that if there's anything visible  
4 on it, you don't have to measure it.

5 This is an issue that's come up before in the  
6 Water Quality Control Commission regulations when it talks  
7 about measurable amounts of oil. There's a point of  
8 contention at hearings in front of the Water Quality  
9 Control Commission that -- What is measurable? Is it what  
10 you can measure with a steel tape or -- you know, nearest  
11 hundredth of a foot? Is it -- What is measurable?

12 It seems like that would be a -- something that  
13 would be difficult -- potentially difficult to enforce,  
14 versus visible.

15 A. Well, I -- and I'm glad you brought that up. If  
16 you look, it says remove any visible or measurable, I think  
17 our objection was a recommendation to make it visible and  
18 measurable, which means it would have to have both of those  
19 characteristics to be addressed. And our proposed  
20 language, it could be one or the other or both. There is  
21 no limit to it.

22 So it would cover anything that ends up being on  
23 it that's oil-related, be it visible or measurable or both.  
24 If you use "and", then you restrict it and it has to be  
25 both in order to be considered, to be addressed.

1           So that's what a lot of that discussion was  
2 about, in cross.

3           Q.   Well, I guess since it was a point of contention  
4 at another hearing in front of the Water Quality Control  
5 Commission, I was wondering if it was a potential problem  
6 here as to what is measurable.

7           A.   I don't know anything about those proceedings, I  
8 don't know what was discussed, to what extent.

9           Q.   I guess what would the Division's position be as  
10 to what's measurable? Would that be 1/100 of a foot, then,  
11 which is usually the --

12          A.   If you could measure --

13          Q.   -- level of precision that -- about the best you  
14 can attain?

15          A.   I guess if you can measure it, then it's  
16 measurable.

17          Q.   Okay. And then we're coming down to 17.12.B.(4).  
18 You have in here language about removing the free liquids  
19 from the drilling pit within 30 days from the date that the  
20 operator releases the drilling rigs.

21          A.   Yes.

22          Q.   How does the Division know when the drill rig is  
23 released?

24          A.   We've discussed this, this was a recommended  
25 concept from our district office, and that -- as we put the

1 proposed language in here, then they came back and asked,  
2 How are we going to implement this? So we have discussed  
3 this.

4 If I'm not mistaken, on the C-103 form we were  
5 planning on modifying that form to have a box or a place  
6 for them to indicate the date that they released the rig at  
7 the site. Therefore, we would have documentation of when  
8 that date -- you can say that timeline -- begins.

9 So there would be a form -- a modified form that  
10 will allow us to track that and make a determination.

11 Q. So you're seeing that that's something that in  
12 the future will be regularly reported to the State, then?

13 A. Yes.

14 Q. And then -- let's see, under 17.12.E.(1), the  
15 same issue of annual integrity testing of a sump. Again,  
16 this is, you know, for the open-top vessel. How does the  
17 Division envision testing the integrity of the sump?

18 A. If you look at E.(2), the operator shall test a  
19 sump that can be removed from its emplacement by visual  
20 inspection. It also continues, The operator shall test  
21 other sumps by appropriate mechanical means.

22 So there are provisions for that, and I believe  
23 that -- I don't know the exact source of that, but I  
24 thought it was either Rule 50 or the guidelines.

25 Q. What would you think would be other appropriate

1 mechanical means?

2 A. Well, other mechanical means could mean, since  
3 these sumps are required to only capture leaks, they're  
4 single vessels, required to capture leaks, not to hold or  
5 store, in this case you could put a certain volume of water  
6 in it and monitor that volume to see if there's any release  
7 from that.

8 Q. Well, if they could remove it and visually  
9 inspect it, could they just empty it and visually inspect  
10 it as well?

11 A. Well, the other -- the mechanical means could  
12 address those that aren't removable. There may be some  
13 that certain structures are around it. If they're  
14 underneath a pit -- or not a pit but a pipe, it may not  
15 be -- they may have put those in there -- to the extent  
16 that they're somewhat permanent, they're not able to --  
17 they're able to access it, but they're not able to remove  
18 it.

19 Q. Well, I was just thinking, if you could visually  
20 inspect, if you could remove it, why couldn't you just  
21 empty it and rinse it out, even for something that's  
22 permanent installation, and visually inspect that as well?

23 A. I'm not understanding. If it's permanent and you  
24 can't remove it, how would you remove it and inspect it?

25 Q. Well, I'm saying you wouldn't remove it, you

1 would just clean it out -- empty it, clean it out and  
2 visually inspect it. Wouldn't that -- if you can visually  
3 inspect it -- if you can remove it, why couldn't you  
4 visually inspect it if you could clean it out?

5 A. I guess the difference in that is that if I'm  
6 able to take this and look at the very bottom and so forth  
7 there, I can look to see if there's any stress cracks,  
8 depending on the nature of the material at the sump, and  
9 determine if it's deteriorating or not, because I can  
10 actually remove it from the area that it's used and not  
11 only see the insides but the outside, which may be impacted  
12 from weathering or the condition of the soils or whatever  
13 it may be placed in.

14 If I'm not able to remove it, I'm only counting  
15 on the integrity of the inside at that point. I'm not able  
16 to assess the outside part of it and give that additional  
17 inspection of it. So it would take something of adding  
18 something to it, another method used. A visual inspection  
19 may not be adequate.

20 Q. But if you had stress cracks -- You know, these  
21 aren't very thick materials on most sumps. Wouldn't you  
22 think you could see the stress cracks on the inside as well  
23 as the outside?

24 A. Well, possibly but not in all cases. I guess  
25 what I'm thinking of is that it may be in a place that the

1 impact -- Let's say it's setting in an excavatable area and  
2 is set down placed in it. The soils that comes -- the  
3 outside comes in contact are not coming in contact with the  
4 inside. So there's a different natural force or impact  
5 from a natural constituent that's impacting one side of the  
6 material but not the other.

7 Q. Uh-huh.

8 A. If you cannot see that, you will not know what  
9 impact is occurring. It's a metal sump it may be rusting  
10 on the outside, it may not be rusting on the inside.

11 Q. Well, I guess, are you aware that that was a  
12 common requirement for in-place sumps by the Division in  
13 the past?

14 A. What was that?

15 Q. Inspection of sumps at discharge permit  
16 facilities?

17 A. Just the visual inspection?

18 Q. Uh-huh.

19 A. I was not aware of that.

20 COMMISSIONER OLSON: Okay. Do you want to break?  
21 I've got a couple more, but -- not a whole lot, but enough  
22 to --

23 (Off the record)

24 CHAIRMAN FESMIRE: Okay, at this time we're going  
25 to put a hold on the cross-examination of Mr. -- the



1 examination of Mr. Jones, I don't know whether it would be  
2 cross or -- the examination of Mr. Jones, and ask, is there  
3 anyone in the audience who would like to make a public  
4 comment on the record today?

5 Sir, how long do you think yours will take?

6 MR. TAYLOR: A couple of minutes.

7 CHAIRMAN FESMIRE: And Randy, you --

8 MR. HICKS: Mine will be sworn testimony. Is  
9 that -- as the comment?

10 CHAIRMAN FESMIRE: Yes, and how long will it  
11 take?

12 MR. HICKS: I've got ten slides, or five slides,  
13 thereabouts. It should take about 10 minutes direct.

14 CHAIRMAN FESMIRE: Okay, why don't you get with  
15 Carl and load them on the computer?

16 In the meantime, sir, why don't you come forward  
17 and put your comment on the record?

18 We have an option under our rules. You can  
19 either make a statement of position, or you can make sworn  
20 testimony and be subject to cross-examination. Do you know  
21 which one of those you'd like?

22 MR. TAYLOR: I just want to make a statement.

23 CHAIRMAN FESMIRE: Okay. Why don't you come to  
24 the middle of the room, so that they don't --

25 MR. TAYLOR: Microphone here?

1           CHAIRMAN FESMIRE: If you're comfortable there,  
2           that would be great.

3           And start with your name, please, sir.

4           MR. TAYLOR: My name is Scott Taylor, I'm an  
5           architect. I live in Cerrillos, in what used to be the old  
6           Cash Ranch outside of Cerrillos, which is now subdivided  
7           into ranchettes.

8           I'm potentially affected by these regulations,  
9           these -- as there is a current well pumping adjacent to my  
10          lot and close to my well another well is planned to go in  
11          within 500 feet of my water well. Groundwater there is 20  
12          feet deep, so...

13          I know there's some in the business that are fond  
14          of saying that this isn't your grandfather's oil and gas  
15          business, yet they still seem to fight every regulation  
16          that comes around. I believe that we must stop polluting  
17          the environment here, there and everywhere.

18          I understand these new regs are being portrayed  
19          as hurting the small companies, and that may very well be  
20          the case. But I'm sure that will affect all the  
21          competition across the board in New Mexico. But it is my  
22          opinion that we as a society must pay the price for  
23          protecting our land and livelihoods. Therefore I commend  
24          OCD in their attempt to regulate an industry that is used  
25          to getting their way in New Mexico and elsewhere.

1 Thank you.

2 CHAIRMAN FESMIRE: Thank you very much, sir.

3 Mr. Hicks, are you ready?

4 MR. HICKS: Thank you.

5 (Thereupon, the witness was sworn.)

6 RANDY T. HICKS,

7 the witness herein, after having been first duly sworn upon  
8 his oath, testified as follows:

9 DIRECT TESTIMONY

10 BY MR. HICKS:

11 MR. HICKS: For the record, my name is Randall T.  
12 Hicks. I am a hydrogeologist. I am the principal of R.T.  
13 Hicks Consultants, Ltd., and I couldn't resist not  
14 testifying at the pit hearing, because it would have been  
15 the only pit hearing that I hadn't testified in since Bill  
16 and I started this -- I'm sorry, Commissioner Olson and I  
17 started this thing together -- in the '80s? Early '80s?

18 And so I have some comments on some of the  
19 language that I'd like to read into the record and be  
20 subject to cross-examination and questions by the  
21 Commission.

22 Next slide.

23 The upper portion of the slide is not meant for  
24 everybody to read, it's more of a note for myself so that I  
25 can keep things straight. This is in the objective portion

1 of the regulation that I downloaded, and this talks about  
2 protection of public health, welfare and the environment as  
3 the objective.

4 And the comment that I'm going to make on these  
5 words are -- pretty much run through all of my comments,  
6 and that is that throughout the NMOC rules we talk about  
7 -- the rules talk about the protection of fresh water,  
8 public health, the environment, human safety and property.  
9 And those are important elements that are mentioned  
10 throughout the regulations.

11 We're talking about a rule that is going to  
12 impact drilling of oil and gas wells, a practice that has  
13 danger in it, like any construction project. And I think  
14 that a series of rules that deal with drilling should  
15 address the human safety, it should be considered.

16 And so my only recommendation to the objective  
17 portion of this -- and throughout the entire regs, proposed  
18 rule, is to include for clarification purposes that the  
19 objective is for the protection of fresh water, public  
20 health, welfare, the environment, human safety and  
21 property. And the word human safety is stuff that -- I  
22 actually put that in there. Most of the time it just talks  
23 about safety, and my -- and so I am making a judgment there  
24 that we're actually talking about human safety rather than  
25 mosquitoes, for example.

1           Next slide. This -- If you're following the same  
2 set of regulations that I had -- I don't have it as -- it's  
3 on page 8 of the rule. I'm not certain what section it is  
4 specifically but it says, The operator shall recycle, reuse  
5 or reclaim all drilling fluids in a manner that prevents  
6 the contamination of fresh water and protects public health  
7 and the environment.

8           I'm just indicating that we're talking about  
9 human safety and property throughout this new rule as well,  
10 and for a -- for clarification purposes, I would advise the  
11 Commission to consider adding that kind of language as  
12 well.

13           Next slide, please.

14           With respect to alternative closure methods, if  
15 the Environmental Bureau in the Division's Santa Fe office  
16 grants an exception approving closure methods for a  
17 specific temporary pit other than that specified in  
18 paragraphs 1 or 2, the operator shall close that temporary  
19 pit by the method the Environmental Bureau in the  
20 Division's Santa Fe office approves.

21           I've got two issues with this.

22           One is, I'd like to see some kind of a time limit  
23 instituted. These wells are drilled on a very regular  
24 basis, and when -- in the Water Quality Commission rules,  
25 one submits a notice of intent if an individual believes

1 there's going to be a potential for an impact -- a  
2 potential for a discharge to enter groundwater. Not  
3 whether there's an impact, just whether your discharge is  
4 actually going to enter groundwater, you submit a notice of  
5 intent.

6 The NMED then evaluates that notice of intent to  
7 determine whether there's going to be an impact. And if  
8 there's going to be an impact that requires a discharge  
9 plan or other kind of permitting protocol, the Division  
10 notifies the discharger. And I would believe that we have  
11 these wells coming through on a very regular basis, that a  
12 time limit would be appropriate.

13 I would also like to see flexibility in this rule  
14 with respect to the district offices, and I have some  
15 testimony with respect to that as well, that closure  
16 methods might be considered to be approved at the district  
17 level as well.

18 Next slide.

19 The operator shall obtain the surface owner's  
20 written consent to the operator's proposal of an on-site  
21 closure method. The operator shall attach the original  
22 signed consent to the permit application.

23 I was concerned about this because it appears to  
24 delegate the regulatory to the landowner, rather than  
25 maintaining the authority of the technical and regulatory

1 experts at NMOCD.

2 While, you know, I believe most people want to  
3 make certain that the landowner is in the loop, I think  
4 that we have technical experts at NMOCD who can judge  
5 whether burial or on-site closure is going to be protective  
6 of human health -- or public health, the environment, fresh  
7 water and property.

8 Property is a word that occurs in the NMOCD rules  
9 routinely. You have a mandate to protect property. So if  
10 you're going to take that mandate with your own technical  
11 experts, with -- in concert with the landowner, in concert  
12 with understanding what the landowner's needs and desires  
13 and issues are -- but the determination should be that of  
14 the technical experts who have the responsibility to  
15 protect property in the first place.

16 And so while the operator shall provide the  
17 surface owner with a copy of any plan to NMOCD that calls  
18 for on-site closure, the operator shall attach verification  
19 that the surface owner received the plan, and a discussion  
20 can ensure.

21 Next slide, lease.

22 This is a long one, and I'm not going to read it.  
23 It's 19.15.17.15. Again, what I'm talking about in terms  
24 of alternative methods here, human safety and property  
25 should be part of the language in there, in my opinion.

1 I'm also indicating that the district office should be  
2 brought into this loop as the office that could grant the  
3 exception and then allowing -- Certainly I'm not indicating  
4 that we should cut the Santa Fe Bureau out, I'm just  
5 indicating that there may -- you may want to have  
6 flexibility to allow the district office to make these  
7 decisions as well.

8 Next slide, please.

9 In the general exceptions -- Let's see what I've  
10 said here. Ah, yes, granting the exception provides  
11 equivalent or better protection of fresh water, public  
12 health and the environment, human safety and property.  
13 Again, that's what I'm trying to get across here, when you  
14 talk about equivalent protection.

15 If you're talking about equivalent protection of  
16 fresh water, and to heck with public health, the  
17 environment and human safety and property, I think that's a  
18 problem. I think that you need to -- you have a mandate to  
19 consider all of these factors, and I think that any  
20 exception that you elect to grant needs to consider those  
21 factors.

22 The NMOCD -- and I've changed the language in  
23 here a little bit in order to allow for flexibility. I  
24 believe it used to say the NMOCD Santa Fe bureau may  
25 revoke. By just switching that out a little bit and saying



1 NMOCD, you create the flexibility to use the district  
2 office or the Santa Fe office. But again, I'm emphasizing  
3 human safety, property, the environment, public health, the  
4 mandate that you have.

5 And so that's the -- when you're -- my -- this is  
6 my suggested language for the general exceptions.

7 Next slide, please.

8 And it's the same thing, it's the same thing.  
9 And so is this, the recommendation that human safety and  
10 property for consideration, when you're talking about  
11 alternative closure methods, as one of the criteria that  
12 should be used to determine whether alternative closure  
13 methods are appropriate.

14 Again, using -- having the flexibility to deal  
15 with the district office with a copy to Santa Fe, or vice-  
16 versa, however the Commission wishes to implement it. My  
17 recommendation is that an operator may apply to the NMOCD  
18 for an exception, without regard to whether it's the Santa  
19 Fe bureau or the district office. And the NMOCD must  
20 notify the operator that compliance with the rule is  
21 required within 60 days.

22 And again, this is only for alternative closure  
23 methods, but it puts a time limit on it, it gives NMOCD  
24 flexibility with respect to which office takes care of the  
25 approval and analysis.

1           And so that's all I've got, is inclusion of the  
2 other criteria for your consideration when you're dealing  
3 with alternative closure methods and exceptions, and  
4 bringing the district office into the loop.

5           CHAIRMAN FESMIRE: Mr. Brooks, do you have any  
6 questions of this witness?

7           MR. BROOKS: No questions, Mr. Chairman.

8           CHAIRMAN FESMIRE: Mr. Carr?

9           MR. CARR: No questions.

10          MS. FOSTER: No questions.

11          CHAIRMAN FESMIRE: Mr. Jantz?

12          MR. JANTZ: No questions, Mr. Chairman.

13          CHAIRMAN FESMIRE: Mr. Huffaker?

14          MR. HUFFAKER: Nothing, Mr. Chairman.

15          CHAIRMAN FESMIRE: Okay, thank you very much, Mr.  
16 Hicks?

17                Oh --

18          COMMISSIONER BAILEY: No, I don't have any.

19          COMMISSIONER OLSON: I just had one quick  
20 question.

21                               EXAMINATION

22          BY COMMISSIONER OLSON:

23                Q. Do you understand that the Oil and Gas Act does  
24 not include the phrases, human safety?

25                A. Yeah, I do.

1 Q. Okay.

2 A. I do. It's throughout the rules. And I'm not  
3 certain it is human safety, I think it's just safety. But  
4 I put the "human" in for clarity, at least on my part.

5 And I mean, the Oil and Gas Act requires -- talks  
6 about prevention of waste too, which I didn't bring out in  
7 here, but -- because I just thought that the nature of this  
8 rule was to focus on those issues, so...

9 Q. Can you point out where human safety appears in  
10 the Oil and Gas Act?

11 A. No, it's not -- I don't believe it is in the Oil  
12 and Gas Act.

13 Q. Oh, I thought you said it was.

14 A. No, no, I said -- I'm sorry, I said prevention of  
15 waste --

16 Q. Uh-huh.

17 A. -- is in the Oil and Gas Act. I don't believe  
18 human safety, or safety, is.

19 COMMISSIONER OLSON: Okay, thank you.

20 CHAIRMAN FESMIRE: Mr. Hicks, I have no  
21 questions. Thank you very much.

22 With that we'll break for lunch, and we'll  
23 reconvene in this room at two o'clock.

24 (Thereupon, noon recess was taken at 12:20 p.m.)

25 (The following proceedings had at 2:10 p.m.)

1 CHAIRMAN FESMIRE: Let's go back on the record.  
2 This is a continuation of Case Number 14,015. We were --  
3 Let the record reflect that all three Commissioners are  
4 present and that we have a quorum.

5 We were in the waning moments of the examination  
6 of Mr. Jones by Commissioner Olson.

7 Commissioner Olson, are you ready to proceed?

8 COMMISSIONER OLSON: Yes.

9 CHAIRMAN FESMIRE: Go ahead and do so.

10 BRAD JONES (Resumed),  
11 the witness herein, having been previously duly sworn upon  
12 his oath, was examined and testified as follows:

13 EXAMINATION (Continued)

14 BY COMMISSIONER OLSON:

15 Q. I'll now move on to, I guess -- this is on page  
16 14, this is 17.13.H. Under H.(1), in the first line, you  
17 have -- talk about -- I think Commissioner Bailey has been  
18 bringing this up, but you have this language of, shall  
19 substantially restore the impacted surface.

20 And then down below in H.(2), on the second line,  
21 you have that the proposed alternative will effectively  
22 prevent erosion.

23 A. Yes.

24 Q. I guess those don't seem to be very enforceable  
25 provisions, and I was wondering what the Division means by

1 -- at least maybe start off with what they mean by  
2 substantially restore.

3 A. I think this has been a topic of a lot of  
4 discussion. What we're looking at, substantially restore,  
5 is what is actually achievable within the two successive  
6 growing seasons.

7 I believe in part 36 we require like a 70-percent  
8 coverage and so forth. Due to the drilling operations and  
9 their location, sometimes the remoteness of their  
10 locations, there may be areas where there's no vegetation  
11 to begin with. So to require to re-vegetate a site at  
12 impacted area to something that's not even as the original  
13 site was to begin with would be somewhat unreasonable, we  
14 thought, to request that.

15 So we used terms like substantially restore,  
16 because we realize we're only dealing with two successive  
17 growing seasons. There's only so much that can be grown  
18 within that time frame and establish itself. So we were a  
19 little bit more flexible in this application.

20 Q. So then are you saying you don't think you would  
21 be able to achieve the same requirements that are now in --  
22 re-vegetation requirements that are now in Rule 36?

23 A. I think what we run into is, especially if you go  
24 across the southeast part of the state, you'll see that a  
25 lot of those areas have very little vegetation in some

1 places. If you're in a location that only has three inches  
2 of topsoil -- or in some places it's just caliche -- you  
3 may have no vegetation.

4 To require a standard that requires 70-percent  
5 coverage might be an impractical request to the operator,  
6 and they would never be able to close.

7 COMMISSIONER BAILEY: But that's not what it  
8 says. It says 70 percent of the native perennial  
9 vegetative cover. 70 percent of zero is zero.

10 THE WITNESS: Thanks for the clarification on  
11 that.

12 Q. (By Commissioner Olson) Because I'll admit, I  
13 think I had the same problem that Commissioner Bailey was  
14 having, it doesn't seem to be -- especially if we're  
15 looking at getting away from things that are not  
16 enforceable, why don't we have something that's a little  
17 more specific and that the Division can then enforce, it  
18 gives more direction to the operator?

19 A. Yeah, and once again, if you notice, it is in  
20 green. It was recommended by the task force. We tried to  
21 stay true to the task force.

22 What we didn't want was a lot of repercussion  
23 from being involved in the task force and then changing the  
24 language that was agreed upon and being, I guess, put in a  
25 position of saying, Well, we went through this whole

1 process of task force and then OCD decides to disregard any  
2 consensus items that were chosen. So we tried to stay true  
3 to the language that was proposed, and this is the exact  
4 language from the task force document.

5 Q. All right, wouldn't it seem to be something more  
6 enforceable to say that it's some percentage of the -- you  
7 know, the native vegetation prior to the pit?

8 A. It would. It would make it more enforceable.  
9 Certain things that may complicate the matter is, with the  
10 two successive seasons you may run into a situation where  
11 there may be two very extreme dry seasons, and how would we  
12 address that?

13 Q. Well, I think the same problem would come up in  
14 36, because it has the same language. It's maintenance of  
15 it through two successive growing seasons.

16 A. That is true, but with part 36 there's also post-  
17 closure standards which allow the maintenance of the cover,  
18 which would involve preventive erosion of that cover, which  
19 would allow them to address that.

20 Q. And what was your rationale, I guess, for the two  
21 successive growing seasons? That's just consistency with  
22 36?

23 A. Yes.

24 Q. I think I had something else that was related to  
25 that. Bear with me a second.

1           Because I guess what happens, then, if that cover  
2 and the vegetation is not maintained? Is that a violation  
3 of the rule? It says through two successive seasons. What  
4 happens if the -- later on, you know, I think -- something  
5 erodes off the cover? And then it seems like we've  
6 defeated the whole purpose of why the cover is there.

7           A. Well, I guess the advantage of this is that we're  
8 not allowing the disposal of those wastes to occur above  
9 ground. Those are the main concerns when you're dealing  
10 with a surface waste management facility, because a lot of  
11 it is above the existing grade. Therefore if you had the  
12 vegetation to not -- or to die off, then it would cause  
13 erosion of something -- anything above ground.

14           The fact that this is below the grade is similar  
15 to, in certain cases, the burial of asbestos waste. It's  
16 required to be buried three feet below existing grade,  
17 because with that you'll never have the erosion if it was  
18 above grade and become exposed again.

19           So there's little -- there's less of a concern,  
20 to a certain extent.

21           Q. But then wouldn't it be a violation of the rule  
22 if the -- if later on it's not vegetated across there? It  
23 says two successive seasons, and --

24           A. Well --

25           Q. -- everything seems to be based upon the cover



1 and the vegetation for an on-site burial.

2 A. Give me a second here. I guess, you know, we  
3 look at a lot of different things. We look at the current  
4 rule which has no timeline specified for them to deal with  
5 the current closure.

6 It doesn't specify that they have to maintain it  
7 to any certain extent, they just -- if I'm not mistaken,  
8 the surface restoration part says, Within one year of  
9 completion of the closure of a pit, the operator shall  
10 contour the surface where the pit was located to prevent  
11 erosion or ponding of rainwater. That's their current  
12 obligation.

13 We're extending that obligation for an additional  
14 two years for the re-vegetation. So I guess how long would  
15 be appropriate is difficult to determine. We thought two  
16 years would be appropriate for them to at least attempt to  
17 establish something.

18 Q. Okay. Well, I guess I'm -- what I was trying to  
19 do was try to relate this back to all the technical  
20 evidence that was presented to us that goes into hundreds  
21 of years of modeling and then protection that this is  
22 supposed to provide.

23 So the requirement here is just to get it  
24 established?

25 A. Yes, to -- this is -- I guess you can look at it

1 this way: This is to address the initial disturbance.  
2 Once you go back and start backfilling areas, such as if  
3 you were to excavate a temporary pit and its waste  
4 contents, if you were to backfill it and put the soil cover  
5 on it, is to allow it -- over two years it should settle  
6 into the formation that it's going to remain. If you can  
7 actually establish some type of vegetation during that  
8 period, then it will -- hopefully, more native vegetation  
9 will take over as time passes. This is just during that  
10 time that it's been disturbed at some great extent.

11 Q. Okay. And I'll move down to 19.15.17.14.E, and  
12 in the first line of that, talking about emergency pits, it  
13 goes into this use of a so-called emergency pit. I don't  
14 -- is that really defined, a so-called emergency pit,  
15 somewhere?

16 (Laughter)

17 MR. BROOKS: Roger Anderson's language.

18 THE WITNESS: Yes, this some of the original  
19 language that we were trying to modify and probably didn't  
20 have the time to make those type of corrections.

21 Q. (By Commissioner Olson) And so if I remember  
22 correctly, a so-called emergency pit is a --

23 A. It's an emergency pit.

24 Q. -- a pit that's just built there in case  
25 something happens someday, it's not actually constructed in

1 an emergency, right?

2 A. Yes, it's probably -- in most current --  
3 something -- I guess you could say a so-called emergency  
4 pit is, someone would go ahead and construct that on-site  
5 if they were going to use it or not, so I -- it's not quite  
6 a true emergency pit, constructed at the moment it's  
7 needed, yes.

8 Q. Okay, but it's not defined anywhere?

9 A. No, no, it's not.

10 Q. Is it?

11 A. Emergency pit is defined, but --

12 Q. Emergency pit, but --

13 A. -- but not a so-called --

14 Q. -- right --

15 A. -- emergency pit --

16 (Laughter)

17 A. -- for clarification.

18 Q. And then I'll move on to 17.15.A.(2) in the  
19 notice.

20 A. Yes.

21 Q. If I come down in the middle of that paragraph  
22 (2), it talks about the exception being granted  
23 administratively if the operator files written waivers from  
24 all persons to whom notice is required.

25 A. Yes.

1           Q.    I guess what I was confused on is, isn't there --  
2           there's still a 30-day period within there, and some of  
3           these people that are getting notice are people from the --  
4           as identified by the Division, aren't they, not just the  
5           landowner? I could see maybe being able to get a written  
6           waiver from other certain people, but are you really going  
7           to be able to get waivers from people before the notice is  
8           -- 30-day notice is completed? Is that really possible?

9           A.    Well, I guess what we're looking at here is --  
10          and I'd like to also clarify, we did realize that we need  
11          to clarify this, that this would be from parties that  
12          received written notice, not the public notice in the  
13          newspaper. I think that was brought up during my  
14          testimony.

15                The goal of this is that these written waivers --  
16          if an operator or applicant is seeking this exception, it  
17          would be their responsibility to obtain these written  
18          waivers from those parties. So they would have 30 days to  
19          address that.

20          Q.    Well, if I look up at the beginning of (2) it  
21          talks about the operator giving notice by certified mail to  
22          the surface owner and other persons that the Environmental  
23          Bureau may direct. Who would those other persons be, I  
24          guess?

25          A.    An example, a good example of this is, there may

1 be an instance where there's an easement right-of-way. So  
2 with that easement right-of-way you may have someone  
3 actually -- multiple parties involved. So if that's  
4 identified, then we would require that those additional  
5 parties be notified.

6 Q. But you're saying, then, that the -- What's the  
7 purpose of the public notice, then, in the newspaper if --  
8 So if someone couldn't object from the -- reading the  
9 notice in the newspaper, why would you even do the public  
10 notice in the newspaper? What's the purpose of it then?

11 A. I think that's a very good question. We modified  
12 this. What we were trying to do, and we probably didn't  
13 make all the corrections to make this more appropriate, but  
14 our goal was to try to comply with the Environmental  
15 Justice mandate from the Governor involving the public and  
16 their participation in forming them.

17 I believe that there's -- maybe it's -- I would  
18 probably recommend, looking over this now, that it probably  
19 needs to be expanded to include any objection based upon  
20 technical merit, and if that needs to be considered prior  
21 to that administrative approval.

22 Q. Well, it might make more sense if you just said  
23 that if you don't receive -- receives no objection to it,  
24 and just drop this issue of written waivers, because that  
25 way you do allow for the public notice by the newspaper and

1 any comments that come in.

2 If you don't get anything, obviously I would  
3 think you could issue it administratively, whether you  
4 don't get it from the newspaper or the written notice.

5 But it seems like you're -- it's inconsistent at  
6 the moment, that you're giving public notice, but it seems  
7 like it means nothing --

8 A. Yeah, that would probably be a proper  
9 recommendation.

10 Q. Okay. And a question, just on page 16 under  
11 17.17, on the -- just the language under 17.17.B. It says,  
12 An operator of an existing operation. Is that correct  
13 language for that?

14 A. We were trying to find the best way to describe  
15 the ones identified through paragraphs (1) through (4) of  
16 subsection A of 13. Since they address different types of  
17 operations, it was -- we were trying to find something that  
18 would represent it. It's -- coming up with regulatory  
19 language to address something that are individually  
20 different is very difficult at times.

21 We thought that the paragraphs (1), (2), (3) and  
22 (4) of subsection A would identify such operations to those  
23 parties, that they would be identified in detail.

24 Q. So wouldn't it be adequate just to say that an  
25 existing pit --

1 A. Well, there's --

2 Q. -- et cetera, et cetera, et cetera, whatever?

3 A. If you go to both page 12 -- If you go to closure  
4 requirements, subsection A, and look at (1) through (4),  
5 it's a bit -- it would be a bit complicated to write that  
6 where you could identify all of the conditions within that.  
7 We thought that might be even more confusing.

8 Q. Okay. Well, it seems like the operator of an  
9 operation --

10 A. Yeah, if you have a better idea, we're open to  
11 it. It's --

12 Q. Okay. And then on this issue of -- you made a  
13 comment at one point about surface owner approval needed  
14 for legal ramifications in order for OCD to issue an  
15 approval. What are you referring to?

16 A. I guess what we're referring to is -- and this  
17 would be for on-site closure, I believe it's 13.F.(2) --  
18 no, 13.F.(1).(b), possibly, if I'm not mistaken. And this  
19 would be written consent -- I'm sorry, it's (c). I was off  
20 by one. It's written consent from the surface owner.

21 Our concerns are, with the Surface Owner  
22 Protection Act there are -- there's the option for  
23 agreements to be established between the operator and the  
24 surface owner. We don't want to put ourselves in a  
25 position to approve something that contradicts that

1 agreement and have the operator use that for just cause for  
2 them to go out and do something that violates that, which  
3 puts us as a party to that conflict.

4 So by having some type of written authorization  
5 from the surface owner, then we have knowledge that this is  
6 okay to approve, because it's indirectly part of their  
7 agreement, without having to review the agreement or be  
8 party to that.

9 MR. BROOKS: Mr. Chairman, Commissioner Olson,  
10 I'm not objecting to the Commissioner's question. It's  
11 been pointed out to me that that's not a proper thing to  
12 do, but I will -- I just wanted to advise you, Commissioner  
13 Olson, that this particular aspect of the matter will be  
14 covered in the brief which Commission -- which Division  
15 counsel will submit pursuant to the Commission's order.

16 COMMISSIONER OLSON: Okay. I only asked because  
17 he was commenting on it, so...

18 MR. BROOKS: Like I said, I'm not objecting to  
19 the Commissioner's question.

20 Q. (By Commissioner Olson) Well, along -- getting  
21 into this issue then, of our -- lots of burritos around the  
22 countryside, is there somehow going to be a -- I guess a  
23 map going to come in with closure, then, that shows where  
24 this burrito is located?

25 A. I would say no. What -- Things that we are doing



1 to kind of make it easier to find such burritos is  
2 requiring under that same provision of 13.F -- make sure  
3 I'm stating the right one here. I believe it's F.(2) --  
4 I'm trying to find my -- with the 100 feet reference.

5 Q. I think it's F.(2).(e).

6 A. Yes, thank you, that was on the other page.

7 -- that you could probably find such a burrito  
8 within 100 feet of the initial drilling or well, because  
9 the initial pit should be beside the well itself. If the  
10 burial occurs within 100 feet of that, it should be  
11 somewhere in the proximity of that well.

12 Q. I guess, shouldn't there be some permanent record  
13 of where this is located?

14 A. We discussed those matters in task force. The  
15 problems that we ran into, we talked about maybe something  
16 on the deed or plat, but there was no question about  
17 longevity of certain notices, maybe on a deed, only being  
18 present for a couple of years, so it may not remain on such  
19 a mechanism. So we couldn't find a way to really resolve  
20 that issue.

21 Q. Well, I guess, how would a future landowner know  
22 this burrito is even there, especially if it ends up being  
23 re-vegetated and you wouldn't necessarily know something  
24 was located there?

25 A. Yes, and that's the current situation that we're

1 in today, with all these on-site burials that are occurring  
2 -- that have occurred in the past.

3 My understanding from doing environmental work,  
4 sometimes things do require environmental assessment to be  
5 done at the site, or around the site, to make those  
6 determinations. If someone saw a well on their property or  
7 some signs of drilling that has occurred, they would  
8 probably be encouraged to do such assessment.

9 Q. Did you see the slides that the Division  
10 presented, and in particular one case where a housing  
11 subdivision was built on top of a former pit --

12 A. Yes.

13 Q. -- in the Shell Westgate subdivision?

14 A. Yes.

15 Q. And so wouldn't it make sense that there should  
16 be some type of a deed notice so that the future landowner  
17 would know this is there, and they shouldn't disturb it?

18 A. Yes, my understanding of deed notice is that  
19 sometimes they purge those records. The notice may only be  
20 allowed to stay only for a couple of years on record, so if  
21 20 years were to lapse, that notice may vacate that record  
22 and still not remain there. We kind of looked into that  
23 assessment to see if that would be appropriate or not.

24 Q. And that's a problem with county record keeping,  
25 is that --

1           A.    Yes, that was my understanding, that to do such a  
2    thing wouldn't guarantee that it would remain in the  
3    record.

4           Q.    Well, shouldn't there be some type of attempt to  
5    somehow record this, so future landowners -- and we've got  
6    some from -- some coming to issue especially that, as  
7    Commissioner Bailey brought up, something that may have,  
8    you know, built up H<sub>2</sub>S or has got other essentially toxic  
9    materials in it, petroleum, even though it's lower levels,  
10   that shouldn't be -- just the whole point is, these things  
11   aren't supposed to be disturbed --

12          A.    Yes.

13          Q.    -- in the future.

14          A.    The problem that we found is that we couldn't  
15   find an appropriate method or mechanism to make that  
16   happen. It was discussed.

17          Q.    Well, I guess then, the current framework,  
18   wouldn't the deed notice probably be the best you could do?  
19   Maybe it's not going to be there forever, but it's the best  
20   you can do at the moment.

21          A.    It's -- it could be a possibility. We didn't see  
22   it as being long-term, though.

23          Q.    All right. And how is this landowner  
24   notification going to work with land management agencies  
25   like the BLM? Are they actually going to go and is the BLM

1 going to give a letter, a written consent of some sort, for  
2 burial on federal lands? Have you talked to them about  
3 that?

4 A. We did meet with the BLM. I don't think we  
5 discussed that proposal at the time. Actually, I don't  
6 think it was during our drafting of the version that the  
7 task force received, so we hadn't quite come up with that  
8 concept yet.

9 My understanding is that they currently allow on-  
10 site burial. We don't see where that would create any  
11 issues if that's their current practice. If they currently  
12 allow it, then they would -- it seems like they would  
13 continue to sign those waivers unless they had some type of  
14 issue.

15 Q. But would they actually -- according to the rule  
16 as proposed, it was that -- it's that the operator shall  
17 obtain the surface owner's written consent. So would there  
18 have to be some type of letter from the BLM consenting to  
19 on-site burial, or how would that work?

20 A. Yes.

21 Q. There would be some type of --

22 A. -- written consent.

23 Q. -- written consent?

24 A. Written authorization, yes.

25 Q. And then we talked about -- There's been a lot of

1 discussion about the 100-mile radius, and a lot of this,  
2 especially in the San Juan Basin, will end up going to --  
3 most likely at the moment, would be going to our regional  
4 landfills permitted by the Environment Department?

5 A. That is a possibility. I would like to clarify  
6 that we do have landfarms up there that they could also go  
7 to if they meet chloride standard.

8 Q. So if they were above the chloride standard, if  
9 they blended it, they could go to the landfarm?

10 A. Yes.

11 Q. How many landfarms are up there now?

12 A. I want to say -- off the top of my head -- and  
13 there may be more -- I know of at least three.

14 Q. And I think it was the testimony I heard earlier  
15 that we're looking at, on a statewide basis, about 1000  
16 pits per year at the moment, and about 1000 yards per pit.  
17 Are we going to be able to handle all that volume between  
18 both the NMED-permitted landfills and OCD-permitted  
19 facilities?

20 A. I would say definitely yes. In my involvement  
21 with the Environment Department in permitting for  
22 landfills, when those applicants come in their design plan  
23 is to design -- most of the landfills are -- and the ones  
24 that fall in this area are regional landfills. They're  
25 designed -- they're looking out 80 to 100 years of

1 capacity, and this is just municipal waste.

2 So they design them quite large. I mean, they  
3 are large facilities, because they want -- when they seek a  
4 permit, they want to make sure they have plenty of room and  
5 that it's going to be worth the effort to construct such a  
6 facility and operate it.

7 So I would say definitely yes.

8 Q. And I guess for the NMED-permitted landfills,  
9 that's for their anticipated municipal waste, that's  
10 probably not counting for getting large volumes of oilfield  
11 waste.

12 A. Some of these facilities accept -- I think Rio  
13 Rancho -- I was trying to think. I want to say it's  
14 roughly -- trying to think how many yards of waste they  
15 accept a day. It's in the thousands they accept in a day,  
16 they anticipate those volumes. So an extra thousand cubic  
17 yards. And we're talking about just a thousand drilling  
18 operations for the year. I'm talking about daily rates at  
19 these facilities. So they're designed to take that type of  
20 -- that volume of waste.

21 Q. And then did you see the language that has been  
22 presented by the New Mexico Citizens for Clean Air and  
23 Water, they proposed some language changes to the rule?

24 A. I believe I saw Dr. Neeper's the other day. For  
25 some reason, they submitted theirs early and it was not in

1 my stack of other parties from the 22nd, so I don't have  
2 that in front of me. But Dr. Neeper did go through those  
3 during his presentation, I do believe.

4 Q. Well, I was wondering if the Division had any  
5 comment on proposed language by the -- Some things that he  
6 proposed seem -- have some merit, but I was wondering if  
7 there was any comment from the Division on their proposed  
8 language.

9 A. Could you preface that with something? Because  
10 off the top of my head -- I don't have it in front of me,  
11 and I -- I don't remember. There's a lot of parties I went  
12 through that had recommendations. I remember they had the  
13 100-foot-to-groundwater separation, I do remember that one.  
14 And that, if I'm not mistaken, that might have been only  
15 for burial on site.

16 Q. Well, they had a number of different ones, so if  
17 you haven't --

18 A. I can discuss the ones that I remember, but I  
19 can't remember them all.

20 Q. Okay. That might be it, let me check here.

21 Oh, just one thing I wanted to clarify, and I  
22 think this is -- Mr. Hiser was bringing this up. Let me  
23 make sure I understand this.

24 If they're going to have multiple pits, which has  
25 been common in the San Juan Basin on wellsites up there, if

1 there's going to be multiple pits on one site, would the  
2 operator be able to submit just one application that covers  
3 all the pits they would have on the location, or does each  
4 one need to be a separate application?

5 A. Well, I think there needs to be some  
6 clarification. I think the difference is, in the southeast  
7 they used the horseshoe, and they have the inner and outer  
8 horseshoe, which indirectly is two separate areas of  
9 containment.

10 In the northwest they separate those, they put  
11 them side by side. I've seen them side by side. Currently  
12 they're being issued under one permit. We continue to do  
13 the same under this proposed rule.

14 Q. So if they got to having multiple below-grade  
15 tanks on the same site, one for a separator, one for a  
16 dehy, maybe a pipeline drip, that could all be done under  
17 one application, then?

18 A. I would think so. That's my understanding.

19 Q. Okay.

20 A. We want to simplify the process if we can.

21 COMMISSIONER OLSON: Right. Okay, I just wasn't  
22 sure from the answer that you had before with Mr. Hiser, if  
23 that was to be allowed.

24 And I think that's all I have at the moment.

25 EXAMINATION



1 BY CHAIRMAN FESMIRE:

2 Q. Okay. Mr. Jones, could you turn to page 10 under  
3 19.15.17.12.A.(2)? And I too would have a question on  
4 something that Mr. Hiser raised.

5 A. Okay.

6 Q. Are you there?

7 A. Yes.

8 Q. The operator shall recycle, reuse or reclaim all  
9 drilling fluids in a manner that prevents the contamination  
10 of fresh water and protects public health and the  
11 environment.

12 And Mr. Hiser's point was, does this foreclose  
13 the disposal of that material? And you did answer it, but  
14 I didn't quite follow the answer.

15 A. I would say that you can still dispose of those  
16 fluids, and the reason I state this is, it was -- he put  
17 out a scenario that was hypothetical. Let's say you have a  
18 flare situation, and you're going to have a surplus of --  
19 or kick, I believe he said. And instead of constructing an  
20 emergency pit, could they dispose of these? Could they  
21 extract them and dispose of them during the operation of  
22 these excess fluids?

23 I believe that you can do that. It may not be  
24 written as clear as that in the rule, but I don't see where  
25 that would be prohibited by the rule, and that's what I was

1     trying to clarify with him.

2                 We do have -- I was going to look for this, and  
3     it may be in construction and design, but I -- there's a  
4     general provision in construction and design, is that  
5     you're supposed to -- Let me find it here.

6                 I guess under page 7 -- especially for a  
7     temporary pit -- it states under F.(1), The operator shall  
8     design and construct a temporary pit to ensure the  
9     confinement of oil, gas and water and prevent uncontrolled  
10    releases. This would mean that if you're constructing such  
11    a pit, if you anticipate that, or if you don't anticipate  
12    and you don't plan -- Let's say in his case, it was not  
13    suitable for an emergency pit. Then your obligation under  
14    the construction and design provisions will obligate you to  
15    ensure that you prepare for such a kick, if you know you  
16    cannot construct an emergency pit at the site.

17                So there are some other provisions that if you  
18    know the site you're going to is not going to allow you to  
19    have such a -- utilize emergency actions for the emergency  
20    pit, that you need to construct a larger pit to begin with,  
21    because based upon this scenario he already set that as a  
22    precedent, he knew he couldn't construct it. So there are  
23    provisions that tells him he needs to ensure it's properly  
24    sized for that provision.

25                But as in -- for disposal, there's not a clear

1 statement for that. We didn't want to create confusion  
2 that in this -- that you shall dispose. It might be  
3 implied that while you're operating you shall be disposing  
4 at the same time. That's what we didn't want to create  
5 this confusion.

6 So I don't know if that answers your question.

7 Q. It helps.

8 A. Okay.

9 Q. Mr. Jones, are you familiar with a product used  
10 in the oilfield called Color Gut?

11 A. No, I'm not.

12 MS. FOSTER: Mr. Chairman, just so I can -- was  
13 that Pellet Gut?

14 (Laughter)

15 CHAIRMAN FESMIRE: Do you want to spell it for  
16 her, John?

17 MR. BYROM: It's Color Gut.

18 MS. FOSTER: Thank you.

19 CHAIRMAN FESMIRE: I don't think I've got any  
20 questions.

21 Mr. Brooks, do you have further direct -- or  
22 redirect?

23 MR. BROOKS: Yes, sir. Mr. Chairman, honorable  
24 Commissioners, before I begin redirect, I would like to ask  
25 a question as to how the Commission would prefer that we do

1 one particular matter.

2 At least two things have come up, and there are  
3 probably one or two others in the course of Mr. Hiser's  
4 examination of Mr. Jones and Commissioner Olson's  
5 examination of Mr. Jones, that just on the basis of  
6 whispered conversations or chats in the breaks, that Chief  
7 Price and I believe that probably the criticism that was  
8 made was fairly accurate in that we probably ought to  
9 revise those provisions.

10 Would you like for the Division to submit another  
11 set of proposed revisions, or is this something that the  
12 Commission is sufficiently informed on, and they can go  
13 ahead and use their judgment on it?

14 CHAIRMAN FESMIRE: Well, without your pointing  
15 out exactly which comment, unless you just generally want  
16 to accept Mr. Hiser's --

17 MR. BROOKS: Well, the one that I had in mind  
18 right off at the moment was the one that you just raised,  
19 Chairman Fesmire, that this provision of F.(2) -- we were  
20 rather well persuaded that it ought to say "or dispose of"  
21 in that provision, and --

22 CHAIRMAN FESMIRE: I think what we'll do is, at  
23 the end of testimony give everybody a chance to submit a  
24 revised list of --

25 MR. BROOKS: Very good, I just wondered if I

1 ought to go into on redirect to try to get my witness to go  
2 back and withdraw his defense or something.

3 (Laughter)

4 CHAIRMAN FESMIRE: I think that would be implied  
5 in the revised list of --

6 MR. BROOKS: Very good. With that, I do have  
7 brief redirect.

8 CHAIRMAN FESMIRE: Okay.

9 REDIRECT EXAMINATION

10 BY MR. BROOKS:

11 Q. Good afternoon, Mr. Jones.

12 A. Good afternoon.

13 Q. Are you getting -- feeling a little droopy about  
14 the --

15 (Laughter)

16 CHAIRMAN FESMIRE: Well, he is getting old, you  
17 know.

18 THE WITNESS: Yes, another day older.

19 Q. (By Mr. Brooks) Well, as I pointed out to you  
20 during lunch, you're not making records for cross-  
21 examination. I did sit through a cross-examination of an  
22 expert witness that lasted an entire week one time, so  
23 you're getting off easy.

24 Anyway, let's see now. Well, I don't have enough  
25 notes to understand what I meant by this. It was three

1 days ago, so I'm not going to ask it. Go on to something  
2 else.

3 When you were discussing -- when Mr. Hiser was  
4 questioning you about the exception standards -- about the  
5 exception rules, you suggested a hypothetical that you  
6 might make an exception to the closure standards -- closure  
7 treatment standards based on the background in a particular  
8 area where the pit was located. Do you recall that?

9 A. Yes.

10 Q. And during one of the breaks, did Chief Price set  
11 you straight on the Division's position on that?

12 A. He presented a scenario that I hadn't considered  
13 that would probably make that an unreasonable example for  
14 that type --

15 Q. Okay, so --

16 A. -- scenario.

17 Q. -- then are you inclined at this point to  
18 withdraw that as an example of an exception that might be  
19 granted?

20 A. Yes, I am.

21 Q. And I only ask that to keep the record straight,  
22 if it is cited as a matter of administrative intent.

23 Okay, let me go ahead then.

24 Mr. Hiser asked you a hypothetical about what if  
25 the Division were to require a hydrological study that -- a

1 \$200,000 hydrological study, and you said that wasn't  
2 intended. Do you recall that?

3 A. Yes, I do.

4 Q. And he asked what the recourse would be. Could  
5 an operator who was dissatisfied with what the Division  
6 required file an application for a hearing under our normal  
7 procedures?

8 A. Yes, they can.

9 Q. And if the Hearing Examiner, who would be either  
10 a petroleum engineer or a lawyer and wouldn't know much  
11 about environmental work, were to reject -- were to  
12 recommend rejection of that, could the operator then appeal  
13 to the Commission?

14 A. Well, that's my understanding.

15 Q. Okay, thank you.

16 At one point this morning, you referred to the  
17 Clean Water Act as being one of the statutes that OCD  
18 administers. Did you misspeak on that?

19 A. Yes, I apologize. I'm kind of weary after all  
20 these days.

21 Q. In fact, do we have anything -- does the Oil  
22 Conservation Division have anything to do with the  
23 administration of the federal Clean Water Act?

24 A. No, I misspoke. It should have been the Water  
25 Quality Act.

1 Q. And that's a New Mexico statute, right?

2 A. Yes.

3 Q. Thank you. Now I want to go through a couple of  
4 specific provisions here.

5 First, the definition of a permanent pit. I  
6 believe that's 17.7.E, as in echo?

7 A. Yes.

8 Q. There was a discussion this morning of the fact  
9 that a permanent pit -- it says something about used for  
10 collection, retention or storage of produced water or  
11 brine. Does it actually say a permanent pit means a pit,  
12 including a pit used for collection, retention or storage  
13 of produced water or brine?

14 A. Yes, you are correct, we did not --

15 Q. Does that language suggest to you that a pit that  
16 was not used -- that was used for collection of something  
17 else would also be a permanent pit under that definition?

18 A. Yes, it would.

19 Q. Thank you.

20 Now you were asked a great many questions about  
21 below-grade tanks --

22 A. Yes.

23 Q. -- and I don't propose to answer -- to ask --  
24 re-ask all those questions, but there were some questions  
25 asked about distinctions between a below-grade tank and an



1 above-grade tank.

2 A. Yes.

3 Q. Now if a tank is down in a depression -- and  
4 under the definition that we're proposing it would be a  
5 below-grade tank, right?

6 A. Well, hm. It would have to be below the  
7 surrounding ground surface.

8 Q. Okay, now surrounding would seem to suggest that  
9 it has to be higher all the way around, or substantially  
10 all the way around, perhaps?

11 A. Yes.

12 Q. Now in the case of a below-grade tank, if it's  
13 down in a depression, would there be a tendency for  
14 precipitation to collect in the event of a heavy -- what  
15 you guys call a rain event? I always just call it a rain,  
16 but what you guys call a rain event, would there be a  
17 tendency for precipitation to collect in the depression  
18 around the base of that below-grade tank?

19 A. There could be a potential, yes.

20 Q. Could that cause some concerns about the  
21 integrity of that below-grade tank that might not exist in  
22 an above-grade tank?

23 A. It could put it in a position to come in contact  
24 with that water, sit in that water, maybe impact the  
25 material that that tank is made out of.

1 Q. Very good, thank you.

2 Now, the fencing provision -- and I failed to  
3 note -- well, I found it right here, I was lucky.

4 11.D.(1). Mr. Hiser and Commissioner Olson have been so  
5 alert at catching the glitches in this rule that I thought  
6 maybe I'd better point out an ambiguity -- or ask you about  
7 what seemed to me to be a possible ambiguity here.

8 Let's see, where's the -- the five-foot provision  
9 is what I'm --

10 A. It's D.(3).

11 Q. D.(3), okay. The operator shall fence any other  
12 pit or below-grade tank to exclude wildlife and livestock,  
13 with at least four strands of barbed wire in the interval  
14 between one and five feet above the ground.

15 Now, if you had four strands of barbed wire at  
16 2 1/2, 3 1/2 -- well, let's see, 2 1/2, 3, 3 1/2, and 4  
17 feet, wouldn't that be within the interval between one foot  
18 and five feet from the ground?

19 A. Yes, it would satisfy this requirement.

20 Q. Okay, thank you.

21 Okay, now --

22 CHAIRMAN FESMIRE: Is that a good thing, Mr.  
23 Brooks?

24 MR. BROOKS: Mr. Chairman, I don't know if it's a  
25 good thing or not, but as long as the Commission is trying

1 to identify things that maybe ought to be -- language --  
2 nuances of language that maybe ought to be addressed, I  
3 thought perhaps the Division had some responsibility to  
4 help them.

5 Q. (By Mr. Brooks) Okay, next one I wanted to call  
6 your attention to is in Section 12.A.(4). 17.12.A.(4).

7 MS. FOSTER: I'm sorry, say that again?

8 MR. BROOKS: 17.12.A.(4).

9 MS. FOSTER: Thank you.

10 Q. (By Mr. Brooks) You were asked some questions  
11 about this by Commissioner Olson this morning.

12 A. Yes.

13 Q. First of all -- and I asked this question of Mr.  
14 Powell, and he didn't -- he disclaimed knowledge of the  
15 answer. But just to clarify, the present Rule 50, does it  
16 have any requirement that an operator report a liner  
17 problem if there has not been a release that's reportable  
18 under Rule 116?

19 A. No.

20 Q. Okay. Now call your attention to 12.A.(4) of the  
21 proposed rule. It says, If the integrity of the pit liner  
22 is compromised, or if any penetration of the liner occurs  
23 above the liquid's surface, then the operator shall notify  
24 the Division district office within 48 hours.

25 Now, if a penetration of the liner occurs below

1 the liquid line, would that be a compromise of the liner?

2 A. That would qualify for that introduction to that  
3 provision, yes.

4 Q. So under this rule, would the operator have to  
5 report to the Division within 48 hours a breach either  
6 above or below the liquid line?

7 A. Yes, they would.

8 Q. And would that be true even if there was not a  
9 release reportable under Rule 116?

10 A. Yes.

11 Q. Now the next question I have for you is about  
12 13.H.(1), re-vegetation provision.

13 A. Yes.

14 Q. Just wanted to clarify this. I'm not sure that  
15 there was any misspeaking, but I want to be sure it's  
16 clear, at least to me, and hopefully to everyone, if I'm  
17 wrong or right, but H.(1) -- reading H.(1), it says, Upon  
18 completion of -- well -- Yeah, Upon completion of closure,  
19 the operator shall substantially restore the impacted  
20 surface area to the condition that existed prior to oil and  
21 gas operations by placement of the soil cover and re-  
22 vege- -- by placement of the soil cover and re-vegetation  
23 of the site, and maintain the cover established by re-  
24 vegetation, which shall not include noxious weeds, through  
25 two successive growing seasons.

1           Would it be correct to say -- Well, let me put it  
2 this way: Does the operator -- Does that requirement  
3 require the operator to re-establish cover, regardless of  
4 how many growing seasons it takes to establish it, and then  
5 to maintain the cover for two growing seasons after it's  
6 re-established?

7           A. Can you ask that again? I want to make sure I'm  
8 understanding your question.

9           Q. Okay, let me preface it a little bit. I'm trying  
10 to put it in non-leading form, but let me preface it a  
11 little bit.

12           What I understood, perhaps wrongly, that you were  
13 indicating in your discussion this morning with  
14 Commissioner Olson was that it only required the operator  
15 to undertake re-vegetation for two successive growing  
16 seasons. And that's -- because that's not the way I read  
17 the rule, I just wanted to get it clarified.

18           The way I read the rule, it says -- the proposed  
19 rule, it says that the operator must establish re-  
20 vegetation, whatever that means, however long it takes to  
21 do that, that -- you know, if it took three or four growing  
22 seasons -- if we had a drought and it took three or four  
23 growing seasons, would the operator still have to continue  
24 efforts until he had established the vegetation?

25           A. I see where you're going with this. As it reads,

1 to maintain the cover established -- re-vegetation through  
2 two successive growing seasons, you are correct. If in the  
3 initial growing season no vegetation was established, then  
4 they still have two successive growing seasons to  
5 accomplish -- to reach that point where they have at least  
6 two of those successively.

7 Q. That was my reading of it, thank you.

8 A. Okay, thanks for that clarification.

9 Q. Okay. Now Mr. Price particularly wanted me to  
10 ask this question. You remember you discussed -- I believe  
11 Commissioner Olson asked you something this morning about  
12 if -- about is not a deep-trench burial essentially the  
13 same thing as a landfill?

14 A. Yes.

15 Q. Now, I'm going to go into this with another  
16 witness, but is it true that landfills -- to establish a  
17 landfill under part 36, there's some additional  
18 requirements that would not apply for a deep-trench burial?

19 A. Exactly.

20 Q. Okay. Now were you here and did you hear Mr.  
21 Hansen's testimony about the probable effects of the  
22 sequestering waste in a deep-trench burial over the long  
23 term?

24 A. If you're referring to his modeling --

25 Q. Yes.

1 A. -- yes.

2 Q. And did he testify that the contaminants in the  
3 waste would eventually reach groundwater, even with a good  
4 liner?

5 A. Yes, the results of his modeling indicated that,  
6 yes.

7 MR. BROOKS: And I want to advise the Commission  
8 that that question was asked at my client's request,  
9 against legal advice.

10 (Laughter)

11 Q. (By Mr. Brooks) I have one more question for  
12 you.

13 A. Okay.

14 Q. No, two more questions for you.

15 There was some talk about reporting the notice of  
16 this pit -- of a buried pit, buried waste. Do you recall  
17 that?

18 A. Yes.

19 Q. It was just a little bit ago.

20 A. Yes.

21 Q. Are you familiar with the fact that the OCD rules  
22 with regard to plugging the wells require a well to be --  
23 require that when an operator plugs a well, that they place  
24 a permanent marker to indicate the location of that well?

25 A. Yes.

1 Q. Would that be one possible solution to the issue  
2 that Mr. -- that Commissioner Olson raised about making  
3 sure that people knew where that buried waste was?

4 A. It could be used as a mechanism for indication of  
5 the proximity of --

6 Q. Yeah.

7 A. -- such buried waste.

8 Q. Well, could the Commission possibly address that  
9 issue by requiring -- although this proposal doesn't do it,  
10 could the Commission possibly address that issue by  
11 requiring that an additional marker be placed at the point  
12 -- at the area -- location where the pit -- where the  
13 buried waste is buried?

14 A. That would be an excellent recommendation, since  
15 it's currently used for other purposes.

16 Q. Thank you.

17 And I just have one more question, and that deals  
18 with the so-called emergency pit. And my question is, do  
19 you recall that during the drafting of this rule, a certain  
20 party wanted to put in the expression "so as to" in various  
21 places --

22 (Laughter)

23 Q. -- such as they should treat this pit so as to  
24 protect the environment, public safety and so forth?

25 A. Yes, I believe that party was you.



1 Q. And do you remember --

2 (Laughter)

3 Q. Do you remember that the decision was made to  
4 strike all the "so as to's"?

5 A. Yes.

6 Q. Well, I don't understand why we have to get rid  
7 of the "so as to's" if we don't get rid of the "so-  
8 called's".

9 A. That would probably be appropriate.

10 (Laughter)

11 MR. BROOKS: That's all my questions.

12 CHAIRMAN FESMIRE: Mr. Carr?

13 MR. CARR: I have no questions.

14 CHAIRMAN FESMIRE: Ms. Foster?

15 MS. FOSTER: I have a few.

16 RECROSS-EXAMINATION

17 BY MS. FOSTER:

18 Q. I believe that you stated on redirect that based  
19 on after conversation with Chief Price that there was a  
20 clarification on the -- what you can leave behind, as it  
21 relates to background levels?

22 A. Yes.

23 Q. Okay. What exactly is background levels? When  
24 that is in the rule, what exactly do you mean by background  
25 levels?

1           A.   Well, currently it's not in the rule.

2           Q.   Okay. Well, there's a couple places in the rule  
3 where it states that you could meet the 250 milligrams per  
4 kilogram on chloride levels for background, based on  
5 sampling. Now, what exactly do you mean by "to  
6 background"?

7           A.   I'm a bit confused, because if I remember  
8 correctly, we never used background in this proposed rule.

9           Q.   I believe in 19.15.17.13, closure requirements --

10          A.   Oh, okay.

11          Q.   Right?

12          A.   I just want to make sure. It's been a long day.

13          Q.   For temporary -- closure method for temporary  
14 pits, you have the option of waste excavation and removal,  
15 which requires that you reach the -- several levels,  
16 including -- delineated by EPA methods --

17          A.   Okay.

18          Q.   -- 250 milligrams per -- or background  
19 concentration, that's just --

20          A.   This is for delineation, not burial on site, for  
21 clarification.

22          Q.   Right, but background concentration is mentioned  
23 a couple of times in the rule, and since that was discussed  
24 on redirect, I wanted to talk about that. What do you mean  
25 by background, then?

1           A.    I just want to clarify. Background is only used  
2 for delineation only.

3           Q.    Okay, but it's used in the rule at least in three  
4 places --

5           A.    And it --

6           Q.    -- for delineation.

7           A.    Yes.

8           Q.    I just want to know what the Division means when  
9 they say to go back to background, because there seems to  
10 be a little bit of a confusion, based on the statements  
11 that you just made on redirect.

12          A.    I think what Mr. Brooks was referring to was a  
13 question Mr. Hiser had about burial of waste on site, not  
14 delineation of waste. So your question is something other  
15 than what was discussed and Mr. Brooks discussed.

16          Q.    Okay, but I believe that what you said on  
17 redirect was that you can't leave behind, even if  
18 background levels are met. Okay?

19          A.    Yes.

20          Q.    What I want to talk about is, what do you mean by  
21 background levels?

22          A.    Okay, in the reference to Mr. Brooks' scenario  
23 and Mr. Hiser's scenario, we were discussing the burial of  
24 waste and the requirements for burial, for deep-trench  
25 burial, and the discussion was, could background

1 concentrations be used?

2 Well, Mr. Price brought up a very good scenario  
3 where this would not be appropriate. Such a scenario would  
4 be at a -- at a -- oh, goodness, I just had a brain --  
5 potash mine, where they're putting high concentrated water  
6 out onto the surface area that would not constitute a  
7 watercourse. Those areas would be impacted -- they would  
8 not be natural background concentrations, because they're  
9 being impacted by the discharge of the potash mine.

10 Q. Okay, but that's by somebody other than the  
11 operator?

12 A. Yes, they would not -- those background would not  
13 be true background because it would be impacted background.  
14 So what we're getting at is that we would not want to  
15 further the impact of that area from that discharge --

16 Q. Okay, and that --

17 A. -- so it would not be appropriate.

18 Q. -- and that leads to my next question, is, how is  
19 an operator supposed to find out what is true background,  
20 as opposed to impact background?

21 A. Well, once again we're talking about disposal --  
22 You know, if we're talking about delineation where a  
23 background is used in the rule, then if you were trying to  
24 determine if a release has occurred up under a temporary  
25 pit, a permanent pit or a below-grade tank, then that would

1 be considered background.

2 Q. Okay, but I'm asking a very basic question here,  
3 I think you're missing the point. I represent several  
4 operators, they're asking me how is it that they are  
5 supposed to determine background? They're supposed to  
6 sample, correct?

7 A. Yes.

8 Q. Okay. And when you take samples, how many is the  
9 Division expecting us to take, to determine whether it's a  
10 true background sample, the numbers that we're getting are  
11 a true background sample, or an affected or -- background  
12 sample --

13 A. Well --

14 Q. -- so that we know what our ground zero is,  
15 supposedly?

16 A. Yes, I'd like to clarify. There's no provision  
17 in the rule that requires background sampling. We're  
18 leaving that up to the operator as an option, if they  
19 choose to do so. Not all operators may choose to do so.

20 Q. Okay, assuming that they choose to do so, they do  
21 have the option under the temporary -- temporary pit  
22 closure, permanent pit closure, and I believe even on the  
23 below-grade tank closures, okay?, to either go, in the  
24 simplest example, the 250 milligram-per-kilogram chloride  
25 level or background.

1           So again, to determine background, how many  
2 samples does an operator need to take?

3           A.   Well, they could propose or they could do it  
4 themselves. Basically if you look at what's required to  
5 demonstrate through the delineation process, you could use  
6 the same format if you choose to. We're not specifying  
7 that. You're asking me to state what's required. We're  
8 not even specifying that in the rule, but we can recommend  
9 to use the same application that you used for your  
10 delineation to create your composite and do it prior to  
11 installing whatever you're choosing to do it, be it a  
12 temporary pit -- because it would be an unimpacted area.

13          Q.   Okay, so -- but you're saying -- you just used  
14 the word "composite". Does that mean that you would expect  
15 operators to do composite sampling?

16          A.   I'm not stating that, I'm saying they can do  
17 that. We're not requiring them to -- You're asking me,  
18 What are we requiring? And we're not requiring in the  
19 rule. We're not requiring that background be established  
20 in this scenario. We can recommend you can use a similar  
21 procedure as your delineation procedure --

22          Q.   Okay, so does that mean --

23          A.   -- for that purpose.

24          Q.   -- does that mean that prior to building a  
25 location where they are intending to put a temporary pit,

1 is one sample enough to establish background? Say for  
2 example, it's taken in the middle of the pit. One sample,  
3 chloride, for example.

4 A. If the operator chooses to and they want to use  
5 that, that would limit their range. If you take a  
6 composite you have a more well-rounded representation of  
7 what you're dealing with in case there's some type of  
8 formation that has a higher concentration than the other.

9 Q. All right.

10 A. So it would be up to the operator if they want to  
11 place that limitation on themselves.

12 Q. Okay, so -- But now what you're saying is, a  
13 composite sample might be good enough. And are we talking  
14 five points of the pit before you even put your liner down  
15 and your things in the temporary pit?

16 A. It's up to the operator if they choose to do such  
17 a thing. They have the excavation of the pit there. They  
18 can choose if they want to grab multiple samples. If you  
19 make a composite you're still testing one sample, so it  
20 would behoove someone to have an area that's 100 by 200  
21 feet to choose one grab -- one sample, take a grab sample  
22 for one location. They can take multiple samples that will  
23 create one composite, and that one sample is still  
24 requiring the testing of one sample.

25 So it's up to the operator. We're not making any

1 recommendations or requirements for that. It would be the  
2 limitation the operator places on themselves by choosing --

3 Q. I understand that, but as an operator, you would  
4 like to know when you start what you would have -- what  
5 levels you have to close your pits at, right? So if you're  
6 going to go through the effort of doing background  
7 sampling, you want to make sure that up front you're doing  
8 enough to satisfy the OCD requirements for background  
9 later.

10 A. Once again, we have no requirements for  
11 background.

12 Q. Okay. Now in terms of the statistical numbers,  
13 would you look at the highest number seen, or a  
14 statistically derived population high number, based on the  
15 samples that were taken?

16 A. Once again, we're not recommending doing  
17 statistics. You're asking me to comment on something that  
18 we're not proposing or recommending -- or requiring under  
19 the current rule.

20 Q. You're not requiring it, but in effect you are,  
21 because you're saying that if an operator wants to use a  
22 temporary pit, he either has to meet your levels or  
23 background levels. And I'm just asking you what the Bureau  
24 is thinking are background levels, so that we have a clear  
25 delineation of what the two options are for an operator.



1 That's all I'm asking.

2 A. Well, let's put it this way: The more samples  
3 you take to make your composite, the more representative  
4 it's going to be of the area. And that's just practical  
5 application. The less samples you use, the less it's going  
6 to represent the area as a whole.

7 Q. Okay.

8 A. So it's going to be up to the operator if they  
9 choose to sample 10 spots, eight spots, five spots or one.  
10 The fact that you have it excavated and you're actually  
11 making one sample -- that's what a composite sample is --  
12 one sample out of all those samples, it would behoove you  
13 not to take more than one sample.

14 Q. Okay. The hydrological study, there's a concern  
15 -- the hydrogeological study, there's a concern, I think  
16 you've heard, as to the cost of that study. And there was  
17 a little bit of conflicting testimony as to what our  
18 requirements are as operators and what we have to do for a  
19 hydrological study.

20 I believe that you stated at one point that it's  
21 really no more than a 10-minute search on the Internet, and  
22 then we can pull stuff off the Internet and that you would  
23 be happy with that. But then I believe there was a  
24 discussion with Commissioner Bailey as to a certification  
25 by a hydrologist or a PE on the hydrological --

1 hydrogeological study.

2 So --

3 A. Well --

4 Q. -- obviously if you have to have certification by  
5 an outside consultant, that's going to cost a lot more than  
6 doing a 10-minute Internet search.

7 A. I think you jumped from one place to another. I  
8 think we never stated that that -- that it had to be  
9 certified by a hydrologist or a geologist. What the  
10 discussion was about was the certification of the  
11 registered, certified engineer.

12 And when you discuss what was that to be applied  
13 to and should the engineer be certifying a hydrogeologic  
14 report, what we were trying to get at in that conversation,  
15 the result of that is -- my understanding from my part of  
16 it was, that would -- the registered engineer certification  
17 applies to the design of what you're trying to get. In  
18 this case it's permanent pit only, it's only required for  
19 permanent pits.

20 We were also -- just in passing and comment, that  
21 rather than have them certify the hydrogeologic report, it  
22 would be more appropriate to have a geologist or a  
23 hydrogeologist certify that. We didn't say it was  
24 required.

25 Q. Well, okay, if I could read you -- I understand

1 what you're saying about the permanent pits, but under  
2 19.15.17.9 sub (2) under permanent pits it states that a  
3 design engineering plan for a temporary pit shall use the  
4 appropriate engineering principles and practices and follow  
5 applicable manufacturers' recommendations. The engineering  
6 design plan shall include operating and maintenance  
7 procedure, a closure plan and a hydrogeologic report that  
8 provides sufficient information and detail on -- and then  
9 you have a list.

10 A. Yes.

11 Q. So you are requiring a hydrologic -- -geologic  
12 report for temporary pits.

13 A. No, your question said, did -- You're saying that  
14 we required either a geologist or a hydrogeologist to  
15 certify those reports. I'm clarifying that we never make  
16 that statement that that's required. That was part of your  
17 question. We can --

18 Q. Okay --

19 A. -- have it read back.

20 Q. Okay, then I want to get the -- I would the  
21 record clear that the Division would be perfectly with a  
22 10-minute Internet search on public records for -- to  
23 satisfy this hydrogeologic requirement for permanent and  
24 temporary pits, because there does not seem to be a  
25 differentiation in what is needed for the hydrogeologic

1 report for a temporary pit or a permanent pit --

2 A. That is --

3 Q. -- and therefore the certification requirements  
4 is -- that's really kind of a moot point.

5 A. Well, the certification requirements pertaining  
6 to the hydrogeologic report is a mute point.

7 The difference between the two, and I think I've  
8 stated this --

9 Q. Well, would you answer my first question first?  
10 Is --

11 A. I -- that's --

12 Q. -- with a report --

13 A. -- I'm sorry, you're cutting me off, and I was  
14 about --

15 Q. Okay.

16 A. -- to do that.

17 Q. Okay.

18 A. The difference between the two, because you're  
19 asking if there is a difference between the two, is that  
20 under the -- and I stated this in my original testimony, is  
21 that due to the permanence of a permanent pit -- and I  
22 think I talked about this even with the 50-foot separation  
23 to groundwater issue, is that we're looking at maybe  
24 something more than just the -- some data from USGS about  
25 groundwater at the site or from the i-WATERS database from

1 the State Engineer's report, we may want further  
2 confirmation due to the permanence of the permanent pit and  
3 the volume of liquid that it's going to be storing.

4 So we did talk about the use or recommendation  
5 that we might recommend the installation of a piezometer  
6 for a permanent pit, for that confirmation.

7 Q. Okay, and how about answering the first part of  
8 my question?

9 A. Can you please repeat the first part of your  
10 question?

11 Q. Okay, the first part of my question had to do  
12 with, would the Division accept a 10-minute Internet search  
13 to satisfy the requirements of a hydrologic report, as I  
14 believe you stated on your --

15 A. If --

16 Q. -- direct testimony?

17 A. If they can provide the information that's  
18 required in that report in 10 minutes, if they can provide  
19 it to our satisfaction, yes.

20 Q. Okay. And would you not agree with me that under  
21 the first section for permanent report, it states a  
22 hydrologic report is required, and under part (2) for  
23 temporary pits it also states that a hydrogeologic report  
24 is required?

25 A. Yes, if I'm not mistaken it's also required for

1 paragraph (4) for below-grade tank as well.

2 Q. Okay, and -- but -- but I -- what I seem to hear  
3 you saying is that the hydrologic -- the requirements for  
4 the hydrologic report seem to be different under each  
5 instance, depending on the longevity of the pit and what  
6 you're going to use that location for.

7 A. I don't think I said that they're going to be  
8 that different. I think the general information is going  
9 to be on the basis of the general information.

10 Of course, it's all site-specific too, so you've  
11 got to put that in consideration. So yes, they are all  
12 going to be different for each application, because each  
13 site is different.

14 But what -- the distinction I was making with a  
15 permanent pit, since it is permanent and the duration of  
16 the use of the pit, and the use of the pit itself for  
17 storage of certain liquids, with a very constant hydraulic  
18 head on it, we may ask for some additional confirmation for  
19 that -- for the permanent pit.

20 Q. Okay. So again, it sounds -- I'm hearing  
21 subjectivity there, but it's not clear in the rule.  
22 Depending on the site location, depending on what the  
23 Division decides to ask for --

24 A. We have no control over the site location.

25 Q. All right. I'd like to go back to definitions.

1 I believe that you gave us the definition of permanent pit.  
2 I'd like to just -- as it relates to the permanent pit, I  
3 want to make sure that I'm not confused, the definition of  
4 temporary pit under I means a pit, including a drilling or  
5 workover pit, which is constructed with the intent that the  
6 pit will hold liquids for less than six months and be  
7 closed in less than one year.

8 If you have a workover pit that is not intended  
9 for the use of fluid, for example, to clean rods, or you're  
10 not intending to put fluids in there, does that -- is that  
11 still considered a temporary pit? I want to clarify what  
12 you said on redirect, because --

13 A. Is that --

14 Q. -- the definition of permanent pits is everything  
15 that's not a temporary pit.

16 A. Well, in your question you said it was a workover  
17 pit. So yes.

18 Q. Okay. So a workover pit -- So it's not really  
19 the fluids that are in there, it's what the pit intended --  
20 is intended to be used for, drilling or workover?

21 A. Yes.

22 Q. All right. And the below-ground tanks. It's my  
23 understanding that -- and I believe this is a statement  
24 that was made by Commissioner Olson, that the current rules  
25 on below-grade tanks were originated to encourage operators

1 to put steel tanks in pits rather than using the open pits.  
2 Do you remember that line of questioning?

3 A. I don't know if those were his exact words, to  
4 encourage them to use steel tanks. But I do remember the  
5 conversation.

6 Q. Okay, you do remember the conversation.

7 Now are you -- when the operators are putting --  
8 using the steel tanks and transferring from the permanent  
9 pits to steel tanks, do you know if there was any paperwork  
10 at all filed with the Division concerning the use of those  
11 tanks instead of the pits?

12 A. My understanding, talking to the people in the  
13 district office, since they fill out a preview of a below-  
14 grade tank and the Rule 50, that there was no paperwork,  
15 other than the closure of the original pit that was  
16 required under Rule 50, that since there were no permits  
17 required and they don't fall up under Rule 50, there's not  
18 documentation for those tanks.

19 Q. Okay, so to your knowledge there were no  
20 conversations with Chief Price or even Commissioner Olson  
21 while he was still with the OCD?

22 A. I began in July of 2006, so I have no knowledge  
23 of those conversations.

24 Q. Okay. Okay, and then just a final line of  
25 questioning. You stated landfarms, that there are quite a



1 few landfarms, particularly in the northwest, that  
2 operators could use instead of a landfill?

3 A. I said I'm aware of three.

4 Q. Okay. Now under Rule 36 that was promulgated,  
5 can those landfarms accept drill cuttings?

6 A. Absolutely.

7 Q. Can they accept cement?

8 A. No, they cannot.

9 Q. Can they accept liners?

10 A. No, they cannot.

11 Q. Can they accept all types of oilfield waste?

12 A. All types --

13 Q. Hydrocarbons, produced water --

14 A. Well, if you're talking -- we were talking -- I  
15 guess for the landfarms we were talking about solids only.  
16 We do have a lot of facilities that do handle produced  
17 water out there as well.

18 Q. Okay, but if you have a sludge -- for example,  
19 you're coming close to -- you haven't completely dried out  
20 the contents of your liner and it's time for you to close  
21 your pit, you're folding up that liner and you're bringing  
22 it someplace. Can those landfills accept that liner with  
23 wet material still in it?

24 A. Actually, we have a facility up there that uses  
25 biopiles, and they look for exactly that type of waste.

1 Q. From the liners or just --

2 A. No, no --

3 Q. -- from the sludge?

4 A. -- you're -- the sludge.

5 Q. Okay. So it sounds like there's a possibility  
6 that an operator might have to dispose of waste from one  
7 location in several locations.

8 A. There's multiple options for multiple disposals,  
9 yes.

10 MS. FOSTER: Okay, thank you. I have no further  
11 questions.

12 CHAIRMAN FESMIRE: Mr. Jantz?

13 MR. JANTZ: No questions.

14 CHAIRMAN FESMIRE: Mr. McMahon?

15 MR. McMAHON: No, Mr. Chairman, no questions.

16 CHAIRMAN FESMIRE: Mr. Huffaker?

17 MR. HUFFAKER: Nothing, Mr. Chairman.

18 CHAIRMAN FESMIRE: Okay, anything more from the  
19 Commission?

20 Mr. -- Oh --

21 (Laughter)

22 CHAIRMAN FESMIRE: Commissioner Olson?

23 COMMISSIONER OLSON: Just a couple of  
24 clarifications.

25 FURTHER EXAMINATION

1 BY COMMISSIONER OLSON:

2 Q. When you -- in this discussion on the  
3 hydrogeologic reports --

4 A. Yes.

5 Q. -- you seem to be saying that there's a higher  
6 level of detail, of course, for something that would be  
7 submitted for a permanent pit?

8 A. Yes.

9 Q. Would it maybe just make more sense in the other  
10 places to replace the confusion and maybe just say if  
11 you'll submit hydrologic data that provides sufficient  
12 information, and maybe that would eliminate industry's  
13 confusion over what is a hydrologic report?

14 A. Well, I guess the reason we haven't done that is  
15 because there may be sufficient data available by public  
16 resources that it's not needed. I think my recommendations  
17 through the siting criteria, through my testimony,  
18 especially such as the hydrology and the groundwater issue,  
19 there's i-WATERS database. They have information of  
20 domestic wells, public wells, so forth, that have been  
21 drilled and permitted by the State Engineer's Office. In  
22 those they talk about depth to groundwater, and that can be  
23 good data.

24 The USGS has multiple monitoring wells all over  
25 the nation, all throughout New Mexico, where you can obtain

1 data, where they monitor those wells, if not annually,  
2 several times a year to verify the groundwater elevations  
3 in those wells.

4 There's a multitude of sources that have recent  
5 data that could be used in this. If all data suggests that  
6 the ground water is at 100 feet, then that's pretty good,  
7 solid information from those sources.

8 Now if we're getting closer to an area where  
9 there's water that may be in question, let's say up towards  
10 the La Plata River, so we may -- I've been involved in a  
11 site assessment for an evaporation pond, and we have water  
12 at fifty- -- I believe it was 52 feet. That is not  
13 documented by any of those sources. If we have that  
14 knowledge, then we may ask for additional verification that  
15 they want to say, We think this is sufficient.

16 Q. Well, I don't have a problem with that, but I was  
17 just wondering if we could just replace hydrologic report  
18 with hydrologic data and -- it seems to me that it would  
19 have the same effect.

20 A. Well, the -- with that we're looking -- we're  
21 looking at a multitude of things. If you look what's in  
22 the hydrologic report, we've got topography, we've got  
23 soils, geology. It still needs to be defined what we need  
24 in there.

25 But the topography, we're -- be looking at a

1 topographic map that will help us try to assess, are there  
2 watercourses in the area? Where's the setback from that,  
3 where the proposed site is located? Does it indicate there  
4 may be a floodplain present or a wetland?

5 Some topographic maps indicate locations of  
6 springs that may not be considered or documented elsewhere.  
7 They would definitely -- most topographic maps will  
8 indicate certain depressions that indicate karst  
9 formations, sinkholes.

10 So that -- I mean, just that one item alone can  
11 be used for a multitude of demonstrations and assessments  
12 for siting criteria.

13 Q. Yeah, I wasn't suggesting striking any of the  
14 rest of the language, I was just --

15 A. Oh, okay.

16 Q. -- suggesting changing the word "report" --

17 A. Oh, that -- oh, I'm sorry, I misunderstood you.

18 Q. You still have everything --

19 A. I'm sorry, I misunderstood. That would be fine.

20 MS. FOSTER: Wow.

21 (Laughter)

22 MS. FOSTER: Sorry.

23 (Laughter)

24 MS. FOSTER: Just for the record, I have you on  
25 record as saying just yes or no to an answer only six

1 times.

2 (Laughter)

3 THE WITNESS: Probably keep that under 10.

4 Q. (By Commissioner Olson) And then back to, I  
5 guess, 17.12.A.(4), the question from Mr. Brooks, where I  
6 think I understand now where you're saying that the  
7 integrity of the pit liner is compromised, that's the  
8 notification provision --

9 A. Yes.

10 Q. -- for the liner. But where is the Division  
11 notified of leaks from below-grade tanks?

12 A. That's an excellent point.

13 Q. Okay. And while we were mentioning definitions  
14 of things, just a point on page 11 --

15 A. Yes.

16 Q. -- under C.(1), you're using BS&W. I --

17 A. It's --

18 Q. -- know what that means, but it's not defined. I  
19 don't recall if that was --

20 A. It's under the other exhibits that we have for  
21 the definitions under part 1.

22 Q. Oh, is it? Okay.

23 A. Yes, and it is included, it's basic sediment and  
24 water.

25 Q. Okay.

1           A.    So it just -- we provided that as a general  
2 definition for our rules.

3           COMMISSIONER OLSON:  Thank you.  That's all I  
4 have.

5           CHAIRMAN FESMIRE:  Mr. Jones, thank you very  
6 much.

7           THE WITNESS:  It's been a pleasure.

8           CHAIRMAN FESMIRE:  Why don't we take a break  
9 until a quarter to 4:00 and reconvene then?

10          Thank you all.

11          (Thereupon, a recess was taken at 3:35 p.m.)

12          (The following proceedings had at 3:45 p.m.)

13          CHAIRMAN FESMIRE:  Okay, let's go back on the  
14 record.

15          Let the record reflect that this is a  
16 continuation of Case Number 14,015, that Commissioners  
17 Bailey, Olson and Fesmire are all present, we therefore  
18 have a quorum, and that I believe we were -- Mr. Brooks,  
19 you were about ready to start your direct examination of  
20 one Carl Chavez.

21          MR. BROOKS:  I was indeed, Mr. Chairman.  May it  
22 please the Commission.

23          CHAIRMAN FESMIRE:  It may, sir.

24          (Thereupon, the witness was sworn.)

25                       CARL J. CHAVEZ,

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

3 DIRECT EXAMINATION

4 BY MR. BROOKS:

5 Q. Would you state your name for the record, please,  
6 Mr. Chavez?

7 A. Carl John Chavez.

8 Q. And by whom are you employed?

9 A. The New Mexico Oil Conservation Division.

10 Q. And in what capacity?

11 A. Environmental engineer.

12 Q. Mr. Chavez, would you give us a brief résumé of  
13 your education and experience?

14 A. I graduated from New Mexico State University in  
15 Las Cruces in 1986 with a bachelor of geological sciences  
16 degree and a minor in economics.

17 I attended California State Polytechnic  
18 University in Pomona, California, for two years studying  
19 mechanical engineering, petroleum option.

20 My experience includes, I guess from most recent  
21 working back, environmental engineer here at OCD for a  
22 little over two years, permit-writing, involved in the  
23 rules, regulations, oversight of quality assurance and  
24 quality control of the UIC, underground injection control,  
25 program, the NPDS program, national pollutant discharge



1 elimination system program, and various other duties.

2 I also worked for a year and a half at the New  
3 Mexico Environment Department, Hazardous Waste Bureau as a  
4 scientist overseeing the monitoring program at the Waste  
5 Isolation Pilot Plant.

6 I worked for five years at the Michigan -- for  
7 the Michigan Department of Environmental Quality in  
8 Lansing, Michigan, the remediation, redevelopment division,  
9 environmental sciences and services division, as a  
10 technical point for remediation and various publications,  
11 presentations on the environment, air, land, water and  
12 waste, pollution prevention.

13 Before that I worked for the remediation  
14 redevelopment division of Superfund section as a project  
15 manager for five years, overseeing all aspects of  
16 environmental cleanups, investigations, feasibility  
17 studies, et cetera.

18 Before that I worked for six years as a geologist  
19 overseeing all hydrogeologic contaminant cases for  
20 groundwater from salt, any type of oil and gas problems,  
21 pits, pump testing, et cetera.

22 And before that I worked for a year as a  
23 geotechnical field engineer for Pacific Soils Engineering  
24 in California, overseeing -- as geotechnical field work for  
25 hillside development and assurance of geotechnical

1 regulations in California.

2 And before that I worked as a student for the  
3 Unocal 76 out in Orcutt, California, as an assistant  
4 petroleum engineer. I worked in a refinery out in  
5 Willington, California.

6 Q. Thank you. Mr. Chavez, have you had some  
7 experience with the regulation of landfills?

8 A. Yes.

9 Q. And what experience have you had?

10 A. More recently with the Oil Conservation Division,  
11 I participated in the part 36 regulations for landfills and  
12 regulation development, liner specifications, geotechnical  
13 specifications for that regulation, Superfund project  
14 manager of two landfills, the Ionia landfill in Ionia,  
15 Michigan, and the Butterworth landfill out in Grand Rapids  
16 Michigan.

17 MR. BROOKS: Thank you, Mr. Chavez.

18 Mr. Chairman, we will submit Mr. Chavez as an  
19 expert environmental engineer.

20 CHAIRMAN FESMIRE: Is there any objection?

21 MR. CARR: No objection.

22 CHAIRMAN FESMIRE: Let the record reflect that  
23 there was no objection. He will be so admitted.

24 Q. (By Mr. Brooks) Like the other technical  
25 witnesses, Mr. Chavez, have you prepared a PowerPoint

1 technical presentation for the Commission?

2 A. I have.

3 Q. I am going to ask you to proceed, then, and I may  
4 occasionally interrupt you with questions. However,  
5 because it's so late in the afternoon I will probably do so  
6 less frequently than I have with the other witnesses.

7 A. I'll try to proceed accordingly.

8 My topic today is pollution prevention, commonly  
9 known as P2. As I indicated, I have about five years of  
10 experience there in the environmental sciences and services  
11 division involved with all kinds of -- all aspects of air,  
12 land, water, waste and pollution prevention in Michigan  
13 through the Michigan Department of Environmental Quality.

14 I just want to start off first by citing under  
15 Rule 50 the regulation that comes the closest to pollution  
16 prevention as it started under Rule 50, and I think that's  
17 subsection E of Rule 50. Drilling fluids and drill  
18 cuttings -- We won't bring it up, I'll just kind of read  
19 it. It's short.

20 Drilling fluids and drill cuttings. Drilling  
21 fluids, drill cuttings, shall either be recycled or be  
22 disposed of as approved by the Division in a manner to  
23 prevent the contamination of fresh water and protect public  
24 health and the environment. The operator shall describe  
25 the proposed disposal method in the application for permit

1 to drill or the sundry notices and reports on wells.

2 So that kind of aspect touches on recycling for  
3 this new proposed rule. The applicable sections that deal  
4 with pollution prevention, and now the term waste  
5 minimization, can be found under 19.15.17.12 of the  
6 operational requirements, A.(2). And I don't think I'm  
7 going to read them in very much detail, I'm just going to  
8 point them out, unless specified otherwise.

9 The waste minimization is cited under the  
10 19.15.17.13 closure requirements for temporary pits, and  
11 specifically subsection B, closure of temporary pits,  
12 subsection F, on-site closure.

13 F.(2).(c), deep-trench burial.

14 19.15.17.15 under exceptions, B.(3), alternate  
15 closure methods.

16 And so those are the sections of the new rules  
17 that kind of go into pollution prevention and introduce the  
18 concept of waste minimization.

19 The OCD's mission is to protect human health and  
20 the environment from the effects of development of the  
21 state's oil, gas and geothermal resources. The source is  
22 from the OCD Strategic Plan, June 28th, 2007. This mission  
23 statement from this agency pretty much covers the Oil  
24 Conservation Division's pollution prevention, waste  
25 minimization initiative, as outlined in this presentation.

1           The two main portions of the state that we deal  
2 with pollution prevention is the San Juan Basin in the  
3 northwest, the Permian Basin in the southeast. I guess you  
4 can see the other areas where some exploration is occurring  
5 throughout the state, but the two areas that I'm going to  
6 focus on today is in the northwest and southeast.

7           I think it's important to observe up in the  
8 northwest, in the San Juan Basin, that we have a major  
9 watershed, the San Juan River, the San Juan River  
10 watershed. It drains most of the drainage up in the  
11 northwest. It underlies all of the -- most all of the  
12 drilling for gas and any oil up in the northwest. A very  
13 sensitive watershed that -- under pollution prevention that  
14 I -- you know, we would like to protect, like to see it  
15 protected, and these regulations that we're proposing, we  
16 think, does that for us.

17           Over on the southeast side we have the Pecos  
18 River Basin, another important watershed in New Mexico with  
19 significant water supplies, both surface and groundwater.  
20 The Texas Gulf Basin is also reflected.

21           These nomenclatures are cited by the source.  
22 United States Geological Survey, that's kind of the source  
23 for what you're seeing there.

24           I think it's important to mention that we do have  
25 a state treasure from the perspective of a groundwater

1     aquifer in the southeast. That is the Ogallala formation.  
2     It's a sandy aquifer that can be very shallow at depth  
3     within 50 feet of ground surface in the southeast. That  
4     aquifer is very significant and important. It provides a  
5     freshwater drinking water supply. It also -- for  
6     agricultural purposes and livestock it serves a very  
7     important purpose and certainly worthy of protection under  
8     pollution prevention as an aquifer.

9             In addition to that we note that in both the  
10    northwest and southeast, as indicated by Mr. von Gonten in  
11    his earlier presentation, these areas are -- have  
12    groundwater within 60 feet. A significant percentage of  
13    water wells are within that 60-foot depth below ground in  
14    these two areas.

15            Mr. Chairman, we're just kind of wondering --  
16    This presentation kind of looks a little bit different  
17    on --

18            Okay. Well, then I would just -- Why don't we  
19    move forward, and I'll just reference this schematic that  
20    you're presented in your presentation.

21            You guys may recall that Mr. von Gonten also  
22    displayed the New Mexico Office of the State Engineer's  
23    underground water basins in New Mexico, where they -- you  
24    basically look at this map, and it's basically an indicator  
25    that all throughout this state there are underground water

1 basins.

2 I think it's important to mention that there are  
3 a lot of surficial aquifers, alluvium, where you have water  
4 table aquifers, either localized aquifers, perched aquifers  
5 that can be present in outwash and alluvium as well,  
6 surficial aquifers in these areas.

7 Little bit about the regulatory history.

8 RCRA was created in 1976 under President Ford's  
9 administration, kind of dovetailed off of President Nixon.  
10 And you may recall from RCRA subtitle C, the hazardous  
11 waste provision subsection and the solid waste provision,  
12 that these basically came about through the Love Canal  
13 incidences in the '70s, burying containerized hazardous  
14 waste on site in trenches. It eventually breached up to  
15 surface, contaminated groundwater, caused public health  
16 concerns in the Buffalo, New York area.

17 These trenches were not uncommon. As a Superfund  
18 project manager in Michigan, it was common to perform  
19 electromagnetic surveys to identify buried drums at  
20 industrial facilities, because there were no landfills in  
21 that day and age. And so these companies, these chemical  
22 companies had land area, they simply trenched and buried  
23 containerized waste below ground, which later -- which  
24 later we had to go back and uncover and dig out the wastes  
25 because of groundwater contamination.

1           Also the Cuyahoga River, you guys may recall,  
2       some of you in here, that river caught fire numerous times  
3       throughout the 1950s and '60s. The sentiment at that time  
4       was that, I think we could be poisoning ourselves, we need  
5       better technologies to treat discharges to surface waters,  
6       into the rivers. Refineries along the rivers were  
7       discharging above health limits at the time.

8           And it's not until 1976 that RCRA came under --  
9       was promulgated, that we began to look at these type of  
10      issues with handling of waste.

11          So we prevent pollution in the first place by  
12      using better waste handling, treatment, storage and  
13      disposal practices. That's where we're at today, in this  
14      day and age. You see it's 1976 when this was promulgated,  
15      and it's 2007, and here we are sitting, talking about best  
16      handling, treatment, storage and disposal practices today  
17      in New Mexico. So we're about -- I don't know, 30 years  
18      back here.

19          Pollution control. If pollution occurs, under  
20      pollution we want to reduce, reuse, recycle, wherever  
21      possible to control pollution. This is a national  
22      initiative spearheaded by the EPA, and New Mexico is  
23      participating.

24          I think I might also want to add that after 1976  
25      with the promulgation of RCRA and subtitle C, in 1984 the



1 Waste Minimization Act was promulgated in order to minimize  
2 hazardous waste, to help hazardous waste facilities  
3 minimize, identify hazardous waste and store and treat it  
4 properly. At that time, you may recall, that was before  
5 EPA's 1988 decision to exempt the oil and gas industry from  
6 RCRA subtitle C. EPA basically indicated that subtitle C  
7 regulations were not warranted. Exploration and production  
8 wastes have remained exempt from subtitle C regulations.

9 RCRA subtitle C exemption, however, did not  
10 prevent these wastes from control under state regulations,  
11 under a less stringent RCRA subtitle D solid waste  
12 regulations, or under other federal regulations. In  
13 addition, although they are relieved from regulation as  
14 hazardous waste, the exemption does not mean these wastes  
15 could not present a hazard to human health and the  
16 environment if improperly managed.

17 And I'm reading directly off of the EPA  
18 publication, reference number 2 of this publication, Crude  
19 Oil and Natural Gas Exploration and Production Waste  
20 Exemption from RCRA Subtitle C Regulation, US EPA, May,  
21 1995.

22 And I hope when I get into my discussion on  
23 pollution prevention -- Waste minimization is a lot like  
24 pollution prevention, with the exception of one tier.

25 And again, as I've mentioned, after 1988 when the

1 oil and gas industry was exempted from subtitle C, although  
2 they weren't subject to the 1984 Waste Minimization Act, we  
3 notice that oil and gas companies use a lot of the waste  
4 minimization forms and information in order to keep  
5 themselves exempt, make sure that their wastes on their  
6 facilities are exempt from Subtitle C and that when these  
7 wastes are delivered to these facilities, permitted  
8 facilities, they contain no hazardous waste. An example,  
9 solvents thrown out into the pits that turn -- you know,  
10 paint wastes that turn the waste into hazardous waste, et  
11 cetera.

12 And I would recommend that if you guys would like  
13 to learn more about the waste minimization, a leader in  
14 that field is the Texas Railroad Commission, or Railroad  
15 Commission of Texas. They have a waste minimization  
16 program for the oil and gas industry where you can download  
17 reports on how to minimize your wastes in the oil and gas  
18 patch. You can download software also to assist you to  
19 more efficiently manage your wastes and prevent hazardous  
20 waste from getting into your waste streams.

21 This is the state's regulatory history during  
22 that time.

23 In 1958 our first order, OCD order, restricting  
24 unlined pits.

25 1965, Oil and Gas Act amended to authorize OCD to

1 regulate disposition of produced water.

2 1989, Oil and Gas Act amended to authorize OCD to  
3 regulate nondomestic water -- or wastes.

4 (Laughter)

5 Who did that?

6 CHAIRMAN FESMIRE: "Waster"?

7 THE WITNESS: Sorry about that.

8 2003, more recently, OCD adopts the first  
9 comprehensive pit rule establishing general performance  
10 standards.

11 Pollution Prevention -- this is -- Pollution  
12 Prevention Week was recently celebrated in September. The  
13 EPA had their latest and greatest diagram on pollution  
14 prevention.

15 You notice up on the top tier, the preferred tier  
16 is pollution prevention. What we see, sustainable  
17 consumption and production, we're going to save the planet,  
18 up at the top, as part of pollution prevention.

19 The second tier, source reduction, prevent waste  
20 from being created in the first place.

21 And then downward we get into the least  
22 preferred, where we get into pollution control. We  
23 generate waste, contamination, we're going to reuse and  
24 recycle where you try to do that more than once.

25 We're going to treat it. If it's contaminated to

1 the point that we can't reuse it, we're going to try to  
2 treat it to recover the energy, reduce the hazard and  
3 toxicity of the waste.

4 And then the bottom tier, the least preferred is  
5 disposal. If we're going to dispose, we want to dispose at  
6 some type of permitted facility.

7 Let's talk a little bit about those.

8 Sustainable consumption and production, this is  
9 the most preferred. Save the planet, find more efficient  
10 ways to extract mineral resources, protect the environment  
11 in the process and save money.

12 A good example that we're touting here is the  
13 closed-loop drilling systems. We think this is a start.  
14 We think that once you put -- once you put a process like  
15 this in the hands of highly talented and intelligent  
16 individuals, that good things can again begin to happen, to  
17 lead to even better things. We think that this industry  
18 can coexist with the environment and produce oil and gas.

19 Source reduction, this is preferred to pollution  
20 control. We use environmentally preferred chemicals and  
21 prevent wastes from being created, we reduce toxicity and  
22 waste volumes by using less toxic products, better waste  
23 management, handling, treatment, storage, disposal  
24 processes.

25 This involves the oil and gas industry with its

1 talented individuals sitting down and looking over their  
2 processes, trying to identify ways for them to use  
3 environmentally friendly products, products that could cost  
4 more money up front but could result in big cost savings  
5 down the road in their process. And these individuals have  
6 the talent and the individuals with the necessary  
7 credentials to make this happen.

8 Reuse and recycle, this is preferred to treatment  
9 or disposal. Use resources more than once, polymer or oil-  
10 based drill cuttings used at other drilling sites.

11 Q. (By Mr. Brooks) Now let me interrupt you, Mr.  
12 Chavez. Isn't it really the drilling fluids that you're  
13 recommending be recycled to other sites?

14 A. Thank you, Mr. Brooks, that's correct. The  
15 cuttings, we're still out -- we're still out thinking about  
16 what we're going to do with cuttings --

17 Q. And particularly due to the salt problems that we  
18 have in southeastern New Mexico, we probably would not be  
19 recommending the recycling of drill cuttings to other  
20 sites, correct?

21 A. Unless they can -- unless the oil and gas  
22 industry can come up with solutions to these problems, it  
23 would be more recycling of drill fluids.

24 Q. Thank you.

25 A. Thank you.

1 Q. You may continue.

2 A. Treatment is preferred over disposal. Use better  
3 waste treatment practices, recover energy, reduce hazards,  
4 reclaim oil and reprocess through treatment systems, tank  
5 -- you know, things like tankbottoms, skimming oil off of  
6 pits/ponds.

7 Disposal, least preferred again. Use better  
8 disposal practices. We try to dispose at some type of  
9 permitted or proper landfill, permitted OCD facility or  
10 solid waste subtitle D facility, if possible.

11 What kind of started the OCD on this course, it  
12 started on the bottom, the *New Mexico State Review*, June  
13 1994, the recommendation by the Interstate Oil and Gas  
14 Compact Commission jointly with the EPA. They reviewed our  
15 programs. One of their comments and recommendations, VI.4,  
16 was, OCD should develop requirements for the siting,  
17 construction, operation and closure of reserve pits.

18 Then in June 2000, the -- I think they call it  
19 the STRONGER, *State Review of Oil and Natural Gas*  
20 *Environmental Regulations* adopted by the IOGCC, they  
21 indicated, Facilities and sites used for the storage or  
22 disposal of wastes derived from the exploration and  
23 production of oil and natural gas should be operated and  
24 managed at all times to prevent contamination of  
25 groundwater, surface water, soil and air, protect public

1 health, safety and the environment, prevent property  
2 damage.

3 Then we go further, in August of 2001, item VI.4,  
4 the same as I reiterated, the OCD's response to that,  
5 Approval of siting, construction and operation of lined  
6 pits and below grade tanks is already covered in Rule 18.  
7 All other on-site pits should be proposed and approved  
8 through the APD process.

9 An additional follow-up comment that was included  
10 in that August report was that, This recommendation has not  
11 been met with regard to reserve pits. However, OCD has  
12 initiated rulemaking to clearly address reserve pits.

13 And so that's kind of why we're kind of here --

14 Q. Mr. Chavez, given the date of that, August of  
15 2001, does that presumably refer to the rulemaking that  
16 eventuated in the existing Rule 50?

17 A. Rule 50, yes, sir, in 2003. Thank you.

18 Q. Continue.

19 A. So we appear to be expanding further on temporary  
20 pits, production pits, because we think we still have  
21 problems with these pits. Some of our concerns --

22 First I guess we should talk about the wastes.

23 Reserve pits. Drilling muds are primarily water-  
24 based mixtures of clays and inert weighting materials with  
25 special additives mixed in low concentrations. Wastes

1 generated including various types of residual drilling  
2 fluids and solids, cement returns, fresh water, salt water,  
3 oil and formations cuttings (shale, lime, salt, dolomite).

4 Drilling rig operations. Wastes generated from  
5 the drilling pit -- drilling rig are primarily associated  
6 with mechanical equipments that include hydraulic fluids,  
7 used oils and rigwash fluids used to wash down the rig to  
8 provide a safe working environment.

9 And then we get into workovers. Workover  
10 operations include installing tubing and packer, acidizing  
11 or fracturing stimulations, replacing tubing or pumping  
12 equipment, recompleting to new reservoirs, deepening,  
13 cementing or the plugging and abandonment of wellbores.  
14 Wastes generated may include hydraulic fluids, used oils  
15 and filters. Spent fluids including weighting agents,  
16 surfactants, muds produced waters, acids, inhibitors, gels,  
17 solvents and other materials.

18 And I think when we look to see which one would  
19 probably have the most toxic ingredients, we're probably  
20 looking at the -- well, and I shouldn't say the most, but  
21 using toxic substances more frequently would be the  
22 workovers.

23 I want to say a little bit about the pits that we  
24 encountered in the southeast. They were the double-  
25 horseshoe pits, and this is a reference from Cimarex and a



1 reference that we cited back in our references.

2           These earthen pits are primarily used to collect  
3 and retain drill cuttings for eventual disposal, but also  
4 hold base fluids such as brines, cut brine or fresh water.  
5 To a limited extent they also act as solids-control devices  
6 by settling solids in the outside ring of the horseshoe  
7 ring.

8           In the past, pits have been incorporated  
9 extensively in the solids-control system used to process  
10 drilling fluid. The inside portion of the pit generally  
11 holds fresh water for drilling surface hole and, later,  
12 brine for dilution of drilled solids in the active mud  
13 system. The outside portion of the pit is used to hold and  
14 settle solids while recovering fluid from the other end,  
15 the downhill end -- the side.

16           The double horseshoe design allows solids  
17 discarded from the solids control system to settle in the  
18 first part of the pit. Fluids continue to flow to the deep  
19 end where it can be recovered and reused. In fact, this  
20 system became so effective that very large pits were  
21 developed with practically no solids control. This system  
22 was called circulating the pit, where the only practical  
23 solids control was gravity-induced settling. These pits  
24 are quite large.

25           Our concerns about waste. These wastes

1 associated with oil and gas operations can poison living  
2 organisms, they contain cancer-causing substances like  
3 benzene and other hydrocarbons, including radioactive  
4 materials and heavy metals.

5 Wastes discharged into the unlined pits, toxic  
6 substances can leach directly into the soil or sediment and  
7 may contaminate groundwater.

8 Lined pits with oilfield wastes can cause  
9 pollution of soil, sediment and water via torn liners and  
10 overflow of fluids from pits, which can adversely affect  
11 human and ecosystem health.

12 Pits can cause pollution. Toxic substances,  
13 again, can leach directly into the ground if stored in  
14 unlined or inadequately lined pits and contaminate soil and  
15 water, overflow the sides of the pit, precipitation and/or  
16 lack of storage volume, and impact soil and water, seep  
17 into the ground via cracks, tears, through liners and leach  
18 directly into soil and water. This happens because liners  
19 either have defects and/or are often improperly installed  
20 or are torn during installation.

21 Solid wastes in pits, if left on site, may  
22 contain toxic substances. They may also readily leach from  
23 solids and impact soil and water, contaminate soil and  
24 vegetation, sterilize soil preventing vegetative growth.

25 A typical oil and gas drilling system. I wish we

1 had this slide earlier. You can see that we've got the  
2 reserve pit there on the bottom, the mud pit, the -- we've  
3 got the mud-mixing hopper that leads to the mud pit, we've  
4 got the suction line which -- with the mud pump, that sucks  
5 the mud from the mud pit, directs it through the discharge  
6 line standpipe, rotary hose, swivel kelly, down the hole  
7 into the wellbore, through the annulars, drill collar,  
8 borehole bit.

9 The main purpose for the drilling mud is to bring  
10 cuttings to surface, to lubricate and cool the bit, also to  
11 control downhole subterranean formation kicks or high-  
12 pressure formations during the drilling process.

13 You can see that when this fluid is recirculated  
14 it goes back up from the bit, up to the mud-return line,  
15 into the shale shaker, back into the mud pits. Those  
16 cuttings eventually end up in the reserve pit. So reserve  
17 pits collect rock cuttings separated from the mud pits.  
18 Mud pits for drilling is mixed and recycled, and those are  
19 generally in some type of tank, but not necessarily.

20 So that's the basic outline of the pits that we  
21 sampled in the southeast and the northwest, reserve pits  
22 and then production pits.

23 I'm mentioning closed-loop systems because we are  
24 touting it as a process control for waste minimization,  
25 pollution prevention. It's something that we think the oil

1 and gas industry should consider. It offers -- Basically,  
2 it's -- it means a system that uses above-ground steel  
3 tanks for the management or drilling or workover fluids  
4 without using below-grade tanks or pits.

5 A little schematic to kind of show -- Well, I  
6 guess I would indicate that closed-loop drilling systems  
7 minimize the need for pit construction, reduces associated  
8 liability for contamination, and I kind of emphasize the  
9 liability for contamination in this paragraph.

10 We also want to note that Cimarex Energy Company  
11 was awarded the OCD 2007 Environmental Merit Award for  
12 pitless drilling system.

13 We're very glad that Cimarex came along and  
14 showed us a due process that may help the oil and gas  
15 industry accomplish a significant pollution prevention in  
16 our waste minimization process out in the oil and gas  
17 fields of New Mexico.

18 We think that this system will protect natural  
19 resources such as soil, local and regional freshwater  
20 aquifer systems. In example, surficial aquifer is an  
21 alluvium. San Juan River Basin aquifers of the northwest,  
22 the high plains aquifer, the southeast, inclusive of the  
23 all-important Ogallala formation.

24 This is a little diagram of what it looks like.  
25 You can see up on the upper far right-hand side, instead of

1 pits we've got frac tanks that contain fresh water and  
2 brine storage.

3 It basically comprises everything that you saw in  
4 the previous reserve pit diagram, but everything is  
5 replaced by tankage, and -- I don't know if you can see it  
6 there, but the holding tanks, number 10, all along the  
7 bottom there, that's where the reserve pit waste is housed,  
8 in tanks.

9 A significant design feature in the closed-loop  
10 system are the centrifuge pumps. There are different  
11 primary-secondary centrifuges that separate solids from  
12 liquids.

13 And also of significant mention, over to the  
14 lower part of the diagram there, you'll see a drying pit  
15 where the bull- -- that little tractor -- you can -- this  
16 tractor takes the drill cuttings from the shaker pits and  
17 delivers that over to the drying pad for storage and  
18 drying. And as you guys may recall, we really like dry  
19 waste. Dry waste means less gas, if there's any organics  
20 in it, also allows any organics to volatilize out.

21 Q. Does it also mean that the waste has less bulk if  
22 it's dry?

23 CHAIRMAN FESMIRE: For those of us who don't  
24 speak Texan, do you mean bulk?

25 (Laughter)

1 THE WITNESS: Yes, the bulk density is much less  
2 dense because it's a drier material.

3 Q. (By Mr. Brooks) Continue.

4 A. Okay. Okay, I want to talk about the Railroad  
5 Commission of Texas has some great ideas or cases on waste  
6 minimization from drilling operations. Again, we mentioned  
7 the closed-loop drilling fluid system.

8 They cite a problem at their website: A small  
9 independent operator was concerned about the volume of  
10 drilling waste in conventional reserve pits at his drilling  
11 locations. Waste management costs were a concern, as well  
12 as the costs associated with the impact on adjacent land  
13 due to pit failures. The operator was concerned about the  
14 potential for surface water or groundwater contamination  
15 and the associated potential liabilities.

16 The solution: The operator was drilling  
17 relatively shallow wells in normally pressurized strata.  
18 Because the drilling plan was relatively simple, the  
19 operator investigated the feasibility of using a closed-  
20 loop drilling system for these wells.

21 The use of a closed-loop system eliminated the  
22 need for a conventional reserve pit. The operator  
23 negotiated with the drilling contractor to obtain a turnkey  
24 contract that required the drilling company to use a  
25 closed-loop system and take responsibility for recycling

1 the waste drilling fluid.

2 The benefits that they cited were that the  
3 turnkey contract was incrementally more expensive.  
4 However, because of the reduced drillsite construction and  
5 closure costs, reduced waste management costs, and reduced  
6 surface damage payments, the operator realized a savings of  
7 about \$10,000 per well. Also the operator reduced the  
8 potential for environmental impact and associated potential  
9 liability concerns.

10 Q. Now does a closed-loop system involve a lesser  
11 footprint on the surface, ordinarily, than a pit -- a  
12 system utilizing a reserve pit?

13 A. The Oil Conservation was cited on a reference to  
14 a .4-acre reduction in footprint. And also in subsequent  
15 discussions with district staff, out in the district, who  
16 have seen closed-loop systems in practice, they also noted  
17 a significant decrease in footprint.

18 Q. And was this Railroad Commission study -- is this  
19 something that's already been admitted into evidence as one  
20 of OGAP's exhibits?

21 A. You mean through us or OGAP?

22 Q. Through OGAP.

23 A. I don't know.

24 Q. Okay, continue.

25 A. With regard to that -- Okay, never mind.

1           Second case, Swaco closed-loop systems, a tale of  
2 two wells.

3           The Swaco closed-loop system is probably the  
4 surest way to ensure the best solids-control value for your  
5 dollar. Basically it is a suite of solids-control  
6 equipment custom-matched to your well and drilling  
7 objectives in order to minimize drilling fluid dilution and  
8 provide the most economic handling of the drilling waste.  
9 The result is that no mud is discarded from the rig.

10           Reserve pits -- reserve pits are eliminated and  
11 used -- reserve pits are eliminated, and used fluids are  
12 recycled.

13           Two wells drilled only 200 feet apart in  
14 Matagorda County, Texas, provided a unique opportunity to  
15 compare the cost-savings difference between conventional  
16 solids-control equipment and a Swaco closed-loop system.  
17 Both wells drilled through the same formations using the  
18 same rig crew, mud company and bit program. Improved  
19 solids control resulted in some significant savings:

20           43 percent savings in drilling fluid costs.

21           23 percent fewer rotating hours.

22           33 percent fewer days to drill to a comparable  
23 depth.

24           37-percent reduction in the number of bits used.

25           Up to 39-percent improvement in the rate of



1 penetration.

2 And the real big one here, uses 80 percent less  
3 water.

4 I can tell you from attending some recent  
5 Groundwater Protection Council conferences and -- that what  
6 the regulators are looking at now is the fact that we're  
7 withdrawing a lot more groundwater from our aquifers than  
8 we replenish, so they're very concerned about water  
9 consumption. And as we know, refineries and oil and ga  
10 activities utilize a significant volume of groundwater in  
11 their daily activity. So that's a real big plus, I think.

12 Q. Now Mr. Chavez, one of the advantages often cited  
13 for closed-loop systems is the one you just mentioned, that  
14 it enables the operator to use less fluids. Is that  
15 because -- Why is that? Why does it -- Why can you operate  
16 with less fluid with a closed-loop system?

17 A. Well, either able to utilize a finite volume of  
18 water, and with their solids-separation system they're able  
19 to separate that fluid, and when they're done with the  
20 drilling process, they're able to recycle it and use it at  
21 another drilling location.

22 Q. Does the closed-loop system separate the solids  
23 from the fluids more efficiently than the reserve pit?

24 A. The reserve pit relies on gravity and a large  
25 land area for separation, and these rely on centrifuges and

1 separation systems. So yes, significantly more efficient  
2 in the solids removal --

3 Q. Continue.

4 A. -- and use of finite volume of water.

5 Typically the system includes a series of linear  
6 motion shakers, mud cleaners and centrifuges, followed by  
7 an optional de-watering system. The de-watering system  
8 adds flocculants to the feed of the high-speed centrifuge  
9 to coagulate ultrafine particles that can be discarded.  
10 This combination of equipment typically results in a dry  
11 location where a reserve pit is not required. And solid  
12 wastes can be landfarmed, hauled off, or injected downhole.

13 Benefits of the closed-loop system:

14 It eliminates unsightly and hazardous pits.

15 Reduces the time, energy and expense of building  
16 fencing, reclamation of reserve pits.

17 It decreases the need for cuts in sensitive and  
18 hilly areas.

19 Total surface disturbance associated with a  
20 wellpad is reduced.

21 And I guess I would just elaborate on that  
22 footprint in that right now a lot of these drill -- these  
23 wells, they clear about an acre of land. We may find with  
24 these closed-loop systems and these smaller size tanks that  
25 they will no longer have to clear, you know, an acre or so

1 of land, they may be able to distribute the tanks in a  
2 succinctly more compact fashion on-site.

3 And another thing I might want to add is that, if  
4 the relief is -- if there's not much relief on the site,  
5 it's fairly flat, I don't think there's anything preventing  
6 an oil company from not having to disturb the soil and the  
7 land, having to clear additional half acre to lay down  
8 tanks. They could very simply, very easily, lay these  
9 tanks down onto the ground. When they're done in a matter  
10 of days of doing their drilling activities, pick up the  
11 tanks and restore the site to a condition that's  
12 satisfactory to regulators and the landowner.

13 Additional benefits:

14 Eliminates risk of waterfowl and wildlife  
15 mortality related to pits.

16 Eliminates risk of damaging underground pipelines  
17 and utilities.

18 It allows drilling in areas with a shallow  
19 groundwater table.

20 In fact, all these issues, all these comments  
21 that I read about siting requirements from, you know,  
22 certain footages, this and that, it all goes away. The  
23 headaches with the bureaucracy of reserve pits and handling  
24 waste from reserve pits to design, construction, never  
25 knowing if a seam is going to be adequately seamed -- all

1 that is going to go away.

2 Virtually eliminates drilling waste.

3 And again, we're still working with cuttings. I  
4 think we all can see that cuttings are probably going to  
5 have to be disposed until we have technologies that would  
6 dictate differently. And I would also emphasize that the  
7 \$10,000 cost savings, I think it's associated with the  
8 disposal of those drill cuttings.

9 I want to add that when companies are able to air  
10 drill, they can realize additional cost savings. I think  
11 I've seen some estimates that showed upwards of \$1200  
12 savings with air drilling technology.

13 Closed-loop uses less water per well, it can  
14 reduce water consumption again by 80 percent. And that is  
15 so significant to this industry, because we use so much  
16 water. Although we don't regulate the consumption of fresh  
17 water, I think that's a real great carrot for this industry  
18 to tout. When you're doing something to conserve water  
19 consumption, I think that can only help your reputation out  
20 in the industry.

21 EPA estimates that closed-loop systems can reduce  
22 the volume of drilling fluids by as much as 90 percent.

23 It eliminates soil segregation, which reduces  
24 wind-erosion problems. You don't have to deal with  
25 disturbed soils to lay down tanks or contaminated soils to

1 segregate on site, bring tractors, equipment, to separate.  
2 And the wind problems that can occur with that, those are  
3 virtually eliminated with these closed-loop systems.

4 It may improve the relationship with surface  
5 owners.

6 As we heard earlier, that rancher that stands out  
7 most in my mind, Irvin Boyd, he just wanted industry and  
8 smart people like Dr. Stephens, Mr. Hansen and people who  
9 can do the science to reach some type of medium to stop the  
10 contamination from occurring on his property. And I think  
11 that's what we're kind of achieving here in this process  
12 today.

13 It greatly reduces waste tracking and need for  
14 landfarming operations.

15 Drill cuttings may be put to beneficial use. If  
16 not contaminated, they may provide a source of finely-  
17 ground clay or [sic] berm construction around tank  
18 batteries.

19 Q. And once again, that would not be permitted under  
20 our rule except by exception; is that correct?

21 A. By exception, and if the industry can show that  
22 these cuttings are not contaminated and don't pose a threat  
23 to human health and the environment.

24 Q. Thank you. Continue.

25 A. The tanks can be reused. They even have up-front

1 capital for these tanks, and you can reuse them time and  
2 time again. The oil companies also, in their capacity as  
3 project management of drilling operations for their  
4 activities, can simply contract to have contractors do the  
5 drilling for them and dispose of the wastes, further  
6 alleviating concerns about waste management for them.

7 And I'd just like to throw in -- I think the last  
8 one -- in the example of the accountant, Ms. Denomy, where  
9 she indicated the oil and gas industry in Colorado was able  
10 to frac four wells at one time using closed-loop systems.  
11 This is an -- exactly an example of the good things that  
12 can happen by putting a tool like closed-loop systems into  
13 the hand of some intelligent people, smart people that work  
14 the oil and gas industry, who can use those closed-loop  
15 systems to -- for things like fracturing multiple wells,  
16 realizing significant savings.

17 And what else more can they do with these systems  
18 that we don't even know of as we speak right now? And what  
19 other advances are they going to make, dovetailing on these  
20 type of systems.

21 Q. Now Mr. Chavez, are you aware that industry has  
22 articulated significant objection -- objection to what they  
23 foresee as being the very high cost of digging and hauling  
24 pit waste?

25 A. Yes.

1 Q. And would the use of closed-loop systems  
2 significantly reduce that cost?

3 A. I think the literature shows that closed-loop  
4 systems can cost more in certain circumstances, it can cost  
5 less.

6 Q. Well, I was -- what I was specifically asking  
7 about was the cost of digging and hauling the waste at the  
8 time of closure.

9 A. That would probably be a significant cost to the  
10 industry, yes.

11 Q. Yeah, but would they or would they not achieve a  
12 cost saving to -- for hauling off waste from a closed-loop  
13 system, as opposed to hauling off waste from a pit?

14 MS. FOSTER: I'm going to have to object to that  
15 question.

16 CHAIRMAN FESMIRE: Overruled. Continue, please.

17 THE WITNESS: Well, the literature that we've  
18 looked at, the ballpark figure is about \$10,000 per will in  
19 cost savings.

20 Q. (By Mr. Brooks) Thank you. Continue.

21 A. P2 and the pit rule.

22 Use of unlined or improperly designed and  
23 constructed pits and deep trench burial for waste storage  
24 and disposal anywhere today is inconsistent with pollution  
25 prevention practices.

1 I think Mr. Hansen's modeling had shown that it's  
2 a matter of when, not if anymore, when chlorides can reach  
3 groundwater.

4 The IOGCC mandate: Facilities and sites used for  
5 the storage or disposal of wastes derived from the  
6 exploration and production of oil and natural gas should be  
7 operated and managed at all times to prevent contamination  
8 to groundwater, surface water, soil, air, protect public  
9 health, safety and the environment, prevent property  
10 damage.

11 And that source was part of the Guidelines for  
12 the Review of the State Oil and Natural Gas Environmental  
13 Programs.

14 Property devaluation issues.

15 You know, from my experience in Michigan, this  
16 was a very big issue for landowners who allowed -- you  
17 know, who acquired properties that were contaminated.  
18 There were a lot of lawsuits, lawsuits on top of lawsuits,  
19 third parties.

20 But in this instance when landowners go to sell  
21 their properties, if somebody finds out there is a buried  
22 pit or there is contamination on the property, they may  
23 want the seller to do expensive environmental site  
24 assessments. They may want to evaluate that site  
25 assessment to determine whether remediation needs to occur



1 before they decide to purchase a property.

2 And therefore, ultimately, as we know from common  
3 sense and our daily transactions with real estate, people  
4 have a tendency to offer less money for these types of  
5 properties.

6 There are legacy issues again. The industry or  
7 state taxpayers will pay in the future to clean up  
8 contamination that can be prevented now.

9 What happens when we leave contamination there  
10 and there's nobody there to do the cleanup? Who may end up  
11 cleaning that up? It may be the taxpayers of New Mexico,  
12 depending on the public health threat.

13 Q. Is one of the -- Well, if industry has to clean  
14 up their own pits or if they have to pay to clean up other  
15 people's pits through taxation, would that be an additional  
16 cost of using pits, as compared to closed-loop systems that  
17 might not create that problem?

18 A. I think so.

19 Q. Continue.

20 A. Use closed-loop mud systems when practical,  
21 particularly with oil-based muds. These are  
22 recommendations of the EPA. I think Mr. von Gonten went  
23 over these, so I'll just kind of briefly touch on them.

24 Size reserve pits properly to avoid overflows.

25 Review material safety data sheets of the

1 materials to select less toxic alternatives when possible.

2 Minimize waste generation, such as by designing  
3 systems with the smallest volumes possible.

4 Reduce the amount of excess fluids entering  
5 reserve and production pits.

6 Keep non-exempt wastes out of reserve or  
7 production pits. That touches on the waste minimization,  
8 to prevent hazardous substances from entering your waste  
9 stream.

10 Design the drilling pad to contain stormwater and  
11 rigwash.

12 Recycle, reuse oil-based muds and high density  
13 brines when practical.

14 Perform routine equipment inspections and  
15 maintenance to prevent leaks or emissions.

16 Reclaim oily debris in tank bottoms when  
17 practical.

18 Minimize the volume of materials stored at  
19 facilities.

20 Construct adequate berms around materials and  
21 waste storage areas to contain spills.

22 Perform routine inspections of materials and  
23 waste storage areas to locate damaged or leaking  
24 containers.

25 Train personnel to use sensible waste management

1 practices.

2 We wanted to cite that based on our pollution  
3 prevention conclusions, performance-based standards clearly  
4 have not been met -- have not met P2 goals.

5 I know there's a lot of throwing around about  
6 performance-based standards, presumptive standards,  
7 technical standards. But I think in this instance, this  
8 directly corresponds to Rule 50, that we have implemented  
9 Rule 50 in 2003, and we continue to see problems as we've  
10 seen in the photos shown by Mr. von Gonten.

11 As far as from the P2 standpoint, sustainable  
12 consumption and production.

13 Current oil and gas practices do not appear to be  
14 addressing P2 during natural resource extraction. Again,  
15 what about closed-loop systems?

16 The reduce aspect of pollution prevention.  
17 Current practices may actually increase wastes as fluids  
18 are not drawn off and wastes are not bulked with clean  
19 soils.

20 The wastes are actually bulked with clean soils  
21 in our process, we're actually increasing the waste volume.  
22 We've seen some photos of pits where runoff of sediment is  
23 running off into the pits, increasing the waste volume  
24 further.

25 Regarding recycling, current pit and deep-trench

1 disposal discourages recycling. This is a key component of  
2 pollution prevention.

3 Reuse. Current pit and deep trench disposals  
4 discourage reuse of pit contents. Again, we're not even  
5 attempting to reuse.

6 Treatment. Current practices may not reduce  
7 toxicity of some parameters. Example, TPH, naphthalenes,  
8 trimethyl benzenes and heavy metals.

9 And I want to note here that while we -- you hear  
10 the term solidification, stabilization, these are common  
11 EPA terms for remediation process where it's a treatment  
12 process where they may be adding limes to keep the metals  
13 from migrating or leaching out of the waste.

14 We're not doing any of that. We talk about the  
15 context of stabilization, solidification as it's been  
16 mentioned throughout this rule for this oil and gas  
17 industry. We're simply adding soils to remove liquids and  
18 to stiffen the waste. Has nothing to do with any  
19 remediation on site.

20 Disposal. Pits and deep-trench disposal may  
21 result in multiple disposal sites, contrary to the best  
22 disposal options of taking that waste to a centralized  
23 permitted facility where we can, with several lines of  
24 defense, monitoring various processes that are appropriate  
25 for waste-handling, storage, et cetera.

1           Q.    Let me ask you a couple questions about that, Mr.  
2 Chavez.  Assume with me, if you will, that Dr. Thomas is  
3 going to say, when he comes to the stand, that there's  
4 really no advantage in taking wastes to a landfill, because  
5 either the liners will hold up or they will not hold up,  
6 and if the liners hold up, then the wastes will be  
7 contained in the deep -- whether it's in a deep-trench  
8 burial or in a landfill, and if they don't, it's going to  
9 escape from either one.

10               Is there anything about landfills that would tend  
11 to -- that would tend to indicate that they would be better  
12 places, or more secure places, for disposal of waste, as  
13 opposed to deep-trench burials?

14           A.   Well, I just notice his use of the term "if".  
15 But also, we know that there's significant differences  
16 between pits, deep-trench disposal and landfills.  You  
17 know, lined landfills are designed with defense mechanisms.  
18 We've got -- in addition to a liner system, we have a  
19 leachate collection and removal systems, leak-detection  
20 systems, to determine whether we've got a compromised liner  
21 in place.  We have monitor wells that we monitor to  
22 determine whether we have a release from that facility,  
23 which you don't have in a deep-trench system or a pit.

24               And finally, if there is a problem, you know, in  
25 a centralized facility, they can activate pump and

1 treatment where they control the hydrogeology at the site  
2 to prevent the plume from continuing to migrate off-  
3 property.

4 And I think for these pits, one aspect is correct  
5 from Dr. Thomas in that we know that the concentrations of  
6 the wastes that we're putting in there are highly -- highly  
7 concentrated. We have a limit that we monitor for before  
8 we allow the disposal, but then the issue becomes, several  
9 of these pits strewn throughout the landscape that could  
10 result in commingled plumes, chloride plumes, from leakage  
11 from these pits. I believe the term was cumulative effects  
12 for multiple small --

13 Q. And you used the term "several", and of course  
14 several is an indefinite term. If you assume that you're  
15 going to drill 1400 wells for -- let's just say 10 years,  
16 for the sake of argument. How many pits would that be in  
17 the state? 1400 a year for 10 years?

18 A. About 140,000 or so?

19 Q. Well --

20 A. You want me to -- I'll calculate it.

21 Q. 1400 -- yes, I think it would be 14,000. But --

22 A. Yeah.

23 Q. -- there's been some objection to my doing  
24 arithmetic.

25 A. I'm sorry, I'm not very good with mathematics.

1 CHAIRMAN FESMIRE: Not as much as Carl.

2 (Laughter)

3 THE WITNESS: If you want me to drag my  
4 calculator out, I will. I'm not going to do it in my head.

5 MR. CARR: By my calculation, Carl was right.

6 (Laughter)

7 THE WITNESS: A fair amount. I think we had  
8 estimated 1200 wells a year as kind of some cost estimates  
9 that I was looking at for dig-and-haul, versus a deep-  
10 trench burial.

11 Q. (By Mr. Brooks) Yeah, 14,000 is certainly  
12 several, right?

13 A. Yes.

14 Q. Okay. In a landfill that is constructed  
15 according to the current New Mexico Oil Conservation  
16 Division rules, would it be required to be double-lined?

17 A. It would.

18 Q. Would it be required to have a leachate  
19 collection system -- leachate collection and removal  
20 system?

21 A. Yes, it would.

22 Q. Now does a leachate collection and removal system  
23 have a tendency to keep the waste drier than if the waste  
24 is encased without such a system?

25 A. It does. Any -- any fluids that get into the

1 waste in a landfill, basically through gravity, goes to the  
2 low-elevation point for leachate collection and removal to  
3 keep the wastes dry, to minimize gas from the waste and  
4 moisture.

5 Q. Yeah. And do you recall Mr. Hansen's testimony  
6 where he said that the reason he thought it appropriate --  
7 do you recall him saying that the reason he thought it was  
8 appropriate to use a -- Well, to be sure I'm in proper form  
9 let me put it this way.

10 Assume with me that Mr. Hansen testified that the  
11 reason it was appropriate to use a higher infiltration rate  
12 for modeling contaminants escaping from --

13 CHAIRMAN FESMIRE: Is that an objection, Ms.  
14 Foster?

15 MS. FOSTER: No. No, I was saying -- I'm too  
16 tired to object.

17 (Laughter)

18 CHAIRMAN FESMIRE: Let the record reflect that  
19 there was not an objection.

20 MS. FOSTER: There was not an objection at all.

21 Q. (By Mr. Brooks) Assume that Mr. Hansen testified  
22 that the fact that the waste was moist, the waste in an  
23 encasement such as a deep-trench burial would be moist,  
24 indicated --

25 (Off the record)



1 MR. BROOKS: My client says I should move on to  
2 something else.

3 (Laughter)

4 Q. (By Mr. Brooks) Thank you, Mr. Chavez, you may  
5 continue with your presentation.

6 A. Okay, so I think we identified some key  
7 components of crude oil that are of concern, disposal from  
8 a pollution-prevention standpoint, pits and deep trench  
9 disposal may result in multiple disposal sites, contrary to  
10 best disposal options.

11 And again, I guess we've just indicated the  
12 modeling results from Mr. Hansen. It's not a matter of if,  
13 it's a matter of when. And we notice, you know, 1400 wells  
14 a year, and doing it this way, using the old ways, you  
15 know, we're not too happy with that, from an agency with a  
16 conservation label in our title.

17 Q. Let me ask you one more question about landfills  
18 before we pass on to that subject.

19 A. Okay.

20 Q. If at some time in the future this agency, or a  
21 successor agency that has responsibility for landfills in  
22 this state, discovers that a particular closed landfill is  
23 becoming a source of pollution, are there things that can  
24 be done to prevent that pollution from spreading?

25 A. Yes.

1 Q. Could you describe very briefly what it might be,  
2 what steps might be taken?

3 A. You mean -- Well, I think I mentioned earlier,  
4 previously, the leachate collection system, the leak  
5 detection systems, the --

6 Q. Well, but I was thinking about remedial steps  
7 that could be taken after the landfill was closed.

8 A. Well, obviously there would be some post-  
9 monitoring period, groundwater monitoring, to ensure that  
10 if any problems did occur over time for at least 40 years  
11 or so, you would at least be able to monitor that.

12 Q. Okay, continue.

13 A. The oil and gas industry is not applying P2  
14 practices during everyday drilling activities. You know,  
15 again we cited the examples with P2, not attempting to  
16 recycle or reuse.

17 The oil and gas industry prefers to bury wastes  
18 and dispose of them on site. Again, the liability issues  
19 are just enormous. The example of Mr. Irvin Boyd where he  
20 indicated it was going to cost an oil company in the  
21 southeast \$30,000 more to use closed-loop systems, and at  
22 the time of the phone call they were up \$40,000 from the  
23 closed-loop system and counting, as they continued to  
24 investigate or remediate contaminated soils from using  
25 reserve pit processes.

1           Pits all too often can become open dumps. We see  
2   that a lot of -- we encountered in the southeast dumps, and  
3   we have photos of drums and debris, various types of debris  
4   that end up thrown into these reserve pits.

5           OCD's proposed pit rule, by allowing the oil and  
6   gas industry to continue drilling with pits and dispose of  
7   oilfield waste using deep-trench burial, will ensure that  
8   the industry applies more efficient designs, construction,  
9   and emplacement techniques to minimize or defer impacts.

10          And you know, when I put together this  
11   presentation I really didn't have a good handle on what our  
12   modelers were coming up with from the standpoint of deep-  
13   trench burial. It appears that we can prolong the impacts  
14   to fresh water, but in the long term I don't think we can  
15   prevent impacts if we allow deep trench systems to go in  
16   and trench -- pit burials to occur on the property.

17          OCD should require the oil and gas industry to  
18   follow best management practices for closed-loop drilling,  
19   pit, evaporation pond, and deep-trench disposal guidance to  
20   prevent pollution.

21          Again, we think the oil and gas industry can help  
22   independents, and by developing guidance for these methods,  
23   if we are going to allow these methods to be used, perhaps  
24   the oil and gas industry through its sophisticated process  
25   can develop best management practices that would be

1 acceptable.

2 Better waste treatment, storage and disposal  
3 practices, coupled with pollution prevention (reduce,  
4 reuse, recycle and sustainable consumption and production),  
5 is the right direction at the right time for the oil and  
6 gas industry.

7 Again, I mentioned earlier, RCRA was imposed in  
8 1976, and here we are 31 years later, trying to implement  
9 best waste management, handling disposal and treatment  
10 processes with the oil and gas industry in New Mexico.

11 I think that this is going to improve your image  
12 significantly.

13 And I'd want to just cite some items from the  
14 Texas Railroad Commission with their waste minimization  
15 programs.

16 Many oil and gas operators have implemented  
17 waste-minimization techniques and have employed benefits  
18 such as reduced operating and waste management costs,  
19 increased revenue, reduced regulatory compliance concerns,  
20 reduced potential liability concerns, and improved company  
21 image and public relations.

22 I would say right now it is my personal that the  
23 image of the oil and gas industry is comparable to the  
24 character of Frankenstein in Mary Shelley's novel,  
25 *Frankenstein*. When you show up to public meetings, who's

1 there to greet you? You've got the villagers carrying  
2 pitchforks, torches, rocks.

3 (Laughter)

4 And I say that --

5 MS. FOSTER: Mr. Chairman, I believe -- if Mr.  
6 Chavez would like to entertain us, that's all very well and  
7 good. But if -- I don't know if -- you know, as --  
8 speaking as an OCD employee on behalf of the OCD, if his  
9 personal opinion comparing our industry to Frankenstein is  
10 really appropriate.

11 MR. BROOKS: Well, Mr. Chairman, in view of the  
12 lateness of the hour I think I will ask Mr. Chavez to move  
13 on.

14 THE WITNESS: I can retract that, but I do -- I  
15 do want to say, I guess, you know, with a lot of emphasis  
16 that --

17 CHAIRMAN FESMIRE: I need to go on record before  
18 we do that. Ms. Foster, I don't think he was comparing the  
19 industry to Frankenstein, so much as the reaction of the  
20 villagers to Frankenstein.

21 MS. FOSTER: Well, either way it's -- I believe  
22 it is his personal opinion, and I don't know if it's really  
23 quite appropriate at this time.

24 CHAIRMAN FESMIRE: Well, he's agreed to go on, so  
25 I won't argue with you.

1 MS. FOSTER: Thank you.

2 THE WITNESS: Okay. Again, just the improved  
3 company image and public relations. I can't emphasize  
4 enough how much that would do for this industry at this  
5 point in time. We're in a pollution-prevention age. You  
6 know, what is our legacy going to be? What is the oil and  
7 gas industry's legacy going to be?

8 And I say "we" because we are the agency  
9 overseeing this industry, and I think what we're trying to  
10 do is move in the right direction for preventing pollution.  
11 And we think we can do this -- You can extract your oil and  
12 gas and you can protect the environment at the same time,  
13 the top tier of the pollution-prevention diagram that I  
14 showed earlier.

15 There's no excuse. Closed-loop field drilling  
16 systems are not new and are in widespread full-scale field  
17 application in the US today.

18 It makes sense. Closed-loop drilling systems  
19 will minimize the land disturbance, reduce the cost of  
20 drilling, minimize, reuse or recycle drill cutting waste at  
21 other drilling sites while protecting the environment.

22 It's like a bad habit. I think the obstacle  
23 impeding the oil and gas industry from applying closed-loop  
24 drilling systems to prevent pollution today is its reliance  
25 on pits. I mean, we've heard time and time again that,

1 This is the way we've always done it. And based on the  
2 comments that I reviewed coming into this hearing, it's  
3 clear that we have a lot of people that do not want any  
4 changes. They're very -- they're not very subject to  
5 change. They like to do things the old way.

6 And I think that if you're an engineer working in  
7 this industry, or a scientist, you know that things are  
8 refined as we go on. You try to make things more  
9 efficient, and when we work with things we realize we have  
10 to make changes. It's a very dynamic process. And for us  
11 as an agency to continue operating in the old ways.

12 Are we pushing this industry? Is this industry  
13 -- is this industry achieving -- is it able to function and  
14 protect the environment and conduct its everyday operation  
15 in line with this pollution-prevention age that we're  
16 living in today?

17 It's common sense. The oil and gas industry  
18 should seek out the most efficient, cost-effective ways of  
19 exploring for and producing oil and gas while protecting  
20 the environment.

21 Habitat and wildlife will benefit, landscape  
22 beauty, the surface waters of the state will also be better  
23 protected by OCD's proposed pit rule and P2 initiatives.

24 Fresh groundwater aquifers will benefit. The  
25 surficial aquifers of the San Juan Basin, the Great Plains

1     Aquifer, that extremely important aquifer, the Ogallala  
2     formation down in the southeast, will be better protected  
3     by these new OCD regulations.

4             To correct the present crisis -- and I say crisis  
5     -- the OCD should consider a massive enforcement campaign  
6     on drilling, workover, disposal and production pits across  
7     the state to enforce the problem of inadequate design and  
8     construction of pits.

9             We've got hundreds of pictures that Mr. von  
10    Gonten was able to show, that clearly indicate that berm  
11    construction, all these things that I'll be -- that I'll be  
12    probably covering, problem -- common problems, anchor-  
13    trenching, tears in liners from stress and strain on  
14    liners, what we perceive to be inadequate strength liners,  
15    12-mil liners that are tearing during construction, tears  
16    that aren't even repaired, business as usual -- those are  
17    all indicators to us that we have a crisis.

18            The use of threaded liners, that we know once you  
19    breach these liners, any size liners, you create a conduit  
20    for leakage. And many of these liners have been installed  
21    with threading methods. So we consider this to be a  
22    crisis. And we think that we could crack down and go out  
23    and do it the regulatory way, or what we're trying to do  
24    now is provide prescriptive directions on how to do this  
25    correctly for the industry.



1           This would significantly increase the number of  
2   abatement plans, we know that, and sites of environmental  
3   contamination under Rule 19 where contamination impacts to  
4   groundwater are discovered. We think because we haven't  
5   looked, we haven't found.

6           Q.    (By Mr. Brooks) Okay, yeah, you went ahead and  
7   explained that. I was going to ask you to explain that,  
8   but you've done so.

9           A.    If you don't look, you're not going to find. If  
10   you're going to sample after you remove these pits, then  
11   there's a potential -- you could potentially find these  
12   leaks that you can see up at the surface, as indicated by  
13   Mr. Bratcher.

14               And my future presentation will be on liner  
15   specifications, and I'll cover that at a later time.

16               Key recommendations.

17               The oil and gas industry should switch to the  
18   more efficient closed-loop drilling system in most of its  
19   drilling operations, especially in sensitive environmental  
20   areas.

21               The oil and gas industry should develop closed-  
22   loop drilling system, deep trench disposal, drilling pit  
23   and evaporation pond design and construction guidance or  
24   best management practices for the industry. If you're able  
25   to develop these, other people in the industry can use

1 those as well to protect the environment.

2 The oil and gas industry should make a commitment  
3 to implement pollution prevention practices along with the  
4 rest of the nation, since it is the most efficient,  
5 protective of the environment and industry is saving  
6 millions of dollars by incorporating P2 into is everyday  
7 work activities.

8 Now I know in working in Michigan in the P2  
9 programs, you see case study after case study where the  
10 companies are sharing information on websites with  
11 different types of industries, and they're benefitting,  
12 they're saving money.

13 That concludes my presentation.

14 Q. That concludes your P2 presentation. You had  
15 another presentation on liners?

16 A. Yes.

17 CHAIRMAN FESMIRE: So this would be a good place  
18 to break?

19 MR. BROOKS: It would be an excellent place. I  
20 just have one more observation.

21 Mr. Chavez, I think you've stolen my closing  
22 statement.

23 THE WITNESS: Sorry.

24 CHAIRMAN FESMIRE: At this time, as is customary,  
25 we'll give anybody in the audience the opportunity to make

1 a statement on the record. Is there anybody that would  
2 like to make a statement tonight?

3 I take it from the fact that everybody's packing  
4 up that they don't anticipate any statements.

5 One last announcement before we go off the  
6 record. We've solved some of our scheduling problems.

7 We will meet again in this room on Monday,  
8 November 26th, that 10:00 a.m. Because of a scheduling  
9 conflict, we've got a one-hour delay in start time, but we  
10 will meet at 10:00 a.m. in this room.

11 We intend to meet Monday 10:00 a.m. till about  
12 6:00, Tuesday from 9:00 a.m. to about 5:30, Wednesday and  
13 Thursday we will not meet, Friday we'll meet in this room  
14 beginning at 9:00 a.m.

15 Any questions before we adjourn for the evening  
16 -- for the long evening?

17 I will see you all again on November 26th at  
18 10:00 a.m.

19 Thank you all.

20 (Thereupon, evening recess was taken at 5:05  
21 p.m.)

22 \* \* \*

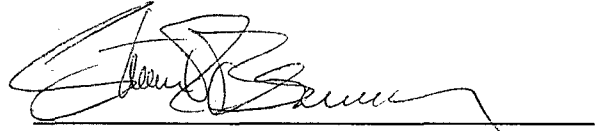
## CERTIFICATE OF REPORTER

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 January 13th, 2008.



STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 16th, 2010