NEW MEXICO OIL CONSERVATION COMMISSION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date APRIL 11, 1996 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
Frank Gray	Texaco E & P	Midland, Tx
GARY STEPHENS	BLM	Santa Fe
MARK SCHMIDT	NM State Land Office	Santa Fe
[illegible]	[illegible]	[illegible]
Ned Kendrick	Montgomery & Andrews	SF
Ruth Andrews	NMOGA	SF
Raye Miller	Marbob Energy	Artesia
Bill Floyd	NMED	Santa Fe
Bill Olson	OCD	Santa Fe
Susan Greseth	S.M. Stoller Corp	Albq

ILLEGIBLE

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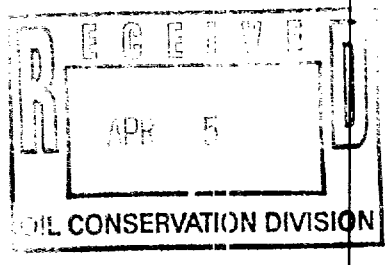
STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION FOR THE PURPOSE OF CONSIDERING:	CASE NO. 11,391
IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION TO ENACT A NEW RULE ESTABLISHING RADIATION PROTECTION STANDARDS FOR THE DISPOSAL AND TRANSFER FOR DISPOSAL OF NATURALLY OCCURRING RADIOACTIVE MATERIALS (NORM) ASSOCIATED WITH THE OIL AND GAS INDUSTRY, AND WHICH ARE NOT SUBJECT TO REGULATION UNDER THE ATOMIC ENERGY ACT OF 1954, AS AMENDED	

ORIGINAL



REPORTER'S TRANSCRIPT OF PROCEEDINGS
COMMISSION HEARING

BEFORE: WILLIAM J. LEMAY, CHAIRMAN
WILLIAM WEISS, COMMISSIONER
JAMI BAILEY, COMMISSIONER

April 11th, 1996
Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission on Thursday, April 11th, 1996, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

April 11th, 1996
Commission Hearing
CASE NO. 11,391

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E X H I B I T S

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A P P E A R A N C E S

FOR THE COMMISSION:

MARGARET CORDOVANO
Assistant General Counsel
Energy, Minerals and Natural Resources Department
2040 South Pacheco
Santa Fe, New Mexico 87505

FOR THE OIL CONSERVATION DIVISION:

RAND L. CARROLL
Attorney at Law
Legal Counsel to the Division
2040 South Pacheco
Santa Fe, New Mexico 87505

CHAIRMAN, NORM DISPOSAL TASK FORCE:

MONTGOMERY & ANDREWS, P.A.
325 Paseo de Peralta
P.O. Box 2307
Santa Fe, New Mexico 87504-2307
By: EDMUND H. KENDRICK

ALSO PRESENT:

DAVID R. CATANACH
UIC Director/Hearing Examiner
New Mexico Oil Conservation Division

* * *

WHEREUPON, the following proceedings were had at 9:05 a.m.:

CHAIRMAN LEMAY: I shall now call Case Number 11,391, which is the matter called by the Oil Conservation Commission to establish new rules and regulations concerning radiation protection standard disposable options for NORMs.

And with that, I would like to know who will be making appearances in this case.

MR. KENDRICK: I'm Ned Kendrick with Montgomery and Andrews law firm. I'm a member of the Task Force and I will be presenting testimony.

And there are eight members of the Task Force here. Seven of us will be making short presentations. We're going to try not to take too long but just to go over the rule. And then our eighth member, David Catanach, will be available to answer questions.

If you like, I could name the people who will --

CHAIRMAN LEMAY: If they're going to give testimony that would be fine, or they could stand -- We need to swear them in anyways.

Will those giving testimony please stand and raise your right hand?

(Thereupon, the witnesses were sworn.)

CHAIRMAN LEMAY: I think they'll be introduced

when they come up.

MR. KENDRICK: Okay.

CHAIRMAN LEMAY: So are there any other appearances in Case Number 11,391?

MR. CARROLL: Rand Carroll on behalf of the Oil Conservation Division. I have no witnesses.

CHAIRMAN LEMAY: Thank you, Mr. Carroll.

Any statements? Well, we'll take statements after, if there's anything.

With that, we shall begin. Mr. Kendrick?

MR. KENDRICK: Okay, thank you.

Mr. Chairman, members of the Commission, as I said, I'm Ned Kendrick, chairman of the NORM Disposal Task Force, and I'd like to give you just a brief overview on how we're going to proceed today.

I am going to give some background on the proposed rule, how it came about, what our thinking was in developing the rule.

Then Frank Gray with Texaco will discuss three of the disposal options in the rule.

Raye Miller with Marbob will discuss one disposal option, injection, which has four subparts.

And I believe four agency representatives on the Task Force will each support the rule, so you can get the sense that this is supported by various governmental

agencies. That will be Roger Anderson with OCD, Bill Floyd with New Mexico Environmental Department, Mark Schmidt with the State Land Office, and Gary Stephens with the Bureau of Land Management.

And then I guess it's up to you as to whether you would like us to break after each witness and you can ask us questions, or wait till the whole presentation. I guess you can -- or ask us as we go.

CHAIRMAN LEMAY: How about a little of both?

MR. KENDRICK: Okay, I'll leave it up to you to do it as you see fit.

Okay, the Task Force, just by way of background -- Well, first maybe I need to introduce our Task Force Exhibit 1, which is our Task Force report, and I believe you all have copies. That is the final report of the NORM Disposal Task Force to the Chairman of the Oil Conservation Commission, dated March 14, 1996. So that is the exhibit we'll be working off of today.

So by way of background, the Task Force was appointed pursuant to this case, which was opened in September of 1995, and I believe the Oil Conservation Commission appointed the Task Force in October of 1995.

The Task Force has met six times since then and developed a draft rule and a report summarizing the rule and giving some background.

And so as we go through the Task Force report, you'll see that the Exhibit A, Attachment A, is the list of the 12 Task Force members, representatives of the oil and gas industry, and four agencies, and the Southwest Research and Information Center.

Then Attachment B to the Task Force report shows the minutes of our six meetings and the attendance lists.

And then Attachment C is Subpart 14 of 20 NMAC 3.1, which is the Environmental Improvement Board NORM regulations, which the regulations today are implementing.

So by way of background, I think you should all know that NORM disposal regulations have been worked on for -- or NORM regulations have been worked on for over five years. Back in -- I first became aware of the problem back in 1991, when an operator had NORM waste on his lease and was not able to dispose of it. It was a BLM lease, and the BLM would not allow any disposal of that NORM without any state regulations.

So that started a four-year process where the Environmental Improvement -- the EIB and then the NMED developed proposed NORM regulations. And those regulations were finalized last August, and they cover the transfer, transport, storage and disposal of NORM waste.

Now, what this Task Force was charged with doing is developing disposal regulations that implement the EIB

regulations. So let me refer you to page 3 of the Task Force report.

Our first job was to look at the NORM disposal section of the EIB regulations at Section 1407. And I think that this is important, that this Task Force was really keying off of the EIB NORM regulations, which had a much wider scope than our proposed regulations. Our proposed regulations are just disposal regulations.

So we had to go through the EIB regs and look at all the disposal options mentioned and determine which options we needed to implement. So on page 3 and 4 is the discussion of the disposal options mentioned in the EIB regs, and our decision on whether or not we needed to implement those options.

Now, the first two options were, the disposal of regulated NORM on or near the surface of the ground, we determined, duplicated option number 4 on page 3. So we didn't implement that one specifically.

The second option was really not one that the OCD had to implement. That dealt with NORM that was already on the ground. If it was on the ground before August of 1995, which is when the EIB disposal regulations were adopted, that NORM could be left in place and maybe disked but not transported anywhere. That disposal option already exists without the OCD rule being -- without the OCD rule dealing

with that option.

Then the other options, disposal in nonretrieved flowlines and pipelines, that's definitely an option that we need to implement, and the same with disposal at commercial or centralized facilities, which is the fourth one listed. Same with the fifth one, disposal in plugged and abandoned wells, and the sixth one, disposal by injection.

Those are all -- Those are really the four options we determined that we needed to address.

And then the seventh one listed here is alternative methods of disposal.

We decided that the four options that we need to address were sufficient at this time and that maybe if somebody identifies other good options in the future, we can have later rule-making to address them at that time.

So a big part of our job is really deciding, you know, what is our charge, which option should we develop regulations for? So as I say, the EIB regs were a starting point, and we determined those four options were the ones we should address.

Then there's another introductory point here. The NORM that we're addressing is called regulated NORM, which is defined in the EIB regulations as NORM exceeding certain levels. And the regulation we propose has a

definition of regulated NORM that makes the reference to the Environmental Improvement Board regulations. It's -- I think we mention it here in the report. "Regulated NORM is defined as NORM with a concentration of greater than 30 picocuries per gram of radium 226 above background".

COMMISSIONER WEISS: Where are you reading that?

MR. KENDRICK: I'm sorry, I'm reading from page 2 of the report, towards the bottom of the first paragraph, in Section 3.

And also I would refer you to Attachment 7 to the report, which is the proposed rule, and the very first item in that proposed rule is a definition of regulated NORM, which has that -- with those thresholds. So...

COMMISSIONER WEISS: And that's attachment what?

MR. KENDRICK: Attachment F. Attachment F is the proposed rule developed by the Task Force. So this is really the meat of what we're discussing today.

And as I was saying, the regulated NORM is north with "a concentration greater than 30 picocuries per gram of radium 226 above background, or NORM with a maximum exposure reading at any accessible point that is greater than 50 microroentgens per hour, including background levels."

And that's an important connection. We've basically been handed that definition of regulated NORM

from the EIB regs, and we're taking that definition and going forward with it in this regulation.

So once we determined the scope of the rule, the scope to include those four disposal options, we went ahead and just analyzed once more OCD jurisdiction and convinced ourselves that, yes, OCD and OCC do have jurisdiction over radioactive materials. And a discussion of that jurisdictional analysis is on page 5 of the Task Force report and in Attachment E to the report. And I'll just briefly summarize.

NORM is not a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act, because it's neither a listed hazardous waste nor a characteristic hazardous waste, so it's not regulated by the Environment Department under its Hazardous Waste Act.

NORM as an oilfield waste is exempt from the State Solid Waste Act, so it's not regulated by the New Mexico Environment Department under the Solid Waste Act.

NORM is an oilfield waste regulated by OCD under the Oil and Gas Act. And because of its radioactive properties, it is also under the New Mexico Environment Department jurisdiction, under the State Radiation Protection Act. And the EIB regulation, NORM regulation, is pursuant to that State Radiation Protection Act.

So there's really dual jurisdiction between the

two agencies, ED and OCD. So we satisfied ourselves that we indeed have jurisdiction to be regulating NORM.

There's one -- I'll try to hurry this up, but there's one kind of side issue that we looked at -- it doesn't directly relate to the Commission's jurisdiction -- and that is, we recognize that the Rocky Mountain Low Level Radioactive Waste Board, which sits up in Denver, has jurisdiction over NORM in this state.

That's a -- The Rocky Mountain Low Level Radioactive Waste Compact consists of three states, New Mexico, Nevada and Colorado. And that body has claimed jurisdiction over oilfield NORM. And so that even once we get this regulation adopted, that allows for disposal of NORM in New Mexico, operators will still have to go through this Board up in Denver to get approval to dispose of NORM in New Mexico.

So that troubles a lot of members of the Task Force and of the industry, so we're working that Board up in Denver to get amendments to the Rocky Mountain Compact to exempt NORM that is disposed under our proposed regulation.

So -- And that's going to take several years, so for the next two or three years, operators will still have to deal with the Rocky Mountain Low Level Radioactive Waste Board, in addition to the Oil Conservation Division, in

disposing of NORM.

That's just an item for your information that's, I guess, outside your jurisdiction, but it's a little bit troubling.

Okay. And then moving to the rule itself, we made an effort to build on existing OCD rules. We tried not to start from scratch.

One of the options actually is a new option: Leaving NORM in nonretrieved flowlines and pipelines is a new concept, and that's new with all the other disposal options built upon existing OCD rules.

I guess as a final note, the last section of the rule deals with the notification and hearings. Each disposal option has its own notification requirements and hearing requirements, but there's still a lot of discretion given to the Director of the OCD to require additional notification and hold hearings. Hearings are optional for two options: the nonretrieved-flowline-disposal option and the plugged-and-abandoned-well-disposal option. And actually a third one, a disposal -- sort of conventional disposal by injection, as opposed to EOR injection and other kinds of injection. And for those I just mentioned, hearings are optional, if requested and if the Director decides to hold a hearing. For all other disposal options hearings are mandatory.

Okay. I think I've kind of run through all the general background and preliminaries and how we got to where we are today. So I could answer questions now or turn it over to Frank Gray to talk about specific disposal options.

CHAIRMAN LEMAY: Commissioner Weiss, do you have any questions at this point?

COMMISSIONER WEISS: I'm not -- I have some questions, but I don't think you're the person to ask.

MR. KENDRICK: Okay.

COMMISSIONER WEISS: You have various -- Is there an EIB person here?

MR. KENDRICK: Yes, there is. Bill Floyd from the Environment Department will -- he could probably talk about how his program relates to the proposed program we have.

COMMISSIONER WEISS: I'm interested in how the standards were set.

MR. KENDRICK: Okay.

COMMISSIONER WEISS: That's one question I have.

MR. KENDRICK: Okay.

COMMISSIONER WEISS: And another -- the other question -- Maybe you have people to answer these.

The other question I have is, how many instances of cases do we have in New Mexico where these records -- or

these -- the exposures are exceeded every year or month or -- the past five years?

MR. KENDRICK: I think there has been some information gathering that's proprietary. I think the New Mexico Oil and Gas Association has done a survey and maybe even David Boyer here at OCD in the past has collected some information.

COMMISSIONER WEISS: Those are the two questions I had.

MR. KENDRICK: Okay.

COMMISSIONER WEISS: Whoever wants to answer them is fine.

MR. KENDRICK: Okay. Well, I think in terms of setting the limits for defining regulated NORM, I think some- -- maybe Bill Floyd or Raye Miller, who's served on the ED Task Force, could answer that.

And in terms of our experience in New Mexico, I can just say that through the New Mexico Oil and Gas Association, that there have been a lot of operators who are concerned, who would like to know how to dispose of NORM properly and would like the safeguard of having an agency say, If you do it this way, you're in compliance with law, and that can decrease exposure to liability, to have some kind of government standard on proper disposal.

So we know there's interest out there. And as

for the exact numbers, I don't know, but maybe someone can give you that information.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: There's a question.

CHAIRMAN LEMAY: I'm sorry. Yes, Ruth?

MS. ANDREWS: I'll be happy to try to answer your question.

Approximately four years ago, we did some data gathering on regulated NORM in the State of New Mexico. The incidents were far and few between.

However, we were dealing with an industry that didn't have a real awareness of how to do the surveying, and I believe the industry members here will agree with me that in looking at the data, we felt that it might be skewed because of lack of proper training of the people doing the surveying.

So our focus here was to get something in place so they were aware it might be a problem, that they got the proper training, and we're in that mode now.

So at this time it appears it is a very small problem, but we won't know until we really get into complying with the regulation.

CHAIRMAN LEMAY: Thanks, Ruth.

Commissioner Bailey?

COMMISSIONER BAILEY: Ned, I don't know if you're

the proper person to answer this one, but you did mention that this remediation disking of NORM-contaminated soils in place was under the EIB jurisdiction?

MR. KENDRICK: Correct.

COMMISSIONER BAILEY: How is this going to dovetail with OCD guidelines and requirements for pit closures on well sites? Is there potential conflict or confusion for operators here?

MR. KENDRICK: Well, I think the EIB jurisdiction is fairly limited in terms of NORM that's in place on the ground before August of 1995.

But you're right, conceivably there could be dual jurisdiction if there is that kind of NORM on the ground at a pit. I imagine an operator would have to comply with this EIB rule, which is actually, I think, fairly easy to comply with. It's basically disking it in place until the regulated NORM, which would be at a level above the thresholds, would then be -- the NORM would basically be kind of mixed in with the dirt until it didn't exceed the threshold level. So it would be a kind of a disposal by spreading it out a bit in place.

I think just basically both agencies would have jurisdiction. That would just be one little piece of it that the Environment Department would have.

COMMISSIONER BAILEY: Okay, because it sounds

like there is potential conflict for remediation of contaminated soil at the well site down to OCD standards, and the requirement of disking in place.

MR. KENDRICK: Yeah, you know, I suppose you wouldn't have to disk it in place. I mean, you could -- That's an easier solution.

I mean, if that soil had hydrocarbons that had to be removed because of OCD regulations, then the NORM in the soil could be removed and disposed of in another way, in a commercial disposal facility or --

COMMISSIONER BAILEY: And at that point it would go under OCD regulations?

MR. KENDRICK: Right, right, I think the disking in place is really an additional option. If it it's more practical and doesn't conflict with any other rule, it's allowable.

But if the OCD had other requirements for that soil containing NORM, then I think OCD rule would prevail and the disking in place probably would not be an option, if there are other reasons for handling the soil differently. So I think that's --

COMMISSIONER BAILEY: That's all.

CHAIRMAN LEMAY: Yeah?

MR. MILLER: Mine may be more explanation than you want. I'm Raye Miller with Marbob Energy.

There are two different concepts. Where we have most of our pit closures currently is in the northwest. We don't have radium 226 in evidence in any of our production wells in the northwest. As a result, the pits there would not have this type of problem.

In looking at the pits in the southeast, pits that have been actually tested do not show levels of regulated NORM. There may be some NORM there, but it may -- or so far it is not evidenced as regulated NORM.

The concept of the disking in place was to allow for an area where a heater treater, free-water knockout, water tank might have been cleaned, and there was material on the soil. At the time these regulations were instituted to actually handle that material, it was really not conceived as dealing with the pits, because our incidence of pits having regulated NORM have, so far, we've tested, not indicated that that is a problem.

It was really designed for a different concept. It was actually pipe-cleaning, scale out of vessels that had been -- was on the ground presently, scattered or however it was there, to actually be addressed as being able to be disked in place to relieve the regulated problem.

COMMISSIONER BAILEY: Thank you, Raye.

CHAIRMAN LEMAY: Thanks, Raye.

Anything else?

COMMISSIONER BAILEY: Huh-uh.

CHAIRMAN LEMAY: Okay. You may continue, Mr. Kendrick.

MR. KENDRICK: That concludes my presentation.

CHAIRMAN LEMAY: Okay.

MR. KENDRICK: I think Frank Gray will now discuss nonretrieved flowlines.

CHAIRMAN LEMAY: Okay.

MR. GRAY: I'm Frank Gray with Texaco Exploration and production out of Midland. I've been with Texaco for 27 years, in various engineering and managerial positions, most recently for the last three years as Regulatory Compliance Manager for New Mexico.

Today I'll be addressing the first three disposal options that we've considered under the Task Force. As Ned mentioned, these options are designed to work in conjunction with the existing OCD rules where they apply to that particular operation, and simply to supplement those so that we did not rewrite or include in this regulation those existing rules that existed.

The first item I will be discussing is the nonretrieved flowlines and pipelines. I will go through and hit the high points of the regulation in all of these three cases.

Under this proposed regulation, the Division will consider leaving flowlines and pipelines that contain NORM in the ground, provided they protect the environment, public health and fresh water.

The applicant desiring to leave a line in the ground must submit an application to the Division, indicating the pipeline layout across its entire length, with legal description at both ends, contained on a form C-102.

In addition, operator must provide the results of a radiation survey conducted at the accessible points, and along -- surface along the complete pipeline route.

The operator must also furnish the type of material which the pipeline had been used for, and also the procedure to be used for flushing the hydrocarbons or produced water from that pipeline at the time of abandonment.

The operator must furnish an explanation as to why it is more beneficial to leave the pipeline in the ground, rather than to retreat it. And he must also furnish proof of notice of the proposed abandonment to all surface owners where the pipeline is located.

Under procedure of this abandonment, the operator must give the OCD District office 24 hours prior notice before beginning work on the abandonment. As a condition

of abandonment, the accessible points must be permanently capped so that they cannot be inadvertently opened at a later date.

In general, there can be no additional regulated NORM placed in this pipeline prior to its abandonment, other than that which was in the line at the time that the abandonment was determined to be the option to be used.

Any pipeline that does not exhibit regulated NORM, as per the definition we described, may be abandoned without such application to the OCD, as it has been done over the many years of operation in the oilfield.

If it's determined in the abandonment that an appurtenance -- in other words, a riser or a valve -- on the pipeline, is demonstrating regulated NORM levels and the operator desires to remove that appurtenance that is reading high, such that no accessible point or surface level above the pipeline now exhibits regulated NORM levels, the pipeline may be abandoned by simply giving notification to the OCD and following all of the rules of this regulation except notification to the surface owner.

That completes the nonretrieved flowline section. Did you want me -- If you want to discuss this particular part before I go on to the next, or -- I can go ahead and cover all three, whichever way you'd rather do it.

CHAIRMAN LEMAY: Well, let's see what -- on this

section, if we have any questions.

Commissioner Weiss?

COMMISSIONER WEISS: I have no questions.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: Produced water is exempt from the NORM regulation?

MR. GRAY: The water itself is, that's correct.

COMMISSIONER BAILEY: Injection lines where produced water is used for waterfloods, they would also be exempt and would not have to --

MR. GRAY: No, they would be a pipeline, still, that would have to be evaluated for its merit as to whether it contains regulated NORM. But the actual water in the line would not -- does not contain the NORM.

COMMISSIONER BAILEY: Okay, but the produced-water pipelines would need to be --

MR. GRAY: That's correct.

COMMISSIONER BAILEY: -- fall under regs?

MR. GRAY: That's correct.

CHAIRMAN LEMAY: One, Frank. What happens if you at some point make the option disposable, but at a future date for some land-use reasons you want to take the pipeline up? Is that also another option, to take that pipeline up and do something with it?

MR. GRAY: I would think that would be between

you and the leaseholder, the surface owner, whether it be State Land Office or private or whatever, that if you wanted to recover that line, you would have to make the arrangements for the damages and so forth.

And then obviously you would have to -- under the EIB regulations, if you were dealing with something that demonstrated regulated NORM levels, you would have to follow all the required personnel protection and all of the things prescribed under that.

But there would not be a provision to have to get approval from the OCD for that retrieval, I don't think.

CHAIRMAN LEMAY: We're talking what amounts to -- I say "temporary", temporary in terms of geologic time, a temporary measure here to keep the pipe in the ground so that there's no contamination that could affect humans and so forth.

But at some future date I could also visualize, like we see all over, that land being used for a different purpose and the pipeline having to come out. That would then go over to the EIB regulations or ED?

MR. GRAY: I believe that's correct, myself, yes.

CHAIRMAN LEMAY: Okay, thanks.

Why don't we continue, unless we have another question?

MR. GRAY: Okay, the next item is commercial or

centralized surface waste management facilities.

The Division will consider proposals for disposal of NORM in commercial and centralized facilities, again, provided such is performed in a manner to protect the environment, public health and fresh waters.

The Division approval is contingent on the applicant obtaining a Rule 711 permit for the facility and complying with the requirements specifically related to regulated NORM as described below, those being, all requests for authority to receive and dispose regulated NORM must be set for hearing by the Division in order for the operator to obtain or modify a Rule 711 permit.

A request to dispose of this regulated NORM at a facility previously permitted under Rule 711 will be considered a major modification of that facility and still will have to be considered at a hearing.

The hearing request must contain complete plans for the facility, including the sources of the regulated NORM to be handled, radiation survey results, quantities of regulated NORM to be disposed, and the monitoring proposals that they would utilize to monitor that NORM.

A copy of the Rule 711 permit for the facility must be submitted. Also, proof of public notice of the application, as required by Rule 711, must be submitted. Also, there must be evidence of issuance of a specific

license pursuant to the ED, Subpart 14 and Subpart 13, and any other authorizations required by law.

Under the procedures for operation, the operating procedures that are protective of the environment and fresh waters and public health will be established in the Division's order. Any person desiring to dispose of regulated NORM in a surface-waste-management facility must furnish the regulated NORM information to the facility operator in order that he might submit Form C-138, as required under Rule 711. The facility operator must receive Division approval of this C-138 prior to receiving the regulated NORM at the facility from the operator.

That concludes that section, if you have some questions on that.

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: I have no questions.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: Will approval of the C-138 be done on the District level or at the Santa Fe level?

MR. GRAY: I believe it will be on the Division level; isn't that right? Yeah, at this level.

CHAIRMAN LEMAY: Question. What does this "[- -96]" refer to on each one of these things?

MR. GRAY: Rand, would you like to address that?

MR. CARROLL: Mr. Chairman, the "[- -96]" refers

to the effective date of the order, or of the rule. So once this order is signed, we will then make the next deadline for publication in the *New Mexico Register*. It's not effective till published. We'll find out when it will be published and then insert that date.

CHAIRMAN LEMAY: Okay, it's nothing to do with what we're talking about.

MR. CARROLL: No, it's --

CHAIRMAN LEMAY: I thank you. I don't have anything, Frank.

MR. GRAY: The third option I'll be discussing is downhole disposal in wells to be plugged and abandoned.

Again, the Division will consider these proposals in wells that are being plugged and abandoned, provided that this operation protects the environment, public health and fresh waters and is in accordance with Division rules pertaining to well plugging and abandonment.

This is specifically the case I discussed where we referenced the existing rules, and then we have items that must be done to supplement that plugging and abandonment operation.

A P-and-A Form C-103 must be completed by the applicant and be submitted to the Division for approval.

In addition to all other information on the P-and-A, the form must specifically state that regulated NORM

will be placed in the wellbore on that application. Application must identify the depths at which the NORM will be placed, radiation survey results conducted on the NORM to be disposed, the procedure to be used to place the NORM in the wellbore, and the specific form of the regulated NORM to be placed in the wellbore, that being scale, pipe, dirt, whatever type of NORM it might be.

The notice of the submittal of an application to dispose of regulated NORM in a P-and-A'd well must be sent to the surface owner and the mineral lessor.

All P-and-A procedures routinely required by the Division must be followed unless specifically superseded by instructions of the Division to facilitate this NORM disposal.

No work may be commenced by the operator until the Application for the NORM disposal and P-and-A'd well has been approved by the Division.

And the cement plug located above the regulated NORM and the surface plug must be color-dyed with red iron oxide to warn people that this is a NORM site.

In general, the regulated NORM must be disposed at a depth of at least 100 feet below the lowermost known underground source of drinking water, commonly referred to as a USDW zone, and there must be evidence that there is cement across this USDW zone in the well.

And any abnormally pressured zones in the wellbore need to be addressed in the application.

And that concludes the P-and-A option.

CHAIRMAN LEMAY: Commissioner Weiss, any questions?

COMMISSIONER WEISS: I have no questions.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: No.

COMMISSIONER WEISS: You covered it well, Frank. Very good.

CHAIRMAN LEMAY: Thank you, I have no questions.

MR. GRAY: Raye will now address the injection option.

MR. MILLER: Good morning, my name is Raye Miller. It's spelled R-a-y-e M-i-l-l-e-r. I'm with Marbob Energy Corporation in Artesia, New Mexico.

Obviously, I was a member of the OCD NORM Task Force. I also served on the ED NORM Task Force. I've had a lot of fun with NORM for the past few years.

In injection there are actually four categories of injection, or subcategories of different injection options: disposal wells, EOR wells, above-fracture-pressure injection, and commercial disposal. And if you don't mind, I'd actually rather discuss them in reverse order.

The shortest section, if you look at it, winds up

being the commercial disposal section. But short is not always sweet. The most onerous requirements are placed on commercial disposal. Besides meeting the requirements that are required for other types of NORM injection, these facilities must meet Subpart-13 and -14 requirements. Those requirements are extremely difficult. It's ED requirements, but they are extremely onerous.

The injection above frac pressure, it may strike a lay person as an extreme concept, but in reality this procedure is actually regularly used as a normal completion technique for oil and gas wells.

Since the addition of pressure, though, adds a slight additional risk, more requirements have been placed on the applicant than for regular injection disposal.

EOR injection actually can in some cases be a very good option, particularly if the NORM originated from the lease where the injection is to occur. In essence, there, we would be putting the material back where it came from.

Yet operators and regulators alike have a concern in an EOR project for the ultimate recovery of the most hydrocarbons possible. Hence, there are additional requirements over normal disposal injection regarding making sure that we're not hurting the recovery of hydrocarbons.

Disposal wells, regular injection disposal wells, have several requirements which must be met before approval will be granted. While these steps may be perceived by some, particularly in industry, as onerous and much more complex than are required for an option such as plugging and abandonment, it is an attempt to provide safeguards to ensure that disposal in injection wells has been given the proper economic and environmental analysis.

I believe that the requirements set forth in each section are appropriate and that the work of the committee has given OCD a very workable but yet protective rule.

Also, I would actually urge the Commission to try to adopt these rules with as few changes or additions as possible. It may seem a little funny, but there actually was a method to our madness in the way these proposed rules were developed, and I believe that the rule as it is presented is not only economically viable, but also very environmentally sound.

Before I close and answer your questions, I'll try to go back and talk about a couple of items that were raised earlier.

The question regards how much incidence of regulated NORM do we actually have in the industry?

When ED actually formed its committee, there was a lot of non-knowledge by most of the members on the

committee, including myself.

At one point, to try to understand how much of a problem that we were actually dealing with, we actually set up to have field trips in both the southeast and the northwest part of the state. ED brought several people, most of the members of that task force came. We wound up taking, or asking, several operators, including the company that I work for, to actually volunteer to be surveyed. There were, I think, two independents in the southeast and a couple of independents and a major in the northwest that volunteered to be surveyed.

At the time that the survey was done, it was done randomly. In other words, not the operator but the people who were actually associated with ED came down. We picked well sites at random to go survey in each operator's wells.

At that time, the company that I worked for operated in excess of 500 wells. I don't remember the exact numbers, but I think 20 different locations were actually picked out of our group.

In the northwest, there was no incidence of radium 226 identified at any location that was surveyed in that random test, and the information that I received from operators in the northwest or larger companies that operate many wells is that they don't actually see radium 226 in -- or they don't find that type of NORM contamination in any

of their facilities.

Radium 226 is like a mineral, gold, you know. You don't find gold veins all over. It appears that it just is not present in the geological formations that we're dealing with at this time in the northwest.

The only incident of radium-226 contamination that was discovered in the northwest was actually found in a pipe yard, in one joint of tubing at one of the independents' facilities. And upon review, it was determined that that was in all likelihood a purchased item that had been purchased from out of state and that the contamination was there when it was purchased and that it was not related to the San Juan Basin.

There is some potential for NORM in the northwest, but it is fairly limited and would appear to be lead 210, not radium 226.

Radium 226 is a gamma emitter, lead 210 is actually an alpha or a beta emitter. In other words, if you have lead-210 contamination inside of a pipe, it would not be evident by an outside examination because the alpha and beta emissions would not penetrate the pipe. The pipe would actually act as a shield. But there are in the ED or EIB regulations, there are regulations regarding alpha and beta emissions, as well as gamma.

In the southeast, there is some incidence of

radium 226. We wound up in the surveys that were done down there, at the different operators, randomly picked sites, we found only one -- one or two sites that actually had any elevated reading. I shouldn't say elevated, I should say regulated reading.

You have an ability today to actually have instruments that will find -- In other words, we have radiation in all of the soil, and as a result you have a background level of radiation, and that varies from site to site. Most of the stuff in the southeast part of the state has a reading of 10 to 12 as a background level.

So when we're talking about a survey regulated rate of 50 being regulated, you're actually talking about an effective rate of somewhere in the neighborhood of 38 to 40, because you're going to pick up a normal background in any location of 10 to 12.

The incidents of regulated NORM were one or two in the southeast. They were actually identified in either a heater treater or a water tank on location. All of the wells that were surveyed, we surveyed the wellheads, the pipelines, the flowlines, the tank batteries. The only places that we could actually -- In fact, it was a very frustrating process, because we were, you know, new kids out with meters, you know -- on other words, doing what you would expect.

You know, we wanted to see some results, and it was very difficult to get any type of elevated readings except on separators, free-water knockouts or water tanks.

NORM -- Or radium 226 is water-soluble, it's not oil-soluble. As a result, I don't believe that you'll have a radium-226 problem at your refineries, because they're processing crude oil.

The incidence is fairly low, and our company has actually surveyed -- at this point we have surveyed all of our facilities.

We don't have -- and in fact, the only incident at that time that they found on our company was, we surveyed our entire pipe yard, we surveyed our entire warehouse of parts, and we finally found one elbow that had a regulated NORM level. It was in the warehouse and, you know, we were going through with our NORM meter just across racks of fittings and parts, and this one was actually identified as having an elevated reading. It was a regulated NORM. And it -- We buy a lot of salvage materials. It was not perceived by the owners as actually having occurred at one of our leases.

We have since surveyed all of our facilities, and at the time of survey and presently, we don't believe we have any regulated NORM, even though we operate still close to 500 wells.

In the areas where we are seeing readings above background of 10 or 12, the highest incidents are at free-water knockouts, water separators, or heater treaters, or in water tanks themselves.

It appears that the location a NORM is most likely to be, where you have changes in pressure, changes in temperature, or changes in flow direction. Largely, the radium 226 precipitates out in scale, and it takes large volumes of fluid having moved through to yield a small problem, or the amount of scale -- You know, it took a lot of fluid moving through before this scale actually formed.

In regards to the limit that was picked or this 50 micro R, you may wonder if there was science or a reason that that level was chosen. And unfortunately, the answer is that largely that was a compromised position between a desire for the environmentalists who served on the committee to have no reading above background -- or every reading above background as being a regulated reading, and the industry's desire to have as high a reading as possible, because the incidence -- or the number of cases of regulated material that would have to be dealt with become greater -- or lesser, the higher the number is. They become greater, the lower the number is. Fifty was the compromised number.

The problem -- and, you know, one of the

arguments that I used as to why it should not have been any lower than that is because K-Mart, Wal-Mart, sell Coleman mantle lanterns, replacement mantles for your Coleman lantern, on their shelf. Well, those mantles actually have a higher than 50 reading, and I mean, you know, it's sitting on the shelf at K-Mart.

It becomes hard to justify if we, you know, sell them to people, why the industry should then be regulated to deal with a problem at a lower level than that. Some of your nut products actually contain levels of radioactivity that would actually be regulated NORM. In other words, don't put any nuts in your pipelines. But some of your nuts -- And we consume them as humans.

I mean, there are several in the industry that are just adamant that by choosing a level of 50, we have over-regulated ourselves. And indeed, I can sympathize with them.

But there was also a need to have a threshold to where the environmentalists felt like that largely if it was under this threshold, it was safe for the general public, it was safe for the workers, if there was not an endangerment. And they felt like they had compromised away by going that high, and industry obviously would have liked higher limits.

I'm sure that's probably not the answer that you

would have liked to have heard as to how we came up with that limit, but that's the reality of how some of that was determined.

I'd be happy to answer any questions, and I thank you for your consideration.

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: Who all was involved in this committee you just discussed? Let me phrase it differently. Was Los Alamos National Lab or Sandia National Laboratories involved? They know more about radiation than anybody in the world.

MR. MILLER: Right. The actual people who served on the committee were industry representatives. Chris Shuey, who's on this committee, Southwest Research and Information. There were two additional environmentalists or -- You know, I mean, that was their trademark. There was a lady from the southeast who was an organic vegetable farmer there in our area who was extremely adamant about radiation concerns. There was a member of one of the Indian tribes on -- It was a very broad-based panel.

We actually, you know, tried to get as much information -- We had a lot of presentations by a lot of different folks, and what I found was that you're right, the level of radiation that we're talking about when we talk about a 50 micro R, does not relate to what people at

Los Alamos or Sandia see as being significant.

Now, you've got to weigh on the other side that the concern is that this -- let's say tubular material, pipe that the oil business has, at some point when it is no longer usable by industry, may be sold or given away to the general public, and the general public could construct swing sets in school yards out of this material. And as a result, there can become a real apprehension or fear that, you know, your regulatory limits should be extremely low because of possible exposure to the general public.

And I recognize your concern or the direction of your concern, but unfortunately -- and that's what -- You know, one of my fellow oil people in the southeast called me the other day and he says, These regulations are terrible, they're terrible.

And I says, Well, now, what's the problem?

And he says, Well, you know, this is just another set of stuff, just like ED, and, you know, he didn't agree with the limit.

And I says, But hold on a minute. You know, what we're doing with OCD -- or you all -- is trying to put in place the follow-up regulations to allow for the disposal options.

The debate about the limits and the 50 micro R was actually -- If that's the area of concern, it should

have been addressed in the EIB or ED discussion, because, you know, that's their rule. All we're doing is building a building block that allows for viable disposal options in our work here.

COMMISSIONER WEISS: Yeah, my concern is, there's no science involved. I think that regulations should be based on science. I see this as regulatory overkill, which infuriates, I suspect, a great deal of the population in America. This is bad policy.

MR. MILLER: It does, but the industry felt like that, you know -- and you know, obviously we were compromising, but we didn't have -- In other words, where the 50 number actually comes from is, there is a calculation that can be made with the 50 that gets to a general population exposure level for a year that assures folks that, you know, largely they can be using one of these pieces of pipe as the bedpost for your bed, and if it's below 50 you would still be under the accepted level of exposure for general population for a year.

And I understand, but at the same time, where the problem originated from was, Conoco had a policy of actually surveying their facilities before abandonment for possible NORM. They had internal company guidelines that said, you know, if a level has -- exceeds some level, we will not just, you know, sell it to the general public or

move it from the site.

They actually surveyed a facility in the southeast part of the state. It had elevated levels. They contacted the BLM, asked for guidance as to what they should do with that facility, and the BLM says, We want it off.

Well, the problem is that getting it off, the only option available to them at that time, because of the absence of ED/EIB regulations, OCD/OCC disposal options, was for them to make application to transport that material to Envirocare at Utah. Their company saw the fact that by taking NORM -- oilfield NORM material to Envirocare, that they were in a potentially larger liability position, ultimately, than trying to deal with it on location or through some type of disposal.

Transportation costs are extremely high. The disposal cost is another factor. And then the fact that disposed materials in Envirocare in Utah are commingled. Other folks' stuff is worse than what we're dealing with here.

But as a result, they needed a set of regulations that will allow them to handle and manage, whether it's a real problem or a perceived problem, to actually handle it, and the disposal options that we've set forth here are some of the most sound.

The easiest disposal option is in the P-and-A wellbore. If you kind of analyze -- or as an operator if you analyze what it would take to actually meet the different requirements or the criteria under here, P-and-A wellbore is probably the easiest criteria to actually meet.

If you had a volume of material that could be placed in a -- which Conoco did at that time, it could have been placed in a 10,000-foot wellbore, because they were in the process at that time of abandoning, plugging and abandoning wellbores at that site -- if it could have been placed in those wellbores in a confined environment, under the way these regulations are done, they would have had a cost-effective solution to the problem.

It is placed at a level below drinking water, it's placed in an area where there should not be any potential exposure or harm to the general public, to the workers, it's back in the ground where it came from.

It's -- Yeah, that was whole driving force, and it became a thing where they were up against the wall. The BLM didn't care what they did, but they wanted it off the BLM location.

Conoco brought in a team of specialists from Louisiana, they took the material out of the vessels, placed it in containers, left it on location while they sought solutions, whether it be envirocare or other

options. The material leaked out of those containers, it oxidized after sitting there for a while, leaked out of the containers. They had then soil contamination.

They brought in specialists again dealing with NORM, cleaned up the soil, cleaned up the containers, put it in a fiberglass 210 tank, put all of the suits and stuff that folks the used at the cleanup of that facility, and it's still there. It's waiting on disposal options that are economically viable and protective of the companies for long-term liability --

COMMISSIONER WEISS: Well, as I understand it, Conoco had a real problem, and Marbob will never have a problem.

MR. MILLER: Quite honestly, this phenomenon should be a short-term phenomenon, because what companies are finding is that by the knowledge that there is the potential of a problem and the cost associated, just like what Conoco has gone through, if you do -- if you recognize that a particular well or lease has the potential for generating over time regulated NORM, if you monitor that facility, then you just schedule your maintenance and stuff to make sure that the vessels are cleaned or whatever prior to the accumulation of material that will get you to a regulated level.

Once we solve what problems are out there because

of the lack of knowledge of years ago, I honestly believe that you'll see, once the problem with the Rocky Mountain folks are out of the way, that there will be a series of disposal applications. But then the next year you probably will have 20 percent or less of what you had the year before, and ongoing there will be very few applications for disposal because companies will endeavor to not let their facilities actually have regulated NORM.

COMMISSIONER WEISS: Would this scenario you just described occur without this rule?

MR. MILLER: Yes. In fact, folks are even in a position where there's more need to not have regulated NORM, because at that point the companies are in a position where Envirocare is the only alternative, and none of us -- I mean, I would not want my company to have material on that facility.

At this point what the companies are doing is, they're storing it on their locations or in their yards where there is more risk to them, because they don't want that option where they may be part of a superfund site in the year 2010 and the liability associated with it.

But these options piggy-back on the back of ED and are actually -- We in industry see these as very progressive. In fact, the options that are proposed here are better and more flexible than are in place in any other

state, and other states have much larger problems. But the regulatory agencies and all here have been very cooperative and -- in working in these groups of trying to formulate an understanding of -- that these are workable and environmentally safe options.

COMMISSIONER WEISS: This is a difficult question to resolve. I see no evidence of this ever harming anyone. The fact is, I suspect the trees that were cut down and the injuries that were involved in that type of work far exceed anything that we're going to prevent in this regulation and rule.

MR. MILLER: But if you do not wind up -- If you did not adopt this rule, then there would be no disposal options available for industry, outside of going to Utah and putting it in a radioactive disposal facility, and that's sad.

In other words, when we have an option, by putting it in a P-and-A wellbore the company retains liability. I mean, we don't ever escape liability for -- You know, I mean if the wellbore leaks on a normal P-and-A job, then I have to go back in and re-fix it, you know, there's some problem with the actual plugging.

But it winds up being in a position where the companies perceive that their liability ongoing, they know where it is, they know how they plugged the well, and the

material is confined. In other words, if it's approved, it's very cost-effective, it's very environmentally sound, it's a tremendous benefit for industry.

COMMISSIONER WEISS: I have no other questions. Thank you.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: Are there requirements for operators to survey their equipment pipelines, et cetera, prior to abandonment?

MR. MILLER: Yes, those are all contained in the ED rules, EIB rules. There are specific requirements. In other words, before any material can be sold to the general public, it had to be surveyed. Prior to workers working on vessels, there's a requirement to survey.

But all of those standards are actually contained in the ED rules and --

COMMISSIONER BAILEY: So even though we don't see them here in the OCD rules --

MR. MILLER: Right.

COMMISSIONER BAILEY: -- there are --

MR. MILLER: There are requirements that are very applicable to the industry and the way they conduct business.

And there is the ability -- and I was questioned by an independent operator out of Roswell the other day.

He says, Well, you know, can I sell a piece of equipment to another operator? And I says, Yes.

In other words, the rules specifically allow for operators to transfer between themselves for use of the same manner, this -- I mean, there's a real lack of knowledge by some of our smaller independents as to what they're required to do and what is available to them.

But those rules have already been promulgated and are there. It's a thing where we feel like -- and I call myself an endangered species because we feel like we're attacked on so many different fronts that until, you know, something hits you and -- You know, he saw that the Commission was considering NORM regulations, and so when he read what had been submitted by NMOGA to him, he didn't know exactly what he could or couldn't do.

He didn't have a survey instrument. I provided him with the information how for $800 he can figure out if he has any problems or not. And as operators, we need to know that.

But those rules are already in place. Operators just need to have a knowledge level and awareness raised as to what they need to do.

COMMISSIONER BAILEY: And they cover each one of these options that are the --

MR. MILLER: Yes. In fact, their rules are

much -- have a lot more in them. But these options were agreed to, and that's one of the reasons that the environmental community was not as active in participating in this development, because these options were already agreed to as being options that were acceptable under the ED rule.

COMMISSIONER BAILEY: That's all.

CHAIRMAN LEMAY: Just a couple questions, Raye.

One, on the injection above frac pressure, I don't see any reference to a tracer survey in this case, just gamma-ray survey. Is that something you would anticipate being required after -- so it doesn't get out of zone, you know it's not out of zone?

MR. MILLER: Well, you know, obviously I think it's a thing where we have not restricted OCD's or your all's ability to make such requirements.

One of the questions, and probably what you will have is, your folks will be looking at what type of evidence the folks are presenting, you know, these three -- the model results predicting frac propagation, expected height, extension and direction. You know, your folks are going to be looking at what type of cement is behind the pipe, what types of formations we're looking at, what the over layers, under layers are actually -- you know, what the porosity of this zone, the permeability of it is,

versus the layers above and below.

There's nothing here that would not give you the ability as a requirement of approval that they do that. But then what we felt like was that we tried to craft these rules, that they didn't place a 1996 technology on something that by the year 2010 may not be applicable.

And so as a result, we tried to stay away from, you know, a lot of specifics such as a tracer survey, because you can get to a point, you know, where technology has changed to where that wouldn't be the appropriate way to actually have the feeling. And yet if it's defined in the OCD rule that you run a tracer survey, then all of a sudden you're running tracer surveys even though it's not something that's really applicable in the future.

CHAIRMAN LEMAY: Just one other quick question. Was it the intention of the committee to bring K-Mart under our OCD disposal rules and regs?

(Laughter)

MR. MILLER: It goes back to the science of the Fifties. I guarantee you, there's -- In fact, one of my close associates down there by the name of Frank Yates has chewed on me more than once because of the fact that there's more radiation to airline pilots than there is from oil industry, 50 micro R. And I mean --

CHAIRMAN LEMAY: Because my colleague,

Commissioner Weiss, is referring to those specific examples.

MR. MILLER: Well, I don't want to have K-Mart in my jurisdiction.

CHAIRMAN LEMAY: Yeah, we don't want them under our jurisdiction either.

Thank you, you may be excused.

Additional questions?

Okay, Mr. Kendrick?

MR. KENDRICK: Mr. Chairman, Ned Kendrick again. I have just a couple points to reinforce that Raye made.

CHAIRMAN LEMAY: Yes.

MR. KENDRICK: In terms of the science behind the thresholds, when we define -- when we were proposing to define regulated NORM, there was some input by the Radiation Technical Advisory Council. They're a group mainly of Los Alamos scientists, I believe. And in that group is required by law to approve of any EIB regulation dealing with radiation.

So once the EIB approved the more sweeping NORM regulation, we had to go through a whole process of getting the RTAC to approve, and then they ask lots of probing questions about the science.

And even though they didn't propose the thresholds, they studied them and concluded that they made

sense.

So there's a little bit of a scientific basis, if you will, in terms of scientific review of those standards.

COMMISSIONER WEISS: And if the standards would have been a factor of 10 higher, what would have happened from them?

MR. KENDRICK: I mean, it's possible they would have -- I mean -- Hard to say.

COMMISSIONER WEISS: You got no input, though, other than okay?

MR. KENDRICK: True, yeah, they blessed them, they looked at them. But they didn't formulate the standards, so...

And the other point that Raye made about if we didn't have this disposal option, or these disposal options, producers would have to, say, on a BLM lease or elsewhere, have to truck their waste up to Envirocare in Utah, which is, a), very expensive, b), somewhat dangerous in terms of any accidents en route, liability created by transportation, and then c), as Raye said, you're taking a terrible chance dumping your NORM waste into a huge facility that you don't have control over. If that became a superfund site, you'd be responsible party on the hook for paying part of the multi-million-dollar cleanup.

So in that scenario, the disposal is out of your

hands, and you're exposed to a lot of potential liability.

So we see ourselves as creating some options, making things better for operators, giving them something they can lawfully do with the NORM waste and minimizing their liability.

CHAIRMAN LEMAY: Thank you very much.

Let's take a 15-minute break before we get on to our next witness.

(Thereupon, a recess was taken at 10:23 a.m.)

(The following proceedings had at 10:41 a.m.)

CHAIRMAN LEMAY: Okay, we shall resume.

MR. ANDERSON: Mr. Commissioner -- Mr. Chairman, Commissioners, my name is Roger Anderson. I'm the Environmental Bureau Chief for the Oil Conservation Division, and I'd just like to make a brief statement for the record and then answer any questions you might have.

I was a member of the NORMs Task Force which developed this proposed draft rule, and the Division -- It's my opinion and the Division's opinion that this proposed rule fills the mandate of the Division to protect public health and the environment and fresh waters, and the Division does support the adoption of this rule as it is written.

CHAIRMAN LEMAY: That's the kind of testimony we like, short and sweet.

Commissioner Weiss?

COMMISSIONER WEISS: I have no questions.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: I have one.

CHAIRMAN LEMAY: Yes.

COMMISSIONER BAILEY: I look at Attachment G, prepared by Exxon, concerning disposal of slurrified NORM waste in EOR injection wells, and I look at the proposed rule, section -- having to do with injection in EOR injection wells and the requirements for issuing the permit, page 6 of the proposed rule, Number B, under 3, "such injection will not cause an increase in the radiation level of Regulated NORM produced from the EOR interval..." et cetera.

How difficult will that demonstration be required for applicants, in view of Attachment G?

MR. ANDERSON: I'd prefer to defer that question to David Catanach, who's the UIC Director, who will actually be the one that would be approving those type of operations.

COMMISSIONER BAILEY: Okay, I was under the assumption that your Bureau would be --

MR. ANDERSON: No, those type of applications are required to go to hearing, and it would be an Examiner hearing. They would be applied to first through the UIC

program --

COMMISSIONER BAILEY: Oh, okay.

MR. ANDERSON: -- as an EOR project. That's correct, isn't it?

MR. CATANACH: Yeah. My name is David Catanach. I work for the Engineering Bureau here with the Division.

Your question, Ms. Bailey, is how --

COMMISSIONER BAILEY: How difficult is this demonstration requirement, in view of the statements of the second paragraph, Attachment G, that says that the significance of radium in EOR projects is nil?

MR. CATANACH: My understanding is that what Exxon has put forth here is that the concentration should not increase in the producing wells within an EOR project.

I don't know what kind of evidence or testimony we're going to be requiring at the hearing to demonstrate this at this point, because we haven't -- I mean, we haven't been through this.

COMMISSIONER BAILEY: Okay, this is one that's -- as you go along, you'll see --

MR. CATANACH: Yeah, but they're going to have to submit some kind of evidence to demonstrate that.

COMMISSIONER BAILEY: Like computer modeling? Would you require that?

MR. CATANACH: I don't think it would be as

sophisticated as computer modeling. Something less than that, I suspect.

COMMISSIONER BAILEY: Good, thank you.

CHAIRMAN LEMAY: Additional questions, Commissioner Bailey?

COMMISSIONER BAILEY: No.

CHAIRMAN LEMAY: Thank you.

Mr. Anderson, you may be excused.

MR. FLOYD: Mr. Chairman, members of the Commission, my name is Bill Floyd. I'm Program Manager of the Radiation Licensing and Registration section for the New Mexico Environment Department.

I'd like to begin by saying that feedback I've received from other states and from the regulated community and also from the NORM experts nationwide, it all tends to indicate that New Mexico's Subpart 14, our regulations pertaining to NORM in the oil and gas industry, is looked on extremely favorably by all sides concerned.

Unlike other states, we don't go into radon flux measurements. We try to keep our regulations as being as user friendly as we could, without having the industry go out and invest in all kinds of expensive equipment and different types of wet-chemistry lab tests. We're basing our definition of regulated NORM primarily on meter readings, and only then what chemistry required, but we

have tried to keep it as simple as we possibly can.

I would like to also mention that, as Ned pointed out, we do have a seven-member Radiation Technical Advisory Council, whose members are appointed by the Governor for five-year terms. We currently have two scientists from Los Alamos and two from Sandia, as well as members of the medical community on that RTAC, and we did get input from them concerning our proposed regulations.

Another thing that was not pointed out, the Conference of Radiation Control Program Directors, which is made up of individuals from all 29 agreement states, as well as the NRC and EPA and other federal agencies have worked on what they call Part N of the suggested state regulations for the control of radiation, and that covers NORM.

They worked on that for ten years, and these limits, those limits and the contamination limits are based not only on what other states have adopted but also what, you know, people in the regulatory community nationwide have worked on for ten years. The 50 micro R per hour is based on the allowable dose, annual dose limit for members of the public, for continuous exposure.

So it's not a number just, you know, grabbed out of a hat. It does have a scientific basis.

With these items in mind, I would like to express

the Environment Department's recommendation that these rule changes be approved to allow for the disposal options allowed in Subpart 14 of the Radiation Protection Regulations. They are compatible with Subpart 14 and would allow Subpart 14 to go into effect.

Any questions?

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: Yes, does risk -- Is that involved in your determination? Was it involved in the determination of these limits or -- this 50-millirem, or is that just a number that you got from the literature?

MR. FLOYD: It involves risk. I think that as a member of the New Mexico -- or an employee of the New Mexico Environment Department, you know, our mission is to protect the public health and safety and the environment. And we take into account the risk factor. And again, that was based on information gathered over a number of years from the CRCPD and also on regulations adopted by other states, primarily Texas and Louisiana.

So yes, risk is involved.

COMMISSIONER WEISS: That was my only question. Thank you.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: No questions.

CHAIRMAN LEMAY: I don't have any either.

Thank you, Mr. Floyd. I personally thank you for being involved in our task force too.

MR. SCHMIDT: Mr. Chairman, members of the Commission, my name is Mark Schmidt. I am the Environmental Engineer with the New Mexico State Land Office. I'm a registered professional engineer here in the State of New Mexico, and I am representing the State Land Office on this task force.

The New Mexico State Land Office manages approximately 9 million acres of surface and 13 million acres of subsurface resources. These resources are held in trust for generating revenues to support the public schools and other beneficiary institutions.

The duties of the State Land Office include not only the maximization of revenue from the land but protection of the land's value from waste and depredation.

I believe that the rule before the Commission is consistent with the mandate of the New Mexico State Land Office. I think the rule provides for practical disposal options that are consistent with the industry, the OCD and the State Land Office. The rule provides for notification to the land owner, as well as identification of the actual disposal sites. And I also believe the rule provides protecting the long-term assets of the trust.

Thank you.

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: I have no questions.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: No questions.

CHAIRMAN LEMAY: Nor do I. I want to thank you again --

MR. SCHMIDT: Thank you.

CHAIRMAN LEMAY: -- for participating with the Task force, Mr. Schmidt.

MR. STEPHENS: Mr. Chairman, Commissioners, my name is Gary Stephens. I work for the US Bureau of Land Management, and I'm a representative on the Task Force. I have worked in the Department of the Interior's Onshore Minerals Program here in New Mexico for the last 19 years, the last seven years here in New Mexico, in the BLM's state office. My environmental management duties consist of developing policies for environmental compliance and assisting in the development of environmental protection rules and procedures.

Now, early on in this process, the Bureau of Land Management determined that because NORM materials were exempt from regulation under Subtitle C of the Resource Conservation and Recovery Act, and because it's not regulated or administered by any BLM rule, that management of NORM was discretionary with field managers.

Testimony has already been given earlier today by Mr. Miller and Mr. Kendrick as to how that discretion manifested itself in the field.

This issue and these findings led BLM's Washington, D.C., headquarters office to direct my office to participate and play an active role with the State of New Mexico's study and potential rules for NORM. And therefore the Bureau of Land Management fully supports this rule-making effort.

That's the conclusion of my statement. Thank you. I'll answer any questions.

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: One question.

Do you, Mr. Stephens, see that this problem will -- which is small now, will go away with time?

MR. STEPHENS: The problem that this rule will make go away is the lack of approvable disposal methods for NORM and NORM waste. The problem that we wanted to address here was the lack of disposal options.

The oil and gas industry did not have a -- at least the way that the Bureau of Land Management saw it, an approvable method of disposal that would sufficiently protect the public interest and to address the issue of liability, not only to the industry but to the federal government as well.

We did not want to establish federal rule-making in this regard, and so we were fully amenable to participating on the State of New Mexico's rule-making effort for that reason.

COMMISSIONER WEISS: My question was more related to the issue of NORMs. Will they go away as operators -- do you view this that the concentrations will be kept dilute enough where's no problem again?

MR. STEPHENS: NORMs will exist, and they will not go away. This will help eliminate the NORMs from exposure to the public and will remove them from the human environment.

COMMISSIONER WEISS: I have no other questions. Thank you.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: No questions.

CHAIRMAN LEMAY: Nor do I.

Again, I want to thank you for your contribution, participating with the Task Force.

MR. STEPHENS: You're welcome.

MR. KENDRICK: Ned Kendrick again. That concludes the Task Force's testimony.

CHAIRMAN LEMAY: Okay. Maybe right now, if we have any questions, since this is rule-making, we generally will be a little more casual, if that's okay, and if any of

my fellow Commissioners have a question, they might ask you, and you could answer it or direct it to someone who --

MR. KENDRICK: Sure. We just finished our direct testimony, but we're all available to answer questions.

CHAIRMAN LEMAY: Are there any other questions of the witnesses?

I guess I'll start with Commissioner Weiss.

COMMISSIONER WEISS: No, I think I've heard all the testimony I need. Thank you.

CHAIRMAN LEMAY: Commissioner Bailey?

COMMISSIONER BAILEY: I have no other questions.

CHAIRMAN LEMAY: I might have one that's been kind of bothering me, and I don't know who to direct it to.

I guess the comment was made, which I didn't know, that there's no NORMS up in the northwest, that they didn't find any. I've had -- Is that a correct statement?

MR. KENDRICK: Raye probably is the expert on that, but it's my understanding that maybe there are more alpha and beta emitters in the northwest that do not penetrate the pipe, so if you take an external reading they don't show up and the people and the environment are not affected by it.

I think that may be the distinction, that there's more gas produced in the northwest and less radium 226, which seems to be more in the water, produced water in the

southeast.

CHAIRMAN LEMAY: Well, maybe the primary question starts with -- I'm familiar with a little of the uranium production up there in the Morrison formation. You've got uranium production from the Brushy Canyon. I hope there's no oil and gas being produced from that same formation, because it's got to be radioactive, doesn't it?

MR. KENDRICK: Right. I know, it seems incongruous.

CHAIRMAN LEMAY: Frank, do you -- does that --

MR. GRAY: The indications we have had up there are that the background readings up there are higher, directly proportional with the uranium mining and uranium in the soil, and they're in the 18 or 19 range, I believe we found in the survey.

Then when we look at the production facilities, that we have, the readings, including background, are very seldom over 25 to 30.

So we have such a -- a very small amount of actual radium 226 associated with the production. We just have a higher background reading associated with the uranium.

CHAIRMAN LEMAY: I assume if you get next to a uranium mine, you would have some pretty good background readings there.

That really answers my question I had. I can't think of anything else at this point.

Does anyone else have any questions on the rule-making?

Yes, Ruth?

MS. ANDREWS: If I might make a statement --

CHAIRMAN LEMAY: Sure.

MS. ANDREWS: -- NMOGA strongly supports this rule-making. We will continue to monitor and build data on NORM in New Mexico, and if we feel there's a demonstration that the ED regulation is unnecessary, we will certainly ask that it be dropped from the books.

CHAIRMAN LEMAY: Okay, thank you very much, Ruth.

Commissioner Weiss?

COMMISSIONER WEISS: Yes, this is addressed to whoever.

It's come to my attention that there are now training courses available for NORM, and this is -- appears to be a new cottage industry springing up. From what I've heard, maybe there's not a lot of need for that. I'd appreciate some comments along those lines.

MR. KENDRICK: Well, I think there was planned to be some training up in the northwest at the recent Four Corners meeting. And you're right, there wasn't a lot of interest, and I think that seminar was dropped. But maybe

Ruth could field that one.

MS. ANDREWS: It is a new cottage industry. NMOGA is not supporting the activities of any of these groups. We are not in a position to determine their experience in giving courses, what their technical qualifications might be.

We are urging our members to be very careful about taking these courses, to make sure that they are valid courses.

They may be necessary. We would like our surveyors to be trained.

COMMISSIONER WEISS: You mentioned that during the course of your investigations you learned how to properly sample, take readings or however it is you measure NORMs. Is that knowledge readily available to the industry?

MS. ANDREWS: I would expect as we move forward these courses will be offered in that area. There are some scheduled for the Hobbs and Artesia areas in April, this month. And the operators themselves will have to determine the credentials of the people giving those courses. We would not undertake to determine whether they're valid or not. But we would hope that they will get training.

Raye, can you help me here?

MR. MILLER: Well, it winds up in a thing where

actually to comply with the regulations that are in place regarding NORM, it is not very difficult to become knowledgeable enough with the proper equipment to actually protect yourself, to make sure that you don't have above 50 micro R readings, which become regulated NORM.

But there is the threshold of having an awareness that, one, you need to own an instrument, and secondly, how to utilize that instrument, that many of the operators are just in the process of crossing.

You know, we have actually created a move or, you know, this problem has created a move for a company in Sweetwater, Texas, Ludlow Manufacturing. They produce Model 3 detectors, and I use a Model 44-2 probe, and with carrying case and batteries and a check source it runs you about $800. They have a nice little system, and they take Visa. You call them over their 800 number, they ship direct to you, you've got you an instrument.

Once you have the instrument, you need to get with someone. The way that I got trained was by one of Exxon's people actually showing me how to utilize the instrument.

The key with radiation is the fact that, if the vessel is here, if I measure right next to the vessel I get one reading, and as I move away from the vessel, I get a lower reading. It's an exponential decline. In other

words, the distance that you hold your instrument away will affect the reading that you're actually getting, and it's not a linear decline, my understanding.

See, sometimes I get to talking these things, and my cohorts over here always wonder whether I really know what I'm talking about or not.

But as a result, one of the questions becomes -- gathering a lot of survey data, is, if the same person didn't conduct all the surveys, you know, how close were they actually to the vessel when they were surveying? Because then the readings that they did could have a dramatic impact as to whether or not it was properly recorded.

COMMISSIONER WEISS: Well, these techniques are going to be -- they're available to industry and well known, I assume?

MS. ANDREWS: If I might add, the Environment Department has an approval process for trainers, and as I understand, there are only two groups now who have been approved?

MR. FLOYD: Yes, we do. Our regulations call for certification of any individual or a company offering training in New Mexico. And currently I think we have three companies out of Louisiana offering training. And I've seen the course outlines of these training programs.

I must say, I'm very impressed. It doesn't look like a fly-by-night type organization.

Of course, any company in New Mexico that would choose to offer this type of training, all they have to do is apply with us and we will review their credentials and certify them too if they are found to be qualified.

MS. ANDREWS: And we would in turn be telling our members to only use people who have been approved by the agency, because that's the only certified training that they can use.

COMMISSIONER WEISS: Thank you.

CHAIRMAN LEMAY: Is there anyone else that wants to make a statement in the case, or additional questions or -- or anything?

Well, I want to express my appreciation to you, Ned, and the Task Force members. I think you've done an excellent job in covering all bases and bringing this in very condensed, concise form to the Commission. My tanks again to all of you.

And we shall take this case under advisement. Thank you very much.

(Thereupon, these proceedings were concluded at 11:02 a.m.)

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CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL April 16th, 1996.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998