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Jurisdictional Working Group

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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MEETING OF THE PART 40 INTERAGENCY

JURISDICTIONAL WORKING GROUP

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MONDAY,

DECEMBER 3, 2007

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ROCKVILLE, MARYLAND

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The Working Group met at the Headquarters of the Nuclear Regulatory Commission, Two White Flint North, Room T2B3, 11545 Rockville Pike, at 9:30 a.m., Mr. Gary Comfort, Chairman, presiding.

Reporter: Charles Morrison

1 WORKING GROUP MEMBERS PRESENT:

2 GARY COMFORT, NRC

3 CATHY MATTSSEN, NRC

4 JOAN OLMSTEAD, NRC

5 KRISTINA BANOVA, NRC

6 WILLIAM RAUTZEN, NRC

7 KENNETH WEAVER, OAS

8 LOREN SETLOW, EPA

9 BRIAN LITTLETON, EPA

10 SURENDER AHIR, OSHA

11 DOREEN HILL, OSHA

12 BRIAN HEARTY, USACE

13 FRED FERATE, DOT

14 CHRISTOPHER FINDLAY, MSHA

15 EDWARD REGNIER, DOE

16

17 NRC STAFF PRESENT:

18 PATTY BUBAR

19 KEVIN HSUEH

20 DENNIS RATHBUN

21 JOAN OLMSTEAD

22

23 ALSO PRESENT:

24 MIKE LAFLEUR

25 CHARLIE SIMMONS

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P-R-O-C-E-E-D-I-N-G-S

9:30 a.m.

CHAIR COMFORT: Good morning everybody. We're going to try to start relatively on time. I expect we may, from what I understand, have a few people from members of the public straggling in.

My name is Gary Comfort. I'm a Senior Project Manager in the Rule Making Branch in the Division of Inter-Governmental Liaison and Rule Making here at the U.S. Nuclear Regulatory Commission. I'm the Chairman of this working group. It's the Part 40 Inter-Agency Jurisdictional Working Group.

This working group was originally assembled to explore the best approach to delineate the responsibility for regulating low levels of uranium and thorium and we've basically taken this title, that was Part 40 Inter-Agency Jurisdictional Working Group because we're trying to figure out, is there better ways to regulate this low activity source material in different jurisdictions better.

The purpose of this meeting is actually to continue deliberations of the working group that we had back in the 2001 to 2002 time period. Back in that time period, I'll get -- I'm going to be doing a little background presentation in a few minutes, but

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1 basically, the working group had come up with a  
2 recommendation that we forwarded to the Commission.

3 Because that recommendation was not taken  
4 at that time, but the Commission asks us to start  
5 moving forward on it again, we're holding this meeting  
6 basically to make sure the agencies still are on  
7 board, on this whole issue and what the original  
8 recommendation was or have there been other issues  
9 that have come up that potentially, we need to change  
10 what that recommendation was? We're leaving that kind  
11 of open.

12 Go the slide here. We're going to try to,  
13 as I stated earlier, discuss whether the previous  
14 assumptions are still valid on what we had originally  
15 discussed. Some data may have changed. We may have  
16 gotten additional data that we want to discuss.

17 We'll also want to discuss in this  
18 meeting, any types of new information that could  
19 impact or play a role in any type of -- you know,  
20 changing the recommendation or re-enforcing the  
21 recommendation that we had previously.

22 Our desired outcome for this meeting is  
23 potentially, we'd like to be able to come out with a  
24 resolution at the -- or recommendation, at the end of  
25 this meeting, as to whether we're going to -- that the

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1 existing recommendation still stands or if we need to  
2 make a new recommendation.

3 Now, we're trying to do this in one  
4 meeting. If we come to the end of the meeting and  
5 there's a lot of open issues, we're not going to  
6 forego that there may be a need to do another meeting  
7 or gather some additional information. We are trying  
8 to keep this as -- we're not trying to push the  
9 original recommendation. We're trying to keep it  
10 open, to make sure that we get clear understanding and  
11 everybody still understands what we had stated before  
12 and that their agencies likely, would be acceptable to  
13 the -- to whatever recommendation that we came up  
14 with.

15 Before we begin, I'd like to make a couple  
16 of announcements. This meeting is open to the public.  
17 We have some members of the public in the back of the  
18 room. This is basically a working group meeting for  
19 the members of the working group, but we plan on  
20 having opportunities for members of the public to  
21 speak at appropriate times.

22 I'll basically, when I go over the agenda,  
23 say where I'm looking at those times, but we may be  
24 able to open up other periods also for members of the  
25 public to speak.

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1 We've arranged for a Court Reporter to  
2 transcribe the activities here today and that will be  
3 publically available after -- some time when the  
4 documents are done and put up on the web.

5 So, in that way, if you do speak, if  
6 you're a member of the public, we ask you to come up  
7 to the microphone, to make sure you speak and announce  
8 your name and give your affiliation, if you'd like so,  
9 before you make your comment. That would be  
10 appreciated.

11 Restrooms, for those who need, are located  
12 out back and behind the lobby, where the elevators  
13 are. Men's room, if you turn left, it will be the  
14 first door on the left. Women's room, as you go out,  
15 take a right and it will be the first door on the  
16 right.

17 We're going to be taking a break for  
18 lunch. You can either go down to the cafeteria.  
19 There's a few restaurants and fast food places around.  
20 You have McDonald's. You have Popeye's, a few up the  
21 street. We're planning on having a little bit over an  
22 hour, but I'd like everybody, if possible, to be back  
23 at -- so that we continue the meeting at 1 o'clock.

24 I've also put on some meeting -- NRC  
25 public meeting feedback forms, back on the table over

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1 there. If you get the opportunity, I'd appreciate it  
2 if you can fill these out and either mail them in or  
3 you can give them to me at the end of the meeting. It  
4 just gives us back some feedback as to how these  
5 meetings were run and how well they were prepared and  
6 all, so we can learn from our -- what we've done well  
7 and what we haven't done so well.

8 I've also put on the table back there,  
9 some copies of slides that we'll be doing in a few  
10 minutes. There's also copies of a lot of the  
11 background documents that we've discussed -- or that  
12 we'll be discussing in this, a lot of the past SECY  
13 papers and the Staff Requirement Memoranda. It's  
14 already been set up.

15 Right now, I'd like to go around the  
16 working group and have everybody introduce themselves.  
17 As I said, I'm Gary Comfort. I'm from NRC and we'll  
18 go around. We'll just do the working group members.

19 MS. MATTSSEN: Cathy Mattsen and I kind of  
20 got this whole effort started way back when. I'm in  
21 the same division as Gary.

22 MR. REGNIER: I'm Edward Regnier from the  
23 Department of Energy, Office of Health, Safety and  
24 Security.

25 MR. WEAVER: Ken Weaver, State of Colorado,

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1 here for Organization of Agreement States and the  
2 Conference of Radiation Control Program Directors,  
3 Inc.

4 MR. HEARTY: I'm Brian Hearty. I'm with  
5 the U.S. Army Corp of Engineers.

6 MS. BANOVA: I'm Kris Banovac. I'm with  
7 the Division of Waste Management and Environmental  
8 Protection at the NRC.

9 MS. HILL: I'm Doreen Hill. I'm in the  
10 Directorate of Standards and Guidance for OSHA.

11 MR. AHIR: Surender Ahir from OSHA as well.  
12 I'm replacing Dave Hamil, who just moved to some  
13 different agency.

14 MR. SETLOW: I'm Loren Setlow, Office of  
15 Radiation and Indoor Air in the Environmental  
16 Protection Agency.

17 MR. LITTLETON: I'm Brian Littleton, Office  
18 of Radiation and Indoor Air in the EPA.

19 MR. FERATE: I'm Fred Ferate from the  
20 Pipeline Enhancements Materials Safety Administration  
21 of the U.S. Department of Transportation.

22 MR. RAUTZEN: Bill Rautzen from the  
23 Division of Material Safety and States Agreements,  
24 here at the NRC.

25 CHAIR COMFORT: Thank you all. We

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1 basically have a mix of -- probably about 60 percent  
2 of the members were previously on this group, so it's  
3 nice to see a lot of you back and I welcome all the  
4 new members.

5 Right now, I'd like to introduce Patty  
6 Bubar. She's from our Deputy Division Director in our  
7 Division of --

8 MS. BUBAR: Inter-Governmental Liaison and  
9 Rule Making.

10 CHAIR COMFORT: Yes, that's a mouthful.  
11 Patty, if you'd like to say a couple of words.

12 MS. BUBAR: Yes, thank you very much, and  
13 I know some of you. I don't know all of you, so I  
14 really appreciate the opportunity to listen in on this  
15 and really hear from the different Federal agencies  
16 first-hand. Gary has done a good job of bringing me  
17 up to speed.

18 I'm new to the NRC. I came to the NRC in  
19 April and I came here from the Department of Energy,  
20 where I spent many years, but I had spent years before  
21 that at EPA. So, I've been at three Federal agencies.

22 So, I understand the value of working with  
23 multiple Federal agencies to come to a consensus. So,  
24 it sounds like this working group has been a good  
25 opportunity to be able to hear from the different

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1 agencies and try to come to a consensus on this  
2 position.

3 So, really, I guess the only thing I  
4 wanted to say in my opening remarks was to encourage  
5 everyone to be open and give us the feedback and have  
6 the deliberations that we need. This working group  
7 got started, as Cathy said, probably a while ago and  
8 then Gary picked up the ball to re-enforce the value  
9 that we place on working with other Federal agencies.

10 Gary was somewhat joking that the name of  
11 our organization is a mouthful. It is. We call it  
12 DLR, affectionately and we have pictures of Phyllis  
13 Diller all over the hallways to kind of affectionately  
14 take our name.

15 But it was a conscious decision that 'I'  
16 in DLR is Inter-Governmental, and our organization got  
17 created about a year ago, October 2006, and that was  
18 a conscious decision to recognize that we do want to  
19 continue to work very closely with other Federal  
20 agencies. So, we are the Division of Inter-  
21 Governmental Liaison and Rule Making.

22 There are other divisions represented here  
23 too, but I just wanted to stress that we do value  
24 working with the other Federal agencies and this  
25 working group is one example of that. So, I look

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1 forward to hearing everybody give us your open  
2 opinions, hearing from the members of the public and  
3 as Gary said, I hope we can meet the desired outcome  
4 today. If we cannot, because we need to have more  
5 deliberations, we will certainly do that.

6 So, I wish everybody a good day. Thank  
7 you, Gary.

8 CHAIR COMFORT: Thank you, and I missed  
9 Joan. So, if she can introduce herself.

10 MS. OLMSTEAD: I'm Joan Olmstead. I'm with  
11 NRC, Office of General Counsel.

12 COURT REPORTER: Use the microphone,  
13 please.

14 MS. OLMSTEAD: Sorry, I'm Joan Olmstead.  
15 I'm with NRC, Office of General Counsel.

16 CHAIR COMFORT: Thank you, Joan.

17 MR. HSUEH: My name is Kevin Hsueh. I'm  
18 with DLR. I work for Patty Bubar and I am the Branch  
19 Chief for the Rule Making and I started this position  
20 about 10 months ago.

21 I had participated in all the working  
22 groups in my branch, and so I had participated in many  
23 of the kick-off meetings and I met all the working  
24 group members and this is one of the working groups  
25 that I haven't met all the working group members yet.

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1 So, I am very glad to have this opportunity to meet  
2 with all of you today and I am hoping that you have a  
3 very productive meeting today. Thank you.

4 CHAIR COMFORT: Thank you, Kevin. Okay, if  
5 anybody can't hear at any point, please let me know or  
6 if I'm talking too fast, please let me know. I'll  
7 definitely try to slow down.

8 Basically, today what I'm hoping to get  
9 through, as we're in the middle of greetings and  
10 introductions. What I plan on doing next is to  
11 basically get everybody re-familiarized. I've  
12 basically -- I've sent out copies of a lot of the  
13 background documents to a lot of the working group  
14 members. As I said, a lot of them are put over on the  
15 side, but I plan on going over a little bit of the  
16 background of how this group was developed and what  
17 they've done in the past and how we got to the point  
18 that we're having this meeting today.

19 So, you're going to have to listen to me  
20 for basically, the first half an hour. But hopefully,  
21 it will get everybody up in the same kind of playing  
22 field, that they're aware of what's going on.  
23 Certainly, you can all ask questions any time that you  
24 have anything that you don't understand or want more  
25 clarification on.

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1                   Hopefully, for a lot of the people, this  
2 is old hat, that they remember it. But it's been so  
3 long, I don't know how much of it I remember all the  
4 time of it.

5                   So, I'm going to go ahead and start that  
6 presentation now, which is basically our activities to  
7 date. Actually, let me go over the rest of the  
8 agenda.

9                   After that, we're basically going to get  
10 into hopefully what's the meat of the discussion,  
11 which are really any types of new issues since this --  
12 the last meeting occurred. I know NRC stumbled up a  
13 few items that may be of interest to this group and  
14 we'd like to hear from any of the other agencies, if  
15 there's been any changes.

16                   So, while I'm going this presentation, you  
17 can be thinking about that, but it can be anything,  
18 including maybe resources have changed, something has  
19 changed in your statutes that we may need to know  
20 about that would impact this, but anything that could  
21 impact the original recommendation, which I'll be  
22 getting over in a few minutes to.

23                   In the afternoon, I plan on, if we need  
24 to, continue on with the discussions of issues of  
25 consideration. When that discussion is completed, I

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1 plan on letting the members of the public -- because  
2 they may have some issues that they group may be  
3 interested in also. So, I'll plan on definitely  
4 allowing some time for them to give some words.

5 In the afternoon, we plan on talking a  
6 little bit about the legislative approaches, which is  
7 the way that were planning on going with this approach  
8 originally, but our Commission's also asked us to see  
9 if there's any alternatives. So, we'll have a little  
10 bit of discussion, to see if anybody has any  
11 alternatives or if the agencies are acceptable to any  
12 types of alternatives, other than legislation.

13 Towards the end of the day, again, another  
14 beefy discussion hopefully will be what options should  
15 be considered? Are we just happy with what the  
16 original recommended approach was or should we be  
17 considering other options? The idea is that we can  
18 hopefully come out with some type of outcome or  
19 decision as to how to approach this and come with a  
20 final recommendation.

21 Then based upon that discussion, whether  
22 -- we'll discuss what types of future actions need to  
23 be necessary. It could be, how do we interact with  
24 the agencies in the future to deal with a  
25 recommendation? It could be, do we need to another

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1 meeting, and then try to set up for that.

2 Finally, we'll do some summary and closing  
3 remarks. Per the schedule, I'm hoping to be done  
4 around 3:30 p.m. We're flexible, as long as you guys  
5 are, so we'll see how this meeting goes and hopefully  
6 we'll be able to get a lot of good input from  
7 everybody.

8 Right now, I do want to go over a little  
9 bit of the background of how we got here. It  
10 basically came out of a SECY paper we sent to the  
11 Commission back in 1999. It was SECY-99-259, issued  
12 November 1999, which was basically, looking at the  
13 exemption in 10 CFR Part 40 for materials less than  
14 .05 percent source material and it discussed the  
15 options and other issues concerning the control of  
16 source material.

17 It really looks at the background of  
18 40.13A, which is our unimportant quantities exemption,  
19 where basically, we're looking at it compared to how  
20 it's defined with source material. We were trying to  
21 look at the origin of the .05 percent, based on  
22 concentration of source material.

23 At that time -- or when it was originally  
24 put into place, it was really -- that .05 percent  
25 number was based on what was thought to be a useful

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1 and economic number to provide fissionable source  
2 material. It wasn't looking at health and safety  
3 requirements at the time and it wasn't until actually,  
4 much later in about 1960, that we even added a concern  
5 -- or added any statement in the Atomic Energy Act and  
6 our regulations, directly related to health and safety  
7 of source material.

8 We got back a Staff Requirements  
9 Memorandum, which is an SRM, in March 2000, and  
10 basically, that told us to do a few actions, the main  
11 one, of which interested this group, is to initiate an  
12 interaction with states and other Federal agencies, to  
13 explore the best way to delineate the responsibilities  
14 for low-level source material.

15 We had determined -- or found in our past,  
16 that we've had a lot difficulties dealing with this  
17 type of material, because it causes some conflicts in  
18 our own regulations. The material is ubiquitous in  
19 nature. It's all over the place. So, how do you  
20 regulate and set a level that is going to be  
21 economical for people to deal with, as well as provide  
22 safety for them, as well as provide -- basically, make  
23 sure that we're not regulating the whole world and  
24 that we're not going to be using all our resources on  
25 this to try to regulate it.

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1                   We basically were, as part of the SRM, to  
2 address the risk from NORM, which is Naturally  
3 Occurring Radioactive Material, TENORM, which is  
4 Technically Enhanced Naturally Occurring Radioactive  
5 Material and low-level source material and those  
6 materials containing uranium and thorium in less than  
7 .05 percent by weight.

8                   We wanted to look at, in that original  
9 working group meeting, the -- evaluate the existing  
10 and planned regulation of such materials from all of  
11 the agencies.

12                   NRC was embarking not only in this SRM, it  
13 provided some directional for addition regulations,  
14 but we wanted to find out what the other agencies were  
15 doing in areas near -- that may be closely related to  
16 this area, including in NORM.

17                   We also were, of course, looking at the  
18 willingness of other agencies to assume  
19 responsibilities for certain levels of source  
20 material. So, it's basically, should NRC be  
21 regulating more -- at a lower concentration level and  
22 take that -- more material that we regulate or should  
23 we be regulating it at a -- that we regulate less  
24 source material.

25                   So, the whole purpose of the meeting -- of

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1 the group was kind of, not to go in any one direction,  
2 but determine the best way to regulate the source  
3 material.

4 NRC assembled the working groups,  
5 basically put out the announcement in 2000, to  
6 assemble the working groups and have their first  
7 meeting in 2001 and it represented a large number of  
8 agencies, of course, the Nuclear Regulatory  
9 Commission. We have the Organization of Agreement  
10 States Conference of Radiation Control Program  
11 Directors also, the U.S. Environmental Protection  
12 Agency, Occupational Safety and Health Administration,  
13 the U.S. Department of Energy, Department of  
14 Transportation, the U.S. Army Corp of Engineers and  
15 the Mining, Safety and Health Administration.

16 So, we have quite a variety. We tried to  
17 look at all the agencies that we thought could have  
18 some sort of role in uranium and thorium at some point  
19 in the life-cycle of it, whether it be in the ground,  
20 be mining, whatever concentration is was at.

21 So, we tried to get those groups that we  
22 thought might be impacted, to make sure they were  
23 involved in this -- and any type of discussion we had.

24 As I stated before, you see the  
25 information, when it was formed and when the meeting

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1 were held. As part of this meeting, basically, the  
2 group discussed the background and history of all the  
3 Part 40 issues. As I stated, the actual intent, when  
4 it was originally written, was basically to ensure  
5 domestic security, by making sure that uranium and  
6 thorium was available for its source material  
7 constituent, so it can be used for either reactions,  
8 nuclear powers or weapons.

9 Back when it was created, of course, you  
10 basically had an Atomic Energy Commission, so it dealt  
11 with all those issues at the time.

12 We wanted to look at things like  
13 jurisdictional issues and authorities, who was  
14 responsible for what. We had each of the agencies  
15 basically provide us a brief paragraph of what the  
16 responsibilities towards this material were and when  
17 they were involved and when they couldn't be involved.

18 Many of the agencies, basically, aren't  
19 involved in the uranium and thorium or any type of  
20 material that's under the Atomic Energy Act, outside  
21 of some small scopes because basically, the  
22 regulations prohibit on regulating that. So, that was  
23 something we had to consider.

24 As I stated, the plans existing  
25 regulations of each agency were discussed, to see how

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1 -- what people were planning on doing that could  
2 impact the decision. Basically, we also looked at  
3 some existing reports and regulations that were  
4 developed prior to the meetings.

5 A big one was NUREG-1717, a "Systematic  
6 Radiological Assessment of Exemptions for Source and  
7 Byproduct Materials". We got some very insightful  
8 feedback from the public on that one and industry, on  
9 some of the things we were looking at in that, that  
10 let us better define how that material was being used  
11 in a more realistic sense than even what that document  
12 -- the NUREG had stated.

13 We looked at the suggested state  
14 regulations that were being developed in Part N for  
15 TENORM at the time. So, the group was trying to look  
16 at a fairly existing -- wide range of things to make  
17 their recommendations.

18 Basically, a lot of the things dealing  
19 with 40.13 that were going on at the time that we  
20 found and wanted to determine were that the group had  
21 basically, a desire for a consistent framework on how  
22 to regulate this material.

23 It's very difficult if multiple agencies  
24 are kind of, regulating the same material for either  
25 different aspects or even the same components, and

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1 that's not always the -- dual regulation is basically  
2 the way we'll term it a lot, and that's not usually  
3 the best and most efficient way to regulate. It's  
4 confusing for the industry to have to deal with  
5 different regulators and it's difficulty for the  
6 agencies, a lot of times, because you've got to make  
7 sure that -- or you try to make sure your regulations  
8 don't conflict with each other. But that's something  
9 you have to watch out for.

10 We also looked and found that there was an  
11 inconsistency on how we regulated source material at  
12 NRC. One of the issues there is, we have 40.13A,  
13 which basically defines as an unimportant quantity,  
14 any material below .05 percent by weight that contains  
15 uranium and thorium.

16 On the other hand, when we have  
17 decommissioning, we basically set a requirement that  
18 our licensees have to decommission to a level lower  
19 than that. So, there's a little bit of inconsistency  
20 that we're seeing. It's unimportant at one level, but  
21 we still regulate it to a much more restrict level for  
22 our licensees. And so, basically, we were looking for  
23 a way that we can clean up those inconsistencies.

24 We found that there were some impediments  
25 to the regulation of uranium and thorium by other

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1 agencies. Again, as I stated, these agencies, a lot  
2 of times, have a statement in their laws that say they  
3 can't regulate material that comes under the Atomic  
4 Energy Act.

5 Well, the NRC exempts that material, under  
6 like, the .05 percent, that it's still under NRC's  
7 jurisdiction. It's still Atomic Energy Act material,  
8 but it's been exempted, and so, it makes it more  
9 difficult for those agencies to regulate it.

10 One of the first ways that we were looking  
11 at in this group that we wanted to change, can we just  
12 change that number? We want to go higher, can we go  
13 higher and then let other agencies regulate it? But  
14 that was an impediment that we couldn't do it that way  
15 because we still have jurisdiction and their  
16 requirement -- their laws basically said they couldn't  
17 regulate the material.

18 We wanted to look at things like impacts  
19 on existing treaties. There is a large number of  
20 treaties we have with other nations. Some of them do  
21 deal with uranium and source material. We wanted to  
22 make sure that whatever the group recommends, that we  
23 weren't going to cause any conflicts with that.

24 At the time, back in the 2000, we had a  
25 large number -- I won't say a large, but eight to a

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1 dozen facilities that we were currently regulating,  
2 that would fall under this low quantity source  
3 material designation.

4 Basically, there were sites that were  
5 extracting or treating materials generally for other  
6 elements, but they contained higher concentrations of  
7 uranium and thorium than that .05 percent and once  
8 they started processing, because it was above .05  
9 percent, they came under NRC regulation, whether they  
10 wanted the uranium or thorium that was contained with  
11 it or not.

12 So, on the other hand, what we were  
13 looking at is, if we changed this regulation, how is  
14 that going to impact those industries and the folks  
15 who are regulating them? I mean, if -- NRC was  
16 looking at all of this -- the other agencies, if we  
17 changed the regulation that we would no longer be  
18 regulating -- or changed laws that we would no longer  
19 be regulating those facilities, would the states and  
20 EPA or other agencies be willing to regulate or take  
21 under their jurisdiction, those facilities?

22 We looked at the impact on FUSRAP sites,  
23 which was basically sites that are pre-1978 UMTRCA  
24 sites -- or milling sites that were pre-1978 UMTRCA  
25 law and they have a lot of material that was left over

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1 from those activities at those sites, and so, by  
2 changing this regulation, what -- if we did anything,  
3 how would it impact them, and also as well, what would  
4 be the impact on alternate feed regulations?

5 So, we -- the group really covered a lot  
6 of different areas when they were making their  
7 decisions in previous times.

8 Going over the methodology of how the  
9 group really worked, we basically looked at trying to  
10 determine what each of the existing agency  
11 responsibilities were. We evaluated the health and  
12 safety data and other applicable information from  
13 things like NUREG-1717 and other reports that we could  
14 find to determine what is the impact on public health  
15 and safety and how would that impact it, if it were  
16 regulated by other agencies?

17 We basically came down to really three  
18 overall options that we were looking at. One is no  
19 change. Everything looks good. We think that's the  
20 best way to go. We looked at, should we increase the  
21 NRC regulation? Should we lower that concentration  
22 level?

23 As I said, decommissioning, we have a  
24 lower level that we go to. Should we lower it to a  
25 level consistent with that? Again, there's a lot of

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1 pros and cons, or should we decrease NRC regulation  
2 and should we change that concentration level or do  
3 something else that would reduce the amount of  
4 regulation that NRC or oversight NRC or jurisdiction  
5 NRC has on those facilities or those activities?

6 For each of the options that we looked at,  
7 we looked at a variety of pros and cons. You can find  
8 a lot of that information in SECY-03-0068. It comes  
9 up with all the options and things that we looked at  
10 in the appendix of four and five of that.

11 But we looked at each of these options.  
12 How does it impact health and safety? Is it  
13 consistent with current regulations of NRC and other  
14 agencies? What does it do to them? If you increase  
15 regulation, one of the things is, are you going to be  
16 regulating a lot more people, industries that you  
17 didn't expect to and are you going to be taking away  
18 the responsibility from other agencies that currently  
19 would be doing those under NORM regulations?

20 We looked at the impact to other  
21 commitments, particularly the treaties and how it  
22 would impact other relations that we had with  
23 countries -- other countries and within our own  
24 agencies.

25 We looked at particularly, the impact on

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1 agency resources. If we did this change, would NRC  
2 have the resources to regulate more facilities? Would  
3 the other agencies have the resources to regulate the  
4 materials -- the types of activities that may have  
5 been transferred to them, depending upon the  
6 recommendation?

7 As I said earlier, we evaluated each of  
8 these options on how it would be impacted by -- on --  
9 for licensees and folks who aren't licensees, who  
10 could potentially become licensees. We looked at the  
11 impact on public confidence. That's, of course --  
12 perception is an important thing. We can say it's  
13 safe, but unless the public believes it's so, it's  
14 going to cause a lot of problems and concern that it's  
15 not being regulated properly in their eyes, even if we  
16 feel so.

17 Finally, we looked at the impacts on the  
18 security initiatives. Unfortunately, 9/11 happened  
19 right in the middle of these meetings and it brought  
20 in a big role. If we turned around and changed how  
21 we're regulating that -- this material, what's the  
22 concern?

23 Probably last week, people might have  
24 heard -- I guess there was some sale of uranium in  
25 Eastern Europe or something that they determined was

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1 of concern. I haven't heard the latest on it. Some  
2 people have said it was enriched -- highly enriched.  
3 Others said no, based on what they've heard, it isn't.  
4 But just the scare factor of that can be of a concern  
5 to people, that there's uranium around or thorium,  
6 just because it's got radiation associated with it.

7 Then we looked at the ways to implement  
8 each option, and this is all before we decided on an  
9 option. We looked at what's the best ways to  
10 implement those options, if we go forward with them,  
11 and the group finally selected a preferred approach  
12 and then we selected a method to implement that  
13 approach.

14 As I said earlier, SECY-0368, which I've  
15 sent to most of you and there's copies on the table  
16 over there, was issued in May 2003 after the  
17 deliberations of this group and it was based upon the  
18 recommendations of the group. This was a staff paper,  
19 but it was written basically using the recommendations  
20 of the group and the staff agreed with the  
21 recommendations, so we forwarded them.

22 The paper was called 'The Inter-Agency  
23 Jurisdictional Working Group' evaluating the  
24 regulation of low-level source material and materials  
25 containing less than .05 percent by weight

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1 concentration uranium or thorium and basically, the  
2 overall recommendation of the working group at that  
3 time was to decrease NRC authority by limited NRC  
4 authority to uranium and thorium that are extracted  
5 purposely or concentrated for the use of uranium or  
6 thorium. Actually, it should say are extracted or  
7 concentrated purposely for the use of uranium or  
8 thorium. I apologize for that.

9 Basically, the recommendations that we  
10 sent to the Commission also said that we should  
11 formally solicit comments on the above approach from  
12 the impacted Federal agencies and individual states.

13 The working group has staff level members,  
14 of which they were providing the opinion of what they  
15 believed their agency would do, but we felt that it  
16 would probably be better to go back to those agencies,  
17 because if the staff member were like us, our  
18 management likes to basically have the final say on  
19 any decision and not let our staff commit ourselves.

20 So, we were looking at going back and  
21 obtaining a more formal approach, but we'd have the  
22 working group members in each of the agencies that  
23 could basically inform their management of what went  
24 on in the groups, and that's the large reason why you  
25 guys are here.

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1 We are also recommending that we  
2 coordinate with the State Department particularly,  
3 regarding those international agreements of  
4 cooperation. We just want to make -- guarantee that  
5 there weren't going to be impacts that would have been  
6 of concern about with anything when we were dealing  
7 with that type of material.

8 The impacts of the recommendation is  
9 really overall that NRC would only regulate the  
10 uranium and thorium that's extracted or purposely  
11 concentrated for the use of the uranium and thorium.

12 As I stated earlier, we have licensees  
13 currently that may be extracting some other type of  
14 minerals from an ore source that contains greater than  
15 .05 percent and they come under NRC license. It's a  
16 very expensive proposition when you come under an NRC  
17 specific license. International competitors may not  
18 have the same type of requirements, so there is some  
19 economic burden placed on that, but you have to off-  
20 set that -- of course, you're getting some extra  
21 safety potentially on that, that NRC is watching it  
22 relatively carefully. But there's a lot of costs  
23 associated with having an NRC license.

24 So, we'd get rid of those types of  
25 licensees under this approach. They'd basically be

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1 going over and being treated -- the material would be  
2 treated as naturally occurring radioactive material  
3 and any type of material that wasn't purposely or  
4 extracted -- purposely extracted or concentrated for  
5 the use of the uranium and thorium, would then be  
6 considered naturally occurring radioactive material  
7 and not Atomic Energy Act material any longer.

8 The recommendation would also provide that  
9 we basically be looking at these other agencies who  
10 would regulate the uranium and thorium and we believed  
11 at that time, that most of it could really be done  
12 through existing regulations with minimal changes.

13 A lot of the agencies that are impacted  
14 here already have regulations or jurisdiction over  
15 NORM material and in some cases, they already regulate  
16 either low concentrations of uranium and thorium that  
17 don't go above the ore level or they regulate it in  
18 the idea of, they're already regulating NORM and they  
19 have to look at all other types of radioactive sources  
20 to protect against, similar to how NRC does that when  
21 they do their evaluations.

22 So, to some rate, they were already -- may  
23 be potentially already regulating or have regulations  
24 that they could apply without too much difficulty.

25 The group also had looked at that because

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1 most of the laws, overlying statutes require that you  
2 can't -- or basically say that these agencies can't  
3 regulate Atomic Energy Act material, once it no longer  
4 becomes Atomic Energy Act material, that would  
5 therefore, seem to make it feel that they could fall  
6 under the existing statutes that they already had in  
7 place, because that limitation would be gone.

8           It does help limit the fact of dual  
9 regulation. You know, usually, when you have a  
10 concentrated source of uranium and thorium, it's  
11 mostly going to be NRC who is directly involved with  
12 it. Once you get into these other activities, such as  
13 the mineral extraction activities, where we have  
14 bigger, broader ores that contain the material, you  
15 start getting into the other agencies being involved  
16 and you get some sort of dual regulation that could be  
17 going on, which could be difficult for the industry  
18 and the regulators, as I stated.

19           And finally, as I said, the proposed --  
20 this proposed recommendation does provide a lot more  
21 consistency within NRC regulations because the  
22 proposal that we'd probably be doing is to get rid of  
23 our .05 percent concentration level under this, and we  
24 could then regulate our uranium and thorium more  
25 consistently with the way -- particularly, on the

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1 decommissioning side, that we do with all the other  
2 materials that we regulate right now.

3           So, there was a lot of benefit from the  
4 recommendation that the group came up with in a lot of  
5 areas. We sent the paper up, as I said, in May 2003.  
6 We got back a Staff Requirements Memorandum, which is  
7 basically a document from our Commission, that directs  
8 the staff on what to do and this was issued on October  
9 9<sup>th</sup>, and basically, it said, you know, they  
10 disapproved that we go forth and seek legislation.  
11 That was one of the recommendations that we had, as we  
12 thought the cleanest way to do this was to remove this  
13 type of material from NRC authority or the Atomic  
14 Energy Act and the Commission said, we agree that this  
15 approach is your best -- is a really good idea. It's  
16 the best approach to do this, but we don't think that  
17 legislation is really going to be successful.

18           At that time, they felt Congress wouldn't  
19 want to look at it, that they -- therefore, the  
20 Commission didn't want to spend the resources on  
21 developing the legislation and so, they instead,  
22 directed the staff to instead focus on other high  
23 priority rule makings.

24           Now, unfortunately at that time, we  
25 weren't aware that there was some other legislation

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1 going on, which became the Energy Policy Act of 2005,  
2 that basically did bring some other materials --  
3 naturally occurring material, radium in particular, as  
4 well as other materials, under the definition of  
5 byproduct material.

6 It's interesting that the definition,  
7 particularly on radium that they brought in, is very  
8 similar in a lot of ways to what the group -- this  
9 working group was looking at, at the same time for the  
10 uranium and thorium.

11 But even though that legislation was going  
12 forward, there wasn't enough interaction within the  
13 staff to make a determination that maybe it would have  
14 been a possibility to throw this in at the same time,  
15 and it was just an oversight, unfortunately.

16 Now, the SRM did approve the staff's  
17 action to continue discussing the recommendations that  
18 we had found before with the states and other Federal  
19 agencies, just to gage the level of support. We were  
20 looking, at that time, of potentially going forth with  
21 a survey or some sort of formal letter to the  
22 agencies, to make sure that those groups at the higher  
23 management levels, supported the staff  
24 recommendations.

25 The other thing that the SRM did was to

1 direct the staff to explore alternatives to  
2 legislation for achieving the recommended approach.

3 Again, the Commission didn't think that we  
4 were going to be able to do it through legislation.  
5 They didn't think Congress would be that interested at  
6 the time, but maybe there was an alternative that we  
7 could do, and that's one of the things that we're  
8 going to be looking at this afternoon.

9 Now, where have we gone since then? The  
10 Commission did direct us to do some activities, but  
11 they basically said, "Do higher priority rule makings  
12 first."

13 Well, because of that direction, basically  
14 the staff and management determined to put this on a  
15 minimal resource expenditure. So, we really haven't  
16 gone any further forward at that point -- since that  
17 point on this activity.

18 The staff believes pretty much, that  
19 legislation is going to be the most -- the best and  
20 cleanest way and if that's not going to be possible,  
21 it was not going to be easy to do anything else.

22 And so, basically, taking resources from  
23 the other agencies at that time by sending them  
24 letters on something that may not even occur, we  
25 decided it was the best and most efficient way to deal

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1 right now.

2 Now, this all changed back in 2006, and  
3 this is why we're here, is the Commission sent down a  
4 new Staff Requirements Memorandum, SECY-06-0117, which  
5 is the "Termination of Nuclear Regulatory Commission  
6 License for the Heritage Minerals site in Manchester  
7 Township, New Jersey".

8 Now, why would they do it during that SRM?  
9 It was kind of out of the blue, even to the staff,  
10 that this direction was coming down and what this  
11 paper had gone up -- was terminating one of these  
12 mineral extraction sites and the Commission was  
13 starting to deal with more and more of these types of  
14 issues that dealt with facilities that weren't really  
15 -- the primary material being dealt with wasn't  
16 uranium and thorium.

17 And so, basically, this Commission was  
18 identifying some of these inconsistencies too on how  
19 we were regulating and they came out and said let's go  
20 ahead and have the staff re-activate this group and go  
21 ahead and try, because we're having a lot of these  
22 sites, it's getting difficult to deal with.

23 So, they directed the staff to provide the  
24 Commission with a plan to accelerate the groups of the  
25 -- the activities of the IJWG and again, the staff was

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1 looking, this time they said, "Go ahead and pursue  
2 legislation. Send us the legislative package and all,  
3 but we still want you looking at alternative  
4 approaches. Is there anything else that we can do,"  
5 because legislation, you go for and you're not sure  
6 what you're going to get, even if you are successful  
7 at getting anything -- for Congress to look at  
8 anything.

9 So, it can be an iffy proposition, so we  
10 want to look at other ways that can on and that we can  
11 handle this.

12 So, that's where we are right now. I also  
13 put at the end of the package, a list of acronyms  
14 because NRC, like most Government agencies, uses a lot  
15 of them. These are the ones that were all in this  
16 presentation. You can also write down anything else  
17 you hear, that you didn't -- that I may be using, such  
18 as the DLR and all that, if you want to, on this  
19 sheet. Of course, you have to figure out what DLR  
20 says yourself.

21 Okay, well, anybody have any questions or  
22 need anymore information on the background on this?  
23 If you can go up to the microphone and state your  
24 name.

25 MR. FINDLAY: Chris Findlay, Mine Safety

1 and Health Administration. You mentioned Heritage  
2 Minerals in Manchester, New Jersey. Is that mine or  
3 are they in operation? What kind of facility is that?

4 CHAIR COMFORT: Chris, you know, I mean --

5 MS. BANOVA: I might be able to speak. I  
6 might be able to speak a little bit to that. Heritage  
7 Mineral, it was sort of, the poster child of why Part  
8 40 didn't work.

9 That site, they were a mineral extractor,  
10 so they were extracting minerals from material. They  
11 happen to concentrate the source material above .05  
12 weight percent and that's when they came under  
13 jurisdiction.

14 At that site, there were certain processes  
15 that occurred and another -- the site, that came under  
16 NRC jurisdiction, but then right next door, there was  
17 another process that didn't concentrate the source  
18 material above .05 percent, and so, that didn't come  
19 under our jurisdiction.

20 So, it was sort of a piece-meal site,  
21 where were making them clean down to various small  
22 levels of thorium in some areas of the site and then  
23 right next to it, we didn't even look at that area of  
24 the site.

25 So, it was sort of -- I guess, it sort of

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1           awoke the Commission to seeing that there was a  
2           problem with the way we regulated it.

3                       UNIDENTIFIED SPEAKER: Was it a Superfund  
4           site?

5                       MS. BANOVA: Not that I know of, although  
6           I think --

7                       CHAIR COMFORT: You need to speak at the  
8           microphone, sorry. He asked was it a Superfund site.

9                       MS. BANOVA: I think New Jersey is  
10          involved in the decommissioning of that site for the  
11          other materials that were being used, the other  
12          contaminants and chemicals.

13                      UNIDENTIFIED SPEAKER: It sounds like it  
14          wasn't a --

15                      CHAIR COMFORT: Can you come up here? I  
16          mean, you're part of the working group anyway, and  
17          then you can use the microphone up here.

18                      MR. FINDLAY: Just as a follow up, it  
19          sounded like it's not in operation, it's closed.

20                      MS. BANOVA: Yes.

21                      MR. FINDLAY: Okay, that was what I was  
22          getting at.

23                      CHAIR COMFORT: Yes, we've run into -- a  
24          lot of the sites that we looked at back in the 2003  
25          time period, a lot of them have turned to

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1 decommissioning and all of that, and a few of them,  
2 actually, have terminated licenses already.

3 MS. BANOVA: Yes, I think back in the 2003  
4 time frame, there were nine sites that were undergoing  
5 decommissioning. That would be impacted by the  
6 recommendation, IJWG, and now it's just about six, and  
7 three of those are slated to finish up in 2008, in the  
8 Spring 2008. So, not too many left.

9 MR. FINDLAY: Well, the important thing for  
10 me, was it closed.

11 CHAIR COMFORT: Any other questions?

12 MR. FERATE: I have one, Gary.

13 CHAIR COMFORT: Sure.

14 MR. FERATE: The proposal or recommendation  
15 that came out in the -- at the termination of the  
16 previous sequence of meetings of the working group, to  
17 limit NRC jurisdiction -- I'll probably say it wrong,  
18 so please correct me, to uranium and thorium that is  
19 extracted or concentrated for the purpose of their  
20 specific use --

21 CHAIR COMFORT: Right.

22 MR. FERATE: How would that affect the  
23 paragraph in Part 40, that limits the jurisdiction to  
24 materials containing uranium and thorium, that are  
25 less than or greater than .05 percent?

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1 In other words, it appears to me that at  
2 the very least, in some instances, it would knock the  
3 limit out entirely and there would be materials with  
4 higher percentages, which would not be regulated by  
5 NRC, according to this.

6 CHAIR COMFORT: And that's exactly the  
7 case. Basically, one of the things that would happen  
8 is, you'd probably get rid of that 40.13A designation  
9 of that concentration limit.

10 If they were using the uranium, for some  
11 reason, at .001 percent, we would be regulating it.  
12 On the other hand, if they weren't using it and they  
13 concentrated it up to 90 percent or further, we would  
14 not -- if they weren't purposely using for the use of  
15 the uranium and thorium, and we've recently come up  
16 with a situation where that later of higher  
17 concentrations could occur and is basically, in the  
18 drinking water industry. That's one of the things  
19 that we'll be getting into as -- in this next -- and  
20 that's actually a good transition into the next topic,  
21 which is new issues that have come up.

22 Back when this group was looking at  
23 different scenarios, I know had mentioned on Colorado,  
24 that they were looking at doing some sorts of  
25 concentration in drinking water or to clean up

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1 drinking water.

2 Well, the group didn't realize at that  
3 time or it wasn't brought up, that EPA had passed a  
4 new regulation that put requirements for all  
5 facilities to clean up drinking water above 30  
6 micrograms per liter.

7 So, basically, that's something that's  
8 come up, and part of it was because the regulation  
9 didn't really have to -- it wasn't really being  
10 enforced until the end of this year. So, it was far  
11 off into the distance and the technologies people were  
12 looking at at that time were more so, things like the  
13 reverse osmosis and all.

14 I think the new technologies, such as ion  
15 exchange, weren't really as considered as being a big  
16 way to do it at that time and they have become a much  
17 more economical method to clean up drinking water.

18 Well, when you're using ion exchange,  
19 you're basically preferentially removing the uranium  
20 from the drinking water and you can get pretty high  
21 concentrations in the material. But the purpose of  
22 why you're doing that is to clean drinking water.  
23 It's not to use the uranium or thorium.

24 So, it becomes a situation of you -- under  
25 this recommendation that we had, you would have a very

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1 high level or high concentration, or could have a high  
2 concentration of uranium, or if the operation, for  
3 some reason, needed to remove thorium or something,  
4 high concentrations of thorium, that NRC doesn't have  
5 jurisdiction on it.

6 On the other hand, if it were being used  
7 for a purpose, let's say, they wanted to take the  
8 residuals from the drinking that they had taken the  
9 uranium, and now, hey, I've got a nice high  
10 concentration of it, the material has got a lot of  
11 value to it for processing, the price of uranium has  
12 gone up, I'm going to send it to a mill or I'm going  
13 to process it further.

14 At that point, when they make that  
15 designation that the material is no longer being  
16 removed for cleaning up drinking water, but they're  
17 going to start using the uranium for something or  
18 purposely treat it or concentrate it or extract it  
19 further, it would then become under NRC jurisdiction.  
20 Go ahead.

21 MR. HEARTY: But that's the question,  
22 they're not actually doing the extraction. They're  
23 sending it to a licensed mill to do the extraction?

24 CHAIR COMFORT: Right, and so, it would be,  
25 when it goes to the mill -- because the purpose has

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1           been designated once it gets to the mill.

2                       If, for some reason, the drinking water  
3 facility decides that's what they want to do, is treat  
4 it further than they have to, for the purposes of  
5 drinking water, then they may have to go get a  
6 specific license for that processing.

7                       MR. HEARTY: This is the same issue that we  
8 have, which is we're cleaning up and disposing of  
9 material. We're not using the uranium or thorium.

10                      CHAIR COMFORT: Right.

11                      MR. HEARTY: And so, we're kind of in that,  
12 in between.

13                      CHAIR COMFORT: And you may want to state  
14 where you're coming from on it, so people who weren't  
15 here before --

16                      MR. HEARTY: As far as, with the Corp of  
17 Engineers --

18                      CHAIR COMFORT: Yes.

19                      MR. HEARTY: -- cleaning up the FUSRAP  
20 sites, we're cleaning up uranium and thorium that was  
21 left over from the purposeful extraction of those  
22 materials. But because it's out in the environment,  
23 there is really no use to it, even though on some  
24 sites, it exceeds 0.05 percent.

25                      CHAIR COMFORT: Yes.

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1 MR. HEARTY: And so, we have to treat some  
2 material. We can treat it as an unimportant quantity  
3 and send it to different types of disposal facilities  
4 and at the same site, if we run into a waste stream  
5 that's slightly greater than .05 percent, we have to  
6 send that to different waste facilities.

7 CHAIR COMFORT: Right, and that's something  
8 that -- because your material came out of a purposeful  
9 use of it, we would continue -- or if somebody else  
10 were doing it purposefully, the residue would still be  
11 regulated under NRC and that certain exemption or  
12 termination requirements.

13 MR. HEARTY: Except for the problem of pre-  
14 '78, 11E2, NRC does not have authority for that  
15 material. So, once again, we're back into the --

16 CHAIR COMFORT: And that gets into a more  
17 difficult --

18 MR. HEARTY: Which we didn't resolve in the  
19 SECY paper. We just left that as open issues and --

20 CHAIR COMFORT: Yes, but whether the change  
21 in jurisdiction on a -- I mean, we have the -- well,  
22 we don't have jurisdiction over it now, do we?

23 MR. HEARTY: Only if it's greater than .05  
24 percent.

25 CHAIR COMFORT: Right, and so, basically,

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1 what you're saying is, if it stays -- with this  
2 change, even if it's above .05 percent --

3 MR. HEARTY: If it's not going to be  
4 purposely concentrated or extracted further, then  
5 maybe it would fall out of NRC --

6 MS. MATTSSEN: Could all -- because it had  
7 -- it's a result of having been used before though  
8 right?

9 MR. HEARTY: But it was at a time when NRC  
10 didn't have jurisdiction over that material.

11 MR. WEAVER: Fortunately, the suggested  
12 state regulations don't recognize that 78 cut-off and  
13 35 states with 80+ percent of the licenses don't have  
14 to be constrained, like --

15 MR. HEARTY: Well, we're talking about the  
16 --

17 MR. WEAVER: Because the states regulate it  
18 pre or post, without that distinction, the same as the  
19 unimportant quantities is not very important to the  
20 states.

21 CHAIR COMFORT: Right.

22 MR. WEAVER: They're regulated according to  
23 how much uranium and thorium is there.

24 CHAIR COMFORT: And that's basically the  
25 issue where they would be able to -- if NRC didn't

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1 have the jurisdiction over, would the states be  
2 picking it up, basically, under their authority  
3 because they look at it anyway, don't they? How does  
4 that --

5 MR. WEAVER: Either the states would be  
6 picking up what they already choose to regulate, such  
7 as the water treatment residuals at one facility that  
8 we have, where we felt it needed to be under license  
9 and so on.

10 MR. HEARTY: And the issue gets to be back  
11 to the disposal facilities that are regulated by the  
12 states, because what they are -- right now, their  
13 waste acceptance criteria usually cuts off at that .05  
14 percent because that's when it would fall under NRC  
15 jurisdiction.

16 And so, even if their performance  
17 assessment or anything says it would be safe to  
18 dispose of it there, generally they can't, because  
19 they would fall under NRC jurisdiction.

20 So, if this went into place, then  
21 facilities like zirconium processing or mineral  
22 extractions that had .05 percent and greater, could  
23 potentially send it to these types of facilities, as  
24 opposed to paying for license dispose.

25 MR. REGNIER: Gary, was it studied and

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1 determined then that there's not a quantity or a  
2 concentration limit, where even though the material  
3 was not purposefully concentrated for the uranium or  
4 thorium, never the less, that it does present a  
5 potential safeguards and security problem?

6 CHAIR COMFORT: We did look at the  
7 safeguards and security and we went through our NSIR  
8 program, who covers the security and stuff at the  
9 time, and their determination was for natural uranium  
10 that there was no concentration -- no quantity of  
11 concern, basically, at that level, that we had to --  
12 at any level, that you had to be concerned with.

13 I mean, mostly, the only materials and  
14 source material area that were of concern were a  
15 couple of isotopes of thorium, and was there one U-232  
16 or something also?

17 MR. HSUEH: Uranium 232.

18 CHAIR COMFORT: Yes, uranium 232 also -- or  
19 233, but there was one isotope of uranium also that  
20 was of concern. But again, those would have been  
21 purposely concentrated, only for that use. There's  
22 not reason that you would ever concentrate it  
23 otherwise.

24 So, basically, natural uranium and  
25 thorium, the determination of our group was that there

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1 was no quantity, health and safety-wise, that you  
2 could have. Perception, of course, is another --  
3 pulling a different thing. If I say, I've got a bunch  
4 of dirt and tell somebody it's filled with high  
5 concentrations of uranium, it's going to cause a  
6 concern, no matter -- whether there's a real health  
7 concern or there's anything in it, period.

8 That's what we just saw last week, with  
9 the uranium that was being sold was, it was being  
10 portrayed as though it were a very high enrichment of  
11 U-235 and I've read some reports though that -- the  
12 U.S. Government, at least in the newspaper, hadn't had  
13 an opportunity to really look at it or find -- get  
14 information about it. But based upon the readings  
15 that they were reporting, that the material was  
16 probably just natural, that somebody was trying to  
17 shake off as high enriched.

18 It again, hits the -- anything dealing  
19 with uranium or thorium hits the news, if there's any  
20 type of sufficient concern on it. But is there a  
21 health and safety concerns, I mean, it is to some  
22 extent, but there is materials that we don't regulate  
23 that are radioactive, that actually have higher  
24 radium.

25 Again, NRC took over -- I can't remember

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1 the exact words and Cathy can tell you, if you want --

2 MS. MATTSEN: I can do that right now.

3 CHAIR COMFORT: Well, we'll get to it in a  
4 minute, but basically, there is concentrations of  
5 radium, such as again, water treatment facilities that  
6 NRC doesn't feel that we have jurisdiction over, that  
7 you could get high concentrations when you extract it,  
8 but NRC --

9 MR. HEARTY: Discrete sources.

10 CHAIR COMFORT: Yes, well, it's discrete  
11 sources for a use in medical and commercial use,  
12 whereas again, at a water treatment facility, you're  
13 doing it to clean the water. You're not using the  
14 radium at all.

15 So, NRC doesn't have jurisdiction and the  
16 external impact, particularly from that, is much  
17 higher than you'd be getting from uranium and usually  
18 thorium.

19 MR. SETLOW: We've been treating that as a  
20 waste and I think that this goes along with the  
21 arguments and positions that we voiced back during the  
22 efforts in the Inter-Agency Jurisdictional Working  
23 Group.

24 We explained, back during that period,  
25 that based on the recommendations of the National

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1 Academy of Sciences on TENORM from their 1999 report  
2 and our report back to Congress in 2000, that we were  
3 going to be examining each of the various industries  
4 which generate NORM/TENORM one at a time and we were  
5 examining each of these for the different physical and  
6 chemical characteristics of the TENORM radio-nuclides  
7 that were present and how they were being generated,  
8 because in each instance, based on the way that the  
9 waste is concentrated, if it's in a mineral form or in  
10 a scale or as a sludge or something like that, the  
11 characteristics may be quite different and the  
12 exposures -- pathways may also vary significantly.

13 And so, what we had -- told Congress what  
14 we would be doing is evaluating each of these waste  
15 streams and that way, we would be evaluating the  
16 occupational and public health exposures, to determine  
17 what would be the most appropriate means of providing  
18 protection for public health and the environment.

19 It may be that a education or publication  
20 of brochures and guidance, working with the  
21 industries, may in fact, provide enough safety and  
22 security that there might not be a need to regulate.

23 However, we did say that we had enough  
24 authorities, based on our various media statutes, as  
25 well as under TOSCA, to regulate the radium in these

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1 wastes, and certainly, we have the authorities for  
2 some of the radium to regulate, as Gary has already  
3 talked about, the concentrations of uranium and radium  
4 in the drinking water materials.

5 So, there are -- in fact, since 2003, when  
6 the Inter-Agency Working Group last met, we have two  
7 very good examples of how we've worked with other  
8 agencies to evaluate the potential impacts associated  
9 with these different kinds of waste.

10 One was with the Inter-Agency Steering  
11 Committee on radiation standards, when they did the  
12 sewage/sludge and ash project, which was completed in  
13 2005, and currently, what we've been doing in the  
14 drinking water treatment.

15 I'll start, perhaps with the  
16 sewage/sludge, since that one was an Inter-Agency  
17 effort and but the pathway was very clear, in terms of  
18 what we finally decided, based on our analysis and  
19 results.

20 In that study, which was a 10 year effort,  
21 beginning about 1995 or so, with the beginning of  
22 ISCORS, we had an Inter-Agency group, chaired by NRC  
23 and EPA, DOE and the Department of Defense and state  
24 participated as an observer, and we wound up  
25 collecting sewage/sludge and ash samples from over 300

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1 sewage treatment plants around the country and these  
2 plants were selected primarily for the potential of  
3 having elevated levels of radionuclides, both  
4 naturally occurring, as well as artificial.

5 During the course of that study, in the  
6 analysis that we conducted, we were able to get a good  
7 distribution of what we were finding in these facilities  
8 and then we conducted dose risk assessments and then  
9 provided -- we published the results of the survey,  
10 the dose risk assessments, and then a guide to the  
11 operators of the public -- treatment works.

12 What we found, by and large, was that the  
13 concentrations of radio-nuclides did not pose a hazard  
14 to the members of the public or to the workers. There  
15 were some cases where that was a potential. But what  
16 we found was that the numbers of plants that  
17 potentially could have these kinds of concentrations  
18 were so low that what we did, in fact, was provided a  
19 -- in the guide to the POTW operators, a set of look  
20 up tables that said if they had a potential -- and we  
21 provided some guides too, as to what was the  
22 likelihood of a particular facility concentrating  
23 radio-nuclides, such that it might have a potential  
24 hazard for members of the public or for occupational  
25 workers, that they should go ahead and conduct a

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1 radiological survey of their sewage waste and ash.

2 Then based on the analysis, we provided  
3 these look up tables on a radio-nuclide by radio-  
4 nuclide basis, and I think there were some 50 radio-  
5 nuclides that we had looked at in this survey, and  
6 they would begin to add up what the potential dosage  
7 might be for various scenarios, occupational or land  
8 use, where there was -- an occupational worker would  
9 spread the material into the soil, as a soil  
10 amendment, or a case where a member of the public were  
11 to build a house on land, which was released for use  
12 where the soil had, in fact, been used as a soil  
13 amendment for a long period of time.

14 Based on the results of looking at these  
15 look up tables and the concentrations of radio-  
16 nuclides in the facility, if they came up with about  
17 a dose of a 10 millirem, even though there's no  
18 requirement anywhere for -- as 10 millirem as an  
19 action level, the recommendation was to go to the  
20 state agencies and we provided a list of state  
21 contacts and also Federal ones, so that the POTW could  
22 make some determination of how they might reduce the  
23 levels of radioactivity in their sludge and also,  
24 whether or not it might, in fact, pose some sort of a  
25 hazard.

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1 EPA has a series of standards. It's 40  
2 CFR Part 503, which have requirements on limits for  
3 concentrations of heavy metals, pesticides and other  
4 contaminants in bio-solids and this particular effort  
5 was being -- that we were doing in this course, would  
6 have provided that if the concentrations were deemed  
7 to be hazardous, that we might, in fact, have  
8 developed a specific regulation for management and  
9 limitations of radio-nuclides in the sewage/sludge  
10 that was being used for soils.

11 However, we felt that the numbers we were  
12 seeing for the concentrations were just not high  
13 enough that it would trigger such a requirement at  
14 this point for us.

15 And so, we felt at that time, that the  
16 guidance, in fact, would be the best means for  
17 providing assistance to the states and to the POTW  
18 operators, such that they could manage the wastes and  
19 the radio-nuclide concentrations within their plans.

20 CHAIR COMFORT: Can I ask you a question on  
21 that? Were the -- the analysis were based -- I mean,  
22 basically, under the existing regulatory scheme. NRC  
23 prohibits how much material you can send to a POTW or  
24 down -- as an effluent, down the system.

25 Under this situation, where we would be

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1 making this change, one of the concerns could  
2 potentially be that a drinking water facility that  
3 concentrates up the uranium is no longer or has that  
4 limitation, because they would no longer be under NRC  
5 requirements, could they be removing -- basically,  
6 washing all the uranium down as an effluent and how  
7 would EPA be able to --

8 MR. SETLOW: Well, you have to understand,  
9 let's just say that it was a drinking water treatment  
10 plant that had concentrated the uranium in the  
11 residuals and then put it down the sewer, such that it  
12 was going into the POTW.

13 Well, actually, what was happening was,  
14 when we looked at this sampling effort from, I guess  
15 it was around 1999, I might be off in a year or so,  
16 but during the years that we were doing our sampling,  
17 there were many plants that were not, in fact,  
18 recognizing that they had been concentrating the  
19 uranium. There was not a requirement that they  
20 analyze their residuals for the presence of uranium,  
21 but we knew that they had, many of them, radium  
22 already because we picked many of these sites for the  
23 fact that they were drinking water treatment plants,  
24 which we knew were in high NORM or TENORM areas and in  
25 fact, probably would have putting their residuals down

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1 into the sewer.

2 So, this was already an ongoing process.  
3 So, if they had the radium and already uranium, that  
4 was already in the POTW sewage/sludge and ash, we  
5 honestly could not find a correlation, and we did  
6 statistical tests on it, we could not find a  
7 correlation between the sewage/sludge and ash that we  
8 were examining and facilities, where there were  
9 elevated concentrations of radium or uranium and  
10 drinking water treatment plants that, in fact, were  
11 putting their waste down into sanitary sewer.

12 So, that also provided us a -- the ability  
13 to make a recommendation that said that the drinking  
14 water plants should continue to examine the use of the  
15 sewers as a means of removing or getting rid of their  
16 wastes.

17 MS. BUBAR: Can I ask a clarification on  
18 that? So, that is your current regulatory --

19 MR. SETLOW: That's correct and we did not  
20 find it a potential hazard for up-takes and -- in  
21 plants or anything like that for agriculture.

22 MR. HEARTY: But under this though, if the  
23 facilities that were working with the concentrated  
24 uranium, things like that, now OSHA would be able to  
25 look at the worker's doses in those facilities.

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1 MR. SETLOW: Well, there's one limitation,  
2 and I'll let OSHA jump back in. But for municipal  
3 facilities, there is a specific exemption that OSHA's  
4 radiation rules do not apply to municipal facilities.

5 However, if a state has adopted the OSHA  
6 regulations for protection of workers and specifically  
7 included in those regulations, that they apply to  
8 municipal treatment plants, then in fact, the OSHA  
9 requirements would apply.

10 If they did not, then they wouldn't be  
11 exempt. So, there is a potential regulatory gap, but  
12 what we were seeing was that there just were not  
13 enough facilities where this would be such a hazard  
14 that we would -- it would be necessary at this point,  
15 to provide that regulation.

16 MR. HEARTY: But it does give the state the  
17 option --

18 MR. SETLOW: That's correct.

19 MR. HEARTY: -- to regulate the worker  
20 exposure to the uranium if it's not ADA-regulated.

21 MR. SETLOW: That's correct. Okay, did you  
22 have another comment, Gary?

23 CHAIR COMFORT: No.

24 MR. SETLOW: Okay.

25 CHAIR COMFORT: If you want to continue.

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1 MR. SETLOW: Then that leads us back to  
2 where we started with, which was the drinking water  
3 treatment plants and as Gary mentioned, EPA had gone  
4 ahead and evaluated a variety of issues related to  
5 developing the new maximum contaminant levels for  
6 uranium, I know you had one for radium, in 2000, I  
7 want to guess it was -- 2000, we developed the --  
8 published its final regulations for radio-nuclides,  
9 which included the 30 micrograms per liter contaminant  
10 level for uranium.

11 Of course, we had the five pico-curies per  
12 liter limitation for radium as well, and there's a  
13 whole host of other requirements for photon emitters  
14 and beta and alpha emitters as well.

15 I guess that when they were developing  
16 this rule, there was an estimate of maybe 1,000 -- 500  
17 to 1,000 plants that might, in fact, wind up having to  
18 develop treatment methodologies to limit the uranium  
19 concentrations in their drinking water and we had not,  
20 at that point, in the working group, taken a harder  
21 look at this particular issue.

22 But in our office of Radiation and Indoor  
23 Air began working more closely with the Office of  
24 Ground Water and Drinking Water to examine the  
25 potential impacts and developed a guidance for the

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1 state, a regulator's guide for management of  
2 radioactive residuals and drinking water treatment  
3 plants.

4 During that period, NRC felt that it was  
5 important that they make it known that there was, at  
6 that time -- and certainly still is, a potential  
7 licensing requirement for drinking water plants if, in  
8 fact, they had concentrated enough uranium in the  
9 drinking water waste that would trigger the  
10 concentration minimums, and I guess Gary, maybe it  
11 would be appropriate for you or Cathy to talk a little  
12 bit about the actions that you took and then, I can  
13 kind of follow up with what we've been doing since  
14 that time.

15 CHAIR COMFORT: Yes, basically, as I said,  
16 when this working group was originally working, we --  
17 although the rule had been issued by EPA, it really  
18 wasn't brought up and the members of the groups  
19 weren't aware of it, and it wasn't until about 2004  
20 time period that NRC started getting a couple of calls  
21 about, EPA has this regulation and is NRC going to  
22 have to license this material?

23 We examined it and you know, most -- or  
24 many of the operations for the clean up of drinking  
25 water, we felt, would stay below the .05 percent, but

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1 it ends up the most efficient and effective ways,  
2 which is probably ion exchange in a lot of ways, would  
3 concentrate it well above .05 percent. You could six  
4 or seven percent type levels we were finding.

5 So, we would definitely have a role in  
6 licensing it and now we're talking, as you said,  
7 somewhere near potentially 500 to 1,000 further  
8 estimates, could say, depending upon how you do the  
9 regulating of it and all, could be multiple thousands,  
10 and a lot of them may very well -- you know.

11 NRC has a variety of licensing schemes. We  
12 have the exemptions. We have what's called general  
13 licenses and we have specific licensing. Most of  
14 these -- or many of the facilities, particularly the  
15 ones doing ion exchange, would go above the exemption  
16 level.

17 So, they'd have to get out of their  
18 general license, which the only one that would apply  
19 was the small quantity general license in 40.22 and  
20 that says you can have up to 15 pounds at one time or  
21 150 pounds per year, of uranium.

22 Well, one of the things that we looked at  
23 originally and I that I specifically looked at is, I  
24 live in a small town where we have a sole source  
25 aquifer and a water treatment plant and so, I have the

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1 numbers for my population of how much water we go  
2 through, and I said, "Okay, well, this is at the 30  
3 microgram per liter level, how quickly are we going to  
4 generate up this 15 pounds?"

5 It ended up, it was going to be for that  
6 -- for the town of my size at that relatively low  
7 level, it could be as quickly as about three to four  
8 months, and that says every three to four months, we  
9 have to get rid of that 15 pounds, but we'd be well  
10 within the 150 pounds per year, so we could operate  
11 under the general license.

12 Well, some of these facilities are looking  
13 at concentrations, it could be something like, you  
14 know, 800 micrograms per liter and other facilities  
15 may have large -- you know, large facilities with high  
16 through-put, so many of these could exceed that 15  
17 pound limit within weeks and there's way they'd be  
18 able to make it. They have to do the general -- or  
19 they'd have to go to a specific license.

20 A specific license is very expensive.  
21 You've got to do an application. There's all kind of  
22 environmental reports. General license is basically,  
23 go ahead and do it and stay below the 15 pounds and  
24 you're exempt from Parts 19, 20 and 21, which are  
25 training and radiation protection requirements, while

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1 in specific licensing, you have decommissioning,  
2 financial assurance, you have inspections and we're a  
3 full fee recovery agency, so we expect the person who  
4 is the licensee to pay for our fees.

5 So, it's very expensive for them to do and  
6 this will -- this law applies to facilities that have  
7 as low as about 25 people taking off the water stream.  
8 So, if you have a facility that's only 25 people, but  
9 it requires specific licensing, you could be costing  
10 each individual potentially tens of thousands of  
11 dollars, depending upon how effective and efficient  
12 the licensing is.

13 So, what we did is, we went to the  
14 Commission with this concern that both, we were going  
15 to have a lot of licensees and that would be a major  
16 potential impact to our resources in trying to license  
17 these folks, as well as to potentially the agreement  
18 states having to license them, that also, it would be  
19 impact on the licensees themselves of being able to  
20 provide clean water at a reasonable cost to them.

21 So, the Commission -- we gave a bunch of  
22 options to the Commission on how to deal with it and  
23 the end result was basically that we were going to  
24 start with a period of enforcement discretion, that  
25 we're not going to require these folks to get licenses

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1 at this point, as long as they meet certain  
2 requirements that were issued in the regulatory  
3 information summary, back in 2006, I think it was.

4 So, as long as they notify us and they do  
5 some things that are similar to the general license,  
6 but some -- there were some requirements in there that  
7 are more specific to that -- you know, that pull out  
8 of the specific licensing requirements they'd also  
9 have to meet, they didn't have to meet them. They  
10 could always go get a specific license. They didn't  
11 have to do this enforcement discretion.

12 So, basically, the other thing that we  
13 were -- so, they are under a period of enforcement  
14 discretion right now, but the other thing we were  
15 looking at that time of doing and we started doing was  
16 to develop a new general license. We didn't think the  
17 license in 40.22 would -- because you're really  
18 talking some high concentration -- you know, some  
19 higher concentrations of uranium, but in fairly large  
20 bulks that we wanted to prevent -- or make sure that  
21 there wasn't a concern that they were being  
22 distributed or put in places where they shouldn't be,  
23 so we're putting more controls that are more similar  
24 to a specific licensee on them than what's under  
25 40.22, including some things of reporting, so we knew

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1 who they were and all.

2 We started that process, but then the  
3 Commission, six months later basically directed us to  
4 do this IJWG. Well, the staff went forth and said,  
5 "If we're doing this IJWG activity and the  
6 recommendation remains the same, NRC would not longer  
7 be licensing these facilities." So, should we be  
8 putting the resources in developing this new general  
9 license at this time, that we would then have to go  
10 back and put more resources in removing the general  
11 license from our regulations? Should we just go ahead  
12 and wait until the outcome of this group?

13 The decision was, let's wait until the  
14 outcome. If we're successful, then we will not be  
15 doing a general license. If the group, for some  
16 reason, decides on a different recommendation or the  
17 Commission determines something or Congress determines  
18 something different, we would go back to that general  
19 license approach.

20 But that's really where we're at right  
21 now, is that we've got the potential. Again, as I  
22 said, the actual rule goes into -- EPA rule goes into  
23 -- that the people have to be in compliance with all  
24 their quarterly monitoring by the end of this year,  
25 which is less than a month away.

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1           On the other hand, basically, what they  
2 have to do is comply -- come in compliance with the  
3 states or come in with a plan for compliance and I've  
4 heard different things. Some states aren't really  
5 actively enforcing the compliance plans. Again, some  
6 of the people, probably completing their -- you know,  
7 if you knew you were going to have problems, you were  
8 probably waiting until this year to do your quarterly  
9 monitoring to make sure that you were holding off the  
10 extra costs as soon as you can.

11           But to date, so far we haven't gotten  
12 anybody come under our enforcement discretion policy  
13 yet. Our expectation is that a lot of them are trying  
14 to do it under general licenses or we did have one  
15 person come in -- you know, a company come in and got  
16 a specific license as a service provider, that they  
17 can provide their services under that licensing -- any  
18 NRC non-agreement state, and they've been going to the  
19 individual agreement states for a similar type  
20 license, so they can offer their services and do it  
21 for them. That's where we're at.

22           MR. SETLOW: And in that latter case, with  
23 -- I guess, it's why the Water Remediation  
24 Technologies is there. Their potential interest is  
25 the possibility that they could potentially sell their

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1 uranium waste contained in the filters as an alternate  
2 feed material for uranium mills. So, for extraction  
3 of that uranium. So, that was an opportunity  
4 situation.

5 But what we have done is -- in a similar  
6 fashion to what we had done with the POTW's effort is  
7 that in EPA, we went out to eight drinking water  
8 treatment plants, which we knew had been treating for  
9 the removal of radium and/or uranium, and we conducted  
10 a radiological survey of the drinking water plants,  
11 went through the complete flow process at the plant to  
12 determine how the water was being treated, where it  
13 was being treated and then we conducted a survey with  
14 a Ludium scintillo-meter meter and also placed radon  
15 canisters to measure radon concentrations in closed  
16 portions of the facilities, and wherever possible,  
17 collected samples of the water from the source, from  
18 backwash and finished water from the plants, and  
19 collected samples of waste, where we could and  
20 residuals and so on.

21 The waste and other water and other  
22 samples were sent to our National Air and Radiation  
23 Environmental Laboratory in Montgomery for analysis  
24 and we collected all of the other data on the  
25 radiation levels and so on, and we've just finally

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1 received the final report from our contractor, back in  
2 the end of September.

3 What we did find in general was that we  
4 found increased levels of radiation above background  
5 at, I believe it was six of the eight treatment  
6 plants. That is not to say that the entire plant was  
7 contaminated, it was just their -- in one or more  
8 units and the plants, we were finding increased levels  
9 of radiation and five of the six plants, as I recall,  
10 which had filtration equipment in enclosed spaces, we  
11 did find increased levels of radon gas.

12 We've had an dose assessment that was  
13 conducted by our contractor and I think for the most  
14 part, we found that the level -- that the occupational  
15 doses are within public limits, and that there are  
16 potentially, a number of things that the drinking  
17 water plants may be able to do, in order to reduce the  
18 levels of radiation in the plants, certainly for  
19 control of the radon, in the enclosed spaces. That  
20 would be to increase ventilation levels.

21 We found that the radon concentrations  
22 were mostly due to the presence of radium in the  
23 drinking water source material -- the source water and  
24 so, increasing ventilation in those rooms would  
25 greatly alleviate the radon concentrations that we

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1 were seeing.

2 In one plant, which was interesting, was  
3 that they had an air conditioner and the air  
4 conditioner was running to provide cooler air  
5 infiltration -- or air exchange in the room where the  
6 filtration equipment was, and they had not changed out  
7 the filter and cleaned and so, what was happening was  
8 that the radon gas was accumulating in the room, going  
9 right into the filter and that the radon daughters  
10 were being deposited on the filter, so that they were  
11 receiving up to somewhere around 100 micro-R per hour,  
12 as a potential dose from the filtration material. And  
13 so, once they removed the filtration material and  
14 replaced it, it went back to being right.

15 So, there are lots of things that can be  
16 done. We are taking a look at the waste  
17 concentrations. We're going to be giving a paper, I  
18 guess, in February at the Waste Management 2008  
19 Symposium on the results of the waste study and also,  
20 a paper at the American Waterworks Association in June  
21 on the dose assessment and the results of the  
22 radiation surveys.

23 In the meantime, we're also working on  
24 education and brochures that we're going to be sending  
25 out to the drinking water treatment plants on

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1 methodologies and means of better -- controlling  
2 radiation exposures to workers, and we're also  
3 planning on doing a pilot study. It's a grant for  
4 drinking water plant to come in and to undertake some  
5 of the methods that we're proposing to do, to reduce  
6 radiation levels in the plant, that we can use then as  
7 a demonstration project to illuminate or illustrate  
8 the kinds of things that we think can be done, in  
9 order to reduce radiation levels in these plants.

10 MS. BUBAR: Loren, may I ask, of the eight  
11 POTW's that you studied, were they of varying through-  
12 puts?

13 MR. SETLOW: They were. The plants that  
14 were selected ranged from the very smallest, that is  
15 the 25 to 50 customers, up to the very largest, where  
16 we were looking at well over 100,000 customers in the  
17 plant.

18 We selected them for a variety of  
19 geographic areas in the U.S. also, and we tried as  
20 best we could to select plants with different types of  
21 technologies that were being used to remove the radio-  
22 nuclides from the plants.

23 So, we tested everything from the ion  
24 exchange to green sand activated charcoal, to hydrous  
25 magnesium and so on. So, there was a wide variety of

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1 different methodologies that were used, just to kind  
2 of give some variety to our responses.

3 So, anyway, we'll be -- we'll really  
4 seeing all the information on that, in the next year  
5 and we've already provided the information on the  
6 first set of results to NRC.

7 CHAIR COMFORT: Now, to follow up a little  
8 bit with what Fred originally said about the higher  
9 concentrations and all, as well as the not so, during  
10 the Summer, I went around with this drinking water and  
11 provided -- you know, went to a bunch of different  
12 meetings and stuff, to EPA regions and did a  
13 conference and one of the questions that came up in a  
14 couple of them is, if NRC gives up jurisdiction to  
15 this material, are the other agencies like EPA and  
16 OSHA and the states going to have -- be able -- are  
17 they going to regulate the material?

18 They would have the jurisdiction, but  
19 there was a concern -- you know, some states don't  
20 have radiation requirements at all, because they  
21 probably don't deal much nor have much naturally  
22 occurring radioactive material in their states on it,  
23 but is there a feeling that the existing regulations  
24 -- or they'd be enough new regulation -- or that there  
25 would be a need to put new regulations in place, that

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1 would cost the agencies resources that would make this  
2 a difficult transition, I guess, is what I -- that's  
3 a flavor I got from some of the people who were  
4 speaking is, would they be regulated sufficiently  
5 enough by the other agencies and would they have the  
6 resources to do that, and any states? OSHA and EPA?

7 MR. SETLOW: Well, one thing that I should  
8 have mentioned was that some years ago, we had  
9 published an Advanced Notice of Proposed Rule Making  
10 to examine a methodology of taking -- or identifying  
11 that RCRA C facilities and to make -- to go through a  
12 process where these would be licensed with the NRC, in  
13 order to accept low level -- or low activity waste,  
14 which could include drinking water treatment  
15 residuals.

16 We didn't realize that this would be a  
17 potential primary customer for these kinds of wastes.  
18 But in fact, we've been -- based on the results of the  
19 study we just completed, we have had some initial work  
20 done to examine some of the exposures and risks  
21 associated with that.

22 So, this in fact, would be an opportunity  
23 we might be willing to examine for completion in the  
24 near future and the drinking water waste would be a  
25 potential kind of, waste that could go into that sort

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1 of facility providing and additional resource, which  
2 was a question of where can these wastes be disposed.

3 CHAIR COMFORT: In that case, would it have  
4 to be a non-AEA material there to do that or would  
5 there they be evaluated even if it stayed Atomic  
6 Energy Material, that it would be able to go to those  
7 type of facilities?

8 MR. SETLOW: Well, it would have to be a  
9 facility --

10 MR. WEAVER: If one was licensed in  
11 Colorado, either would work.

12 CHAIR COMFORT: Okay.

13 MR. SETLOW: Yes. I mean, basically,  
14 because we had proposed having an NRC license, that  
15 would allow for it to be receiving these materials.

16 MR. HEARTY: Other RCRA facilities  
17 currently accept non-AEA regulated material.

18 CHAIR COMFORT: Yes, I'm aware a lot of  
19 them accept non-AEA, but we've had cases where people  
20 wanted to send source material to those sites and  
21 we've -- they've only accepted them when they go below  
22 our exemption level, that they don't need any type of  
23 license, which is really --

24 MR. WEAVER: The issue really isn't the  
25 handling of the material, less than the disposal

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1 aspects of it. It really is in the process of just,  
2 is there a little bit elevated material that needs to  
3 be handled carefully by the workers, and that's the  
4 issue we really address in a licensing context.

5 CHAIR COMFORT: Now, the --

6 MR. WEAVER: Less of disposal.

7 CHAIR COMFORT: Right.

8 MR. SETLOW: You know, we --

9 MR. WEAVER: But you are familiar with that  
10 -- Dwayne Harbors, Colorado situation.

11 MR. SETLOW: Right, and for our perspective  
12 we feel that it always behooves these facilities, if  
13 in fact, they are treating for these wastes, that they  
14 would go ahead and get a certified health physicist or  
15 other state accredited person to come in and review  
16 the data to the plant and provide training or in fact,  
17 if there's one individual that is handling this  
18 material, to go ahead and have specific training on  
19 how to handle these materials, to provide some  
20 additional occupational safety.

21 But at these plants, you know, even if you  
22 have one or two people, then that's all, they work  
23 part-time. The exposure or incidental or occasional  
24 -- it's not like they're working in these rooms full-  
25 time and that that's their only job.

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1 MR. WEAVER: The convergent validity is  
2 that was, in fact, much of the up-shot of the  
3 Department of Energy work several years ago, where  
4 they examined this same kind of question and  
5 developed, actually, the modeling for gauging dose  
6 during handling and how many reports? One for each of  
7 many facilities as we reviewed?

8 MR. REGNIER: Several, yes.

9 MR. WEAVER: So, there actually was that  
10 work as well, available to us. Has anything -- how  
11 much has been further done with that work, Ed, from  
12 half a decade ago?

13 MR. REGNIER: Well, we haven't follow on  
14 with any further individual site studies on that. All  
15 we've -- I would mention that we certainly do -- we  
16 still have our process, which is our authorized limits  
17 process, so that our -- the DOE material that we  
18 review and make health and safety assessments and dose  
19 assessments, and if it meets appropriate criteria,  
20 then it can go to a RCRA facility, an unlicensed RCRA  
21 facility.

22 Now, that will be one of our concerns is,  
23 we find that process works very well, we think it's  
24 extremely protective and it's been working very well  
25 and we would not to have any changes which would upset

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1 that.

2 CHAIR COMFORT: Now, other than the  
3 original recommendation, it doesn't sound like there  
4 would be an impact, but are you --

5 MR. REGNIER: Well, my concern -- I did  
6 note when you were describing the recommendation,  
7 although it certainly -- it would depend on the  
8 particular recommended legislative language, when you  
9 said removing source material from the AEA --

10 CHAIR COMFORT: Right, well, it's removing  
11 uranium and thorium.

12 MR. REGNIER: Or removing uranium and  
13 thorium, DOE has always had authority for any amount  
14 of radium and thorium, under the AEA, and we certainly  
15 want to retain that.

16 So, we wouldn't want it removed entirely  
17 from the AEA. It would be a matter of NRC authority  
18 under the AEA, instead of complete removal under the  
19 AEA.

20 CHAIR COMFORT: Yes, again, I mean, you're  
21 talking -- I mean, the authority would be that uranium  
22 and thorium would still be under the AEA, but it would  
23 only be that uranium and thorium that was purposely  
24 concentrated for the use of the uranium and thorium.

25 So, basically, for DOE's purposes, is

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1 there any reason that they'd want to be regulating  
2 uranium and thorium that they don't need for the use  
3 of the uranium and thorium?

4 MR. REGNIER: Yes. Yes, when we use our  
5 authority to generate authorized limits for  
6 contaminated soils and so forth, from decommissioning  
7 or clean up that goes to these RCRA disposal sites,  
8 we'd certainly want to retain that authority.

9 CHAIR COMFORT: Okay, but that material is  
10 usually already been generate from purposely used  
11 uranium and thorium, hasn't it? I mean, you're not  
12 dealing a lot of times with mineral extraction, that  
13 you pulled something out that has a higher  
14 concentration?

15 MR. REGNIER: No, but the wording has to be  
16 quite precise, because certainly, the material that's  
17 there has no use --

18 CHAIR COMFORT: Right.

19 MR. REGNIER: -- what-so-ever and it's not  
20 where it's being cleaned up --

21 CHAIR COMFORT: Yes.

22 MR. REGNIER: -- having anything to do  
23 with use, purposeful use. So, as I said, that the  
24 language would have to be carefully crafted.

25 MR. WEAVER: In a way, you're along several

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1 different dimensions. I mean, the cut point of .05  
2 percent is really a rule, not an AEA. The question of  
3 unimportance was always a semantic question.

4 CHAIR COMFORT: Right.

5 MR. WEAVER: And then you have basically,  
6 the control commensurate with risk dimension. So,  
7 sometimes, these things really are --

8 CHAIR COMFORT: Yes.

9 MR. WEAVER: -- well, less than five  
10 percent is a rule making, issued for NRC, I believe.

11 MR. REGNIER: Well, you're right, that's a  
12 good point, because the AEA let's NRC set the percent  
13 level.

14 CHAIR COMFORT: Yes, it basically says any  
15 concentration determined --

16 MR. REGNIER: Determined by the NRC --

17 CHAIR COMFORT: Basically says that --

18 MR. HEARTY: I thought ores greater than  
19 .05 percent was in there.

20 CHAIR COMFORT: No, not in the AEA. The  
21 AEA basically says that -- you know, this is the  
22 Atomic Energy Act. It says that the Commission can  
23 set a concentration for ores, if they feel they need  
24 to be and they -- actually, it does say to -- can  
25 change it from time to time too, or be considered at

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1 time to time.

2 MR. WEAVER: And the question of purpose is  
3 an additional dimension and I was going to ask you  
4 about the McGaffigan distinction and the Energy Policy  
5 Act, the discrete, diffused source -- the definition  
6 of discrete and diffused for what we call TENORM. I  
7 was going to ask you about how that is a new issue or  
8 development, related to this topic.

9 CHAIR COMFORT: We can go ahead and --  
10 Cathy was going to say a few words on the Energy  
11 Policy Act. So, this might be a good time.

12 MR. WEAVER: That would help us, I think.

13 MS. MATTSSEN: Your question though, the  
14 intent of an earlier recommendation that we were  
15 reconsidering was, once something was concentrated ore  
16 extracted for use, it stayed AEA material from then  
17 on.

18 MR. WEAVER: That was Fred's question.

19 CHAIR COMFORT: Yes.

20 MR. WEAVER: That was your -- basically,  
21 your question, I believe.

22 MS. MATTSSEN: So, even if you encounter it  
23 at a site, where it's no longer being used, if it came  
24 from some purposeful concentration in the past, it  
25 still would be AEA material. That was the intent of

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1 where we're going.

2 MR. FERATE: Well, what about mines that --  
3 like this Heritage Minerals, where you're extracting  
4 heavy metals or you're extracting rare earth compounds  
5 and in the physical process of the extraction, you're  
6 actually concentrating uranium and thorium?

7 Up until now, are those automatically  
8 regulated by the NRC, if they happen to be above .05  
9 percent?

10 CHAIR COMFORT: If they go above .05  
11 percent, they're suppose to get a license from NRC on  
12 that.

13 MR. FERATE: Okay.

14 CHAIR COMFORT: And that license stays in  
15 place until we determine that the site has been  
16 terminated, at which point then, you basically say it  
17 goes back to its place of nature, you could say, and  
18 even that, in some cases, we've gone back after we've  
19 terminated a license site and said, "Hey, we need to  
20 re-look at this and you need to do some more work."

21 MR. FERATE: What about the tailings?  
22 Do you take care of them in some way, before you  
23 prepare them --

24 CHAIR COMFORT: Are you talking mill  
25 tailings or the tailings from the type of site you

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1 were just talking about?

2 MR. FERATE: The type where you're actually  
3 extracting something else.

4 CHAIR COMFORT: If you're extracting  
5 something else, that's the waste product that has all  
6 of the uranium and thorium in it. We actively  
7 regulate that. We have, you know, decommissioning  
8 requirements that you have to reach before you can  
9 decommission a site.

10 There's alternatives to going to a certain  
11 level that, there could be some onsite decommissioning  
12 that we have additional protections you have to put on  
13 the site and all for it, but most of the time, we try  
14 -- hope that they're sent off to some sort of disposal  
15 facility, of which then you get down to a certain  
16 level, which is usually below that -- well below that  
17 .05 percent level, before we terminate the site.

18 That's where you get that inconsistency of  
19 a situation where the site right next to you could be  
20 active -- working right up to that .05 percent and  
21 they don't need a license and therefore, they don't  
22 need to have any type of decommissioning requirements  
23 or levels put in, whereas the guy who does have the  
24 license has to go well below that and clean up a lot  
25 further, even though his neighbors get a higher

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1 concentration there now.

2 MR. FERATE: Are those regulated by NRC in  
3 all states or just the non-agreement states?

4 CHAIR COMFORT: Well, NRC has authority in  
5 all the states, but they -- in some of the states,  
6 they've given that authority to the agreement states  
7 to regulate those facilities, but they'd be done  
8 similarly in those agreement states, as to how they  
9 have to be dealt with under a license and we ever  
10 change this, then that -- because NRC loses their  
11 authority, we can't give authority to somebody else,  
12 where authority we don't have.

13 So, they would not have that authority  
14 under the AEA anymore. They'd now be doing it under  
15 other statutes that they have to regulate the  
16 material.

17 MR. FERATE: So, it's a potential impact  
18 and if we were to do away with this paragraph in Part  
19 40 --

20 CHAIR COMFORT: Yes, well, you'd get rid of  
21 the authority for NRC, which would mean that since you  
22 no longer have a reason for that paragraph, it  
23 wouldn't be there anymore.

24 But the idea is that EPA and the states  
25 and OSHA would be picking up all of the health and

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1 safety related to it.

2 MR. SETLOW: You have to understand,  
3 certainly, this was something we had discussed back in  
4 -- when we were working in this working group back in  
5 2001 and while we were generating all of this.

6 NRC's authority specifically is not for  
7 mines, but it's for the mills or the facilities which  
8 process the material, in order to extract the -- or  
9 concentrate the uranium and thorium.

10 So, NRC generally does not go ahead and  
11 license the uranium mine, conventional mine. It will  
12 license an ISL in situ leach facility, because it's  
13 viewed by NRC as a mill operating underground.

14 So, in the case where you have a mine that  
15 may concentrate uranium, they may in fact, choose to  
16 sell that as one of the streams of mineral products  
17 that they have, in order to make money. So, they  
18 become a supplier to whatever that mill was that's  
19 going to, in fact.

20 MR. FERATE: But presumably, they haven't  
21 done this, much less in the past, than they may be  
22 tempted to do in the near future.

23 MR. SETLOW: Well, given the price of  
24 uranium, they may well -- a lot more companies may be  
25 wanting to sell their uranium.

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1 MR. FERATE: But in the past, this  
2 generally --

3 MR. SETLOW: But they're generally not  
4 licensed by NRC, but there have been exceptions in  
5 which this was the case. The rarest facility in  
6 California was another one. So, there are a few mines  
7 that have done that, but not a lot.

8 In those cases, the requirements for  
9 radiation protection and environmental protection have  
10 been provided by the states or EPA.

11 CHAIR COMFORT: Now, one of the concerns is  
12 exactly that. Right now, specific licensing is a  
13 major burden and barrier for entry into those  
14 industries for mineral extraction and so on, and once  
15 we do change this, you could see more facilities  
16 dealing with more material or ores that have higher  
17 constituents of uranium or thorium than they have in  
18 the past, or potentially even importing such ores and  
19 stuff.

20 That's something that has to be considered  
21 also is, are you going to be adding additional  
22 exposures, because it's easier to get into that  
23 industry, that people are going to say, "You know, I  
24 don't have this huge burden of getting a license, so  
25 my cost for entry is so much lower, I'm going to go

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1 ahead and start it."

2 MR. LITTLETON: Gary, one of the things  
3 that guess we have been looking at have basically been  
4 the disposal and any regulations regarding disposal.  
5 But this whole thing, as far as economic trade-offs  
6 that have come up with the increased price of uranium  
7 have kind of raised the bar and said, "Have we done  
8 any type of economic analyses on what type of  
9 different impacts might come about, because the price  
10 of uranium is high?"

11 People -- instead of what may have been  
12 thought of as a waste product in the past, now has a  
13 potential for re-use.

14 CHAIR COMFORT: And once they start saying,  
15 "I'm going to use it for that uranium," it's NRC  
16 jurisdiction, once they do that.

17 So, if you have a mineral extraction  
18 facility that does concentrate, but now says, "Well,  
19 wait a minute, I've got a lot of value in that uranium  
20 because it's been concentrated there," once they say,  
21 "I'm going to start concentrating the uranium further  
22 to use it for that purpose," or they're going to  
23 basically take it in, as part of their operation for  
24 use of the uranium, the extractor mineral and the  
25 uranium at the same time or something, but once they

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1 start concentrating that uranium, it comes under --  
2 for the purpose of using the uranium, it comes under  
3 NRC jurisdiction under this proposal.

4 MR. LITTLETON: But is there current -- I  
5 would assume that probably somebody out there has done  
6 some sort of analysis. Is there any current analysis  
7 that says, "Well, if you concentrate it to .08, it's  
8 still a waste product and it's still more beneficial  
9 to just dispose of it," as opposed to, "Well, if you  
10 concentrate it up to let's say, one percent," then  
11 that's where it's actually economically feasible to  
12 recover the uranium.

13 CHAIR COMFORT: I don't know if there is  
14 one, but to tell you the truth, if -- the best use of  
15 the material and the safest use would be to  
16 concentrate it and use it, versus disposing of it.

17 MR. LITTLETON: Right.

18 CHAIR COMFORT: Because you are going to  
19 have regulation over it at that -- or NRC would be  
20 regulating it at that point and stuff, versus let's  
21 say, people say it's worthwhile doing all the sudden  
22 at five percent or something like that. Before they  
23 weren't.

24 That five percent uranium or thorium is  
25 now going through the transportation cycle to the

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1 disposal site and all, and it would be under this  
2 proposal and not under NRC authority. So, it would be  
3 relying upon the states and EPA and OSHA to be  
4 watching all these workers.

5 Now, hey, it's worthwhile concentrating it  
6 and using it, as now under NRC jurisdiction. So, it  
7 would probably have more direct oversight in all on  
8 it. So, and the pathway of where it ends up, is  
9 probably not in the disposal site, at least in the  
10 near term. So, that's all the better in some ways  
11 too.

12 So, the price actually helps in some way,  
13 but my concern originally -- my original statement on  
14 that one is, how many industries though, once you do  
15 this, are going to come in at levels above what  
16 they're operating right now, but a levels below where  
17 -- or it doesn't even have to be below. They may say,  
18 "Hey, I can do two things. I can get the one mineral  
19 and the uranium. So, it makes it even more worthwhile  
20 for me to work with this material, that I would have  
21 never worked with before," and stuff.

22 That's something that has to -- we have to  
23 consider as part of this group.

24 MR. REGNIER: Question, when you looked at  
25 the history of the AEA and your regulations on the

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1 source material, was the prime driver on that to --  
2 safeguards to keep this material out of the wrong  
3 hands or was it economic? What was the purpose?

4 The reason I ask is that it seems like if  
5 the purpose, which is what I always thought, which may  
6 well be completely wrong, that it was a safeguards-  
7 type of issue, then it would seem to not make -- if  
8 wouldn't logically follow that if something were  
9 concentrated in -- in some significant quantity at  
10 these high percentages, that would then still be an  
11 issue and it wouldn't matter whether they announced  
12 that they were going to use it or not.

13 CHAIR COMFORT: Yes, what the original  
14 intent, back in -- you know, this is 1947 time period,  
15 is when the Atomic Energy Act was originally  
16 developed.

17 At that time, the use of uranium and  
18 thorium was relatively limited and new and there was  
19 no idea what types of supply of it was there and  
20 really, what the intent of that number that the  
21 concentration was, was to ensure that there was  
22 adequate domestic supply for the use of the  
23 Government.

24 It wasn't for safeguards. It wasn't for  
25 health and safety. It was to ensure that if we needed

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1 it for either weapons or energy production or  
2 whatever, that the Government could step in and take  
3 where ever it was, once it left its place in nature.

4 We knew where it was in nature, but we  
5 didn't want it moved around that it went somewhere  
6 else, other than where the nation could be able to use  
7 it.

8 MR. HEARTY: Because we could call anything  
9 source material, beryllium, other types of ores, any  
10 of those could be called a source material.

11 MR. REGNIER: All these potential minerals.

12 CHAIR COMFORT: Yes. So, basically, that's  
13 really what the intent was and it wasn't until early  
14 1960 that they actually added in the Atomic Energy Act  
15 for source material, the requirements to do health and  
16 safety against it and stuff.

17 So, now, it's basically, there's much more  
18 -- we found that there's much larger deposits  
19 available of the uranium and thorium, that right now,  
20 there isn't really as big a need, as far as we've  
21 seen, that we need to ensure that that supply is  
22 available to the Government and all and instead, it's  
23 causing a burden on how we regulate, that you  
24 basically could be taking in a lot of people at cost  
25 and difficulty -- and even perception, to tell you the

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1 truth.

2 We regulate at .05 percent, but you  
3 certainly can find that material above .05 percent in  
4 nature and if people start really looking and saying,  
5 "Are they doing that for safe reasons? My back yard  
6 is greater than that. Should I be concerned?" That  
7 becomes a perception issue.

8 Where this proposal would actually help  
9 get rid of that, because we're basically saying if  
10 it's naturally occurring, we don't feel -- we don't  
11 need the active NRC regulation over it. But again,  
12 the question is, is that still the adequate or best  
13 way to go on this?

14 MR. WEAVER: I wonder if we could take a  
15 five minute break and then come back to the Energy  
16 Policy Act?

17 CHAIR COMFORT: Sure, is everybody okay  
18 with? We'll give you 10 minutes to go and get back  
19 here at 25, and probably give Cathy 20 minutes to go  
20 over her thing, and then we can take a break for  
21 lunch.

22 (Whereupon, the foregoing matter recessed  
23 briefly at approximately 11:15 p.m.)

24 CHAIR COMFORT: Okay, everybody, if we  
25 could get back to the meeting, I'd appreciate it.

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1 Okay, we'll go ahead and wait just about 30 seconds to  
2 see -- would you mind grabbing them and telling them  
3 we're ready to start?

4 Okay, welcome back, everybody. I  
5 appreciate you coming back relatively quickly. Before  
6 we go forward, my Division Director, Dennis Rathbone  
7 would like to make a couple words.

8 MR. RATHBONE: Yes, I am Dennis Rathbone.  
9 I'm the Division Director of Inter-Governmental  
10 Liaison Rule Making. Patty Bubar was down here this  
11 morning. Some of you know her.

12 But I just wanted to thank everybody for  
13 coming in and working with us, with Gary and Cathy  
14 Mattsen and me, and Kevin and Joan Olmstead on the  
15 Part 40 Inter-Agency Jurisdictional Working Group.

16 Kevin mentioned to me that, in terms of  
17 where we go and things of that nature, that we --  
18 let's see, we have a due date to the Commission, like  
19 next April --

20 MR. HSUEH: Next April.

21 MR. RATHBONE: -- for our advise for a  
22 staff paper, SECY paper, and an end point of the  
23 activities that you're engaged in today and the time  
24 ahead is, we will be coming back to you with letters  
25 to the agencies, with respect to what we come to --

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1 what you all come to here. Do you think that will be  
2 like, what?

3 CHAIR COMFORT: I would hope that we'd get  
4 them out next month.

5 MR. RATHBONE: Next month?

6 CHAIR COMFORT: Is that's what the decision  
7 -- the working group decides it's the best approach.

8 MR. RATHBONE: And so, yes, if people agree  
9 that that's the right thing to do, what I'd like to  
10 encourage is if when you get that, take it aboard and  
11 talk to the people that you need to talk to in your  
12 respective agencies and help us come to a conclusion  
13 that we can report to -- provisionally, to the  
14 Commission.

15 So, with that, let me go back to Gary and  
16 -- I'm going to have to go off to another meeting here  
17 in a few minutes, but then I'd like to come back this  
18 afternoon, when you get into the legislative approach,  
19 NRC's Congressional affairs and all of that, and some  
20 ideas, whatever. So, go ahead.

21 CHAIR COMFORT: Okay, thank you. We were  
22 going to go ahead and Cathy was going to give us a  
23 little bit of update on what we've been doing with  
24 Energy Policy Act and how the can play into this a  
25 little bit.

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1 MS. MATTSSEN: Well, the idea of NRC  
2 potentially regulating NORM, that got kicked around a  
3 long time, here and there. There were a lot of  
4 differences of opinions and because of the difficulty  
5 or our potentially regulating all types of NORM and  
6 because of concern about going to Congress and not  
7 necessarily getting the piece that you asked for, but  
8 the impetus that eventually resulted in the inclusion  
9 of the Energy Policy Act and our taking over  
10 responsibility was concern for security of radioactive  
11 materials and the fact that radium was on the list of  
12 radio-nuclides of concern in IAEA and for us, under  
13 our agreements with IAEA.

14 So, the Policy Act of -- Energy Policy Act  
15 of 2005 added to us -- to the definition in the Atomic  
16 Energy Act 11E3 and 4 byproduct material. The thing  
17 that's of interest to us is the piece where they added  
18 any discrete source of radium 226 that is produced,  
19 extracted or converted after extraction, before on or  
20 after August 8, 2005 for the use for a commercial,  
21 medical or research activity.

22 At the same time, they also required us to  
23 write a definition when we wrote the rules. Now, the  
24 rule goes into effect -- just went into effect a  
25 couple of days ago, November 30<sup>th</sup>. So, this expanded

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1 definition of byproduct material is on the books as of  
2 now.

3 MR. RATHBONE: That was an element of the  
4 Energy Policy Act of August 2005. We've gone through  
5 a very lengthy compendious rule making and we -- what  
6 this does is give the Nuclear Regulatory Commission  
7 Federal jurisdiction basically, over radium 226 and  
8 other NORM-type materials and as Cathy points out, so  
9 while that regulatory authority is now in place for  
10 the NRC and we've been struggling with how to work  
11 that with 34 agreement states since, I think, all of  
12 them had regulated radium 226, prior to the Energy  
13 Policy Act.

14 So, it's been sort of a major transition.  
15 So, that's what we're doing.

16 MS. MATTSSEN: Essentially, the goal of  
17 that, with respect to radium, was to capture exactly  
18 the same material we planned -- the same portion of  
19 radium that we plan to keep under the Atomic Energy  
20 Act, under our earlier proposal, although they use  
21 some different words to do so.

22 In our earlier discussions, we had talked  
23 about the concept of discrete source versus diffuse  
24 source and for talking purposes, it worked fine, but  
25 we had concluded, at that time, that it wasn't the

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1 best way, in terms of actually defining something  
2 legally.

3 So, we had a lot of difficulty when we  
4 tried to come up with the actual definition of  
5 discrete source to go with this definition of by  
6 product material.

7 One good thing about the way they worded  
8 things was this before, on or after the certain date  
9 of the Act, which didn't cause the same kind of thing  
10 that UMTRCA caused in 1978, so that everything, it  
11 doesn't matter when, any radium that has been  
12 purposely concentrated or extracted is now byproduct  
13 material and any other radium is not byproduct  
14 material.

15 Our definition of final rule is quite  
16 different than the proposed rule, because we ran into  
17 a lot of issues with this, which were really kind of  
18 along the line of some things we discussed earlier,  
19 and the definition, as it came out, was discrete  
20 source means a radio-nuclide that has been processed,  
21 so that its concentration with that material has been  
22 purposely increased for commercial, medical or  
23 research activities.

24 It doesn't go a whole lot beyond what the  
25 definition of byproduct material -- how that

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1 constrains it itself, but we're trying to make sure we  
2 -- well, the confusion was that discrete source -- we  
3 wanted to regulate the radium the same way as we  
4 regulate other byproduct materials, once it came under  
5 a license, and that was that even when it is being --  
6 a site is being decommissioned or -- that we go to the  
7 same level, that it doesn't -- when is something is  
8 contamination, it's not discrete anymore, we're still  
9 going to regulate it.

10 So, that was a problem with discrete  
11 source in the proposed rule. We had defined it in a  
12 way that could be interpreted that contamination  
13 resulting from the use of these materials, would not  
14 be AEA material.

15 This does set a good precedent for us, I  
16 think, in terms of the end result that we were trying  
17 to achieve. We have that same result now, with  
18 respect to radium. And so, if we are able to achieve  
19 the same result with uranium and thorium, we won't  
20 have materials where just the uranium is byproduct  
21 material or just the radium is byproduct material.

22 Right now, there's some that the radium  
23 isn't byproduct material, but the uranium and thorium  
24 is byproduct material. We did have some problems,  
25 however, with the exact wording and what I was

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1 mentioning, with respect to discrete source, and the  
2 other aspect that kind of came to be a problem towards  
3 the end of development of the final rule, some of the  
4 lawyers decided the for use commercial, medical  
5 research activity seems to be purposely leaving out  
6 Military.

7 And so, we got into a difficulty of  
8 deciding what is Military, what the Military does  
9 that's not covered and what the Military does that is  
10 covered, because they do conduct medical activities  
11 and research activities. So, I don't think we want to  
12 necessarily copy this exact wording, but it should  
13 have -- help to lay the ground work, I think, for what  
14 we were intending to do before because the end result  
15 is the same as what we were trying to achieve.

16 CHAIR COMFORT: Yes, I mean, the shame of  
17 it is again, as I stated, that we weren't directly  
18 aware of the staff working and this group wasn't aware  
19 of the effort going on for the Energy Policy Act,  
20 because it would have really made a nice, consistent  
21 of at that time, doing one package of legislation  
22 where we're basically taking jurisdiction away from  
23 some agencies for the radium, but we're actually  
24 giving them jurisdiction -- additional jurisdiction  
25 over the uranium and thorium that they didn't have

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1 before.

2 So, it's more of an equivalent toss-back  
3 of jurisdiction at that time, as well as it creates  
4 almost a more consistent policy. You know, if it's  
5 naturally occurring, if it's not being used for the  
6 specific purpose of the material and it comes under  
7 NRC regulation if it is.

8 So, for just for anybody dealing with  
9 radioactive material, this recommendation, at least at  
10 that point, would be a more consistent pattern across  
11 the Government.

12 MR. HEARTY: But there is some difference  
13 though, because the Energy Policy Act specifically  
14 says that this new byproduct material does not fall  
15 under the Low Level Radioactive Waste Policy Act.

16 CHAIR COMFORT: Right.

17 MR. HEARTY: And therefore, it does not  
18 necessarily require disposal, let's say, a compact  
19 disposal -- license compact disposal facility. So, we  
20 can still dispose of it, potentially, in -- at state  
21 license NORM facilities.

22 CHAIR COMFORT: That's correct. Anybody  
23 have any questions for Cathy on that, or other  
24 comments on it?

25 (No verbal response)

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1 CHAIR COMFORT: Are there any other new  
2 issues? Does anybody have any new regulations? I  
3 know OSHA has been recently working on some radio --  
4 at least a few years ago, was starting to look at the  
5 radiation.

6 MR. AHIR: We still have RFI, which we've  
7 published about two years and we're still trying to  
8 analyze and we have stake holder meetings going on.

9 CHAIR COMFORT: Okay.

10 MR. AHIR: That's where we stand right now.

11 CHAIR COMFORT: Do you see any impact from  
12 this activity on that or -- you're doing that anyway,  
13 so it should influence it.

14 MR. AHIR: I'd like to clarify one of the  
15 statements he made. OSHA's radiation standard does  
16 not exempt any municipal or state employees. It's the  
17 Occupational Safety and Health Act that does exempt  
18 them from all of the OSHA standards.

19 CHAIR COMFORT: Okay.

20 UNIDENTIFIED SPEAKER: Same thing.

21 CHAIR COMFORT: Now, does anybody else want  
22 to bring up any other new issues that they can think  
23 of, that may have concern for this group?

24 MS. MATTSSEN: One of the concerns back  
25 then, with our management at least, was the SDMP

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1 sites. Have you updated -- I think quite a few have  
2 been decommissioned and are there a few of them to  
3 worry about now? Do you know how much that's changed?

4 CHAIR COMFORT: Well, Kristina --

5 MS. BANOVA: Yes, there were -- I think in  
6 the 2003 time frame, there were about nine sites that  
7 were currently decommissioning, that would be impacted  
8 by the recommendation.

9 So, these were sites that either were  
10 starting with raw material that was above .05 weight  
11 percent or through extracting rare earth or other  
12 minerals, they happen to extract the radium above .05  
13 weight percent.

14 There are currently just six of those  
15 sites that are decommissioning and three of them are  
16 expected to complete decommissioning in the next year.  
17 So, a few more sites will be impacted.

18 CHAIR COMFORT: And if I remember  
19 correctly, there were something like three sites at  
20 that time that were still operating and I think two of  
21 those may have gone into decommissioning since then.

22 MS. BANOVA: Yes, there is a Cabot site in  
23 Boyertown, Pennsylvania that is currently operating  
24 and they're using sort of, a raw material up to, I  
25 think, four percent by weight uranium and thorium, but

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1 they're not extracting -- they're extracting niobium  
2 and tantalum.

3 So, they're licensed by the NRC, just  
4 because the raw material they're using is considered  
5 source material.

6 So, they're still operating and of course,  
7 RMD is the other operating site.

8 CHAIR COMFORT: Yes, RMD is the specific  
9 licensing for the water treatment that would be  
10 impacted by this also.

11 MS. BANOVA: Yes, RMD is going to  
12 operating.

13 CHAIR COMFORT: Yes, currently on that one.  
14 Now, one of the concerns that we did have then when we  
15 brought up these licensees is because we had a  
16 concern, are the states going to be willing to take  
17 over these or should there be some sort of grandfather  
18 provision or something that keeps them on?

19 I guess, we were concerned that the states  
20 wouldn't want them at that point. Now, from recent  
21 things that have been going on since some of the  
22 states haven't been happy with how we've been  
23 decommissioning sites and all, that I've got a feeling  
24 that that may go the other way around that the states  
25 would like it, but the industry wouldn't want us to

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1 transfer those grandfather sites.

2 So, that's something that it going to have  
3 to be considered when we do this is, would there have  
4 to be -- try to get some sort of grandfather clause  
5 for existing sites versus -- you know, the Energy  
6 Policy Act said it covers all before, during and after  
7 now. We'd have to consider, do we want to be putting  
8 -- if we go forward and start a legislation, that we'd  
9 want to exclude sites that are already under NRC  
10 jurisdiction, that they'd have to stay under it, or  
11 some part of that type thing on it.

12 MS. MATTSEN: With the exception of  
13 potentially grandfathering certain situations, weren't  
14 we really intending -- maybe we didn't think about the  
15 word specifically, but that it wouldn't matter when  
16 the -- we didn't want to do the same thing that UMTRCA  
17 did.

18 CHAIR COMFORT: Right.

19 MS. MATTSEN: But we would probably want to  
20 include words like before, on or after --

21 CHAIR COMFORT: Okay.

22 MS. MATTSEN: -- in the legislation. Is  
23 that not what we --

24 CHAIR COMFORT: And that's --

25 MS. MATTSEN: Is that not what we --

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1 CHAIR COMFORT: Well, I mean, that's  
2 something that had to be considered and discussed with  
3 the states and I mean, I'm sure industry would have  
4 some concerns about how it's done also.

5 MR. WEAVER: There's a cute saying that I  
6 like, that's a little bit like the hair on the tail  
7 wagging the dog. I mean, I think there's going to be  
8 so much difference in how we approach materials policy  
9 in the future, these valuable materials that we need  
10 and the extraction processes that, really far more  
11 important is what implications you're going to have by  
12 these distinctions for future potential specific  
13 licenses or not.

14 So, I mean, I would --

15 CHAIR COMFORT: Yes, this is going to --

16 MR. WEAVER: -- you'll find a way. It  
17 will take long enough to put stuff under rule three,  
18 five, seven years from now, that you'll find a way to  
19 deal with the grandmothers.

20 MR. HEARTY: Well, the one caution I want  
21 to bring up is, at the time we were completing this in  
22 2003, NAS was still working on their low activity  
23 waste disposal study, completed that, published that  
24 and one of the things that the Corps brought up to  
25 ACNW here, the Advisory Committee and to NRC is, going

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1 along with that disposal by risk, not by pedigree, and  
2 I just worry that if we do what the recommendation is  
3 here, how you have NRC regulating these waste streams  
4 and taking away the .05 percent exemption and then you  
5 have the states regulating these other waste streams,  
6 you could open up that pedigree distinction, where you  
7 have these less than .05 percent source material waste  
8 streams in an NRC regulated site being required to go  
9 some place maybe for license disposal at high cost and  
10 higher than .05 percent activity waste outside of NRC  
11 jurisdiction, being able to be handled in a more cost  
12 effective manner.

13 I think that just needs to be balanced out  
14 and looked at, so that we don't create more  
15 restrictions on this low activity waste.

16 CHAIR COMFORT: And I don't disagree and  
17 truthfully, whether it should be more risk based on  
18 it, and I think NRC is starting to look a little bit  
19 at it -- I think I've seen from our Division of Waste  
20 Management Environmental Protection in the --  
21 recently, they've been coming up with, are there  
22 alternatives to the current way that we can open up  
23 more disposal to some of these facilities, while still  
24 maintaining public health and safety?

25 MR. HEARTY: And it's get back to the ANPR

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1 that you guys put out, as far as, is there any future  
2 on that?

3 MR. SETLOW: Well, it's just a matter of  
4 resources at this time, because of the fact that  
5 although a lot of people who are -- would be working  
6 on that, are currently working on the Yucca Mountain  
7 rule.

8 So, once something happens to that then  
9 they're certainly free to go back to -- it's moving  
10 at us as a next higher priority.

11 CHAIR COMFORT: Now, you brought up  
12 resources, so I'll bring that one -- follow up with  
13 that. If we make this change, there is going to be an  
14 impact to these other agencies resources to some  
15 certain level.

16 Do you think your agencies are going to be  
17 able to accept those changes or are they going to need  
18 additional -- to make it -- to work, that we'd have to  
19 go through Congress to try to get them, or is the  
20 current existing regulatory programs sufficient enough  
21 that they could deal and the additional resources  
22 would be built up over time, or is that big stopping  
23 issue for any of the agency, "Hey, we're okay with it,  
24 but we don't have the resources to adequately deal  
25 with this material." Does anybody have any -- and

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1 that goes for the states too.

2 MR. FINDLAY: We could change some of our  
3 regulations, some of our proposed regulations.

4 CHAIR COMFORT: Well, I know NRC would have  
5 to do some -- would plan on doing some changes to  
6 their regulations, to remove the parts that are  
7 currently causing inconsistencies in the regulations.

8 What I'm wondering is, if the existing  
9 regulations were -- EPA or the states may already  
10 cover it, once it's no longer an AEA material or  
11 something would have to be drafted, or if it's kind of  
12 a -- it could cover it, but we'd also want to do  
13 something more specific.

14 MR. FINDLAY: Well, if you want the other  
15 agencies to fix any health and safety gap then --

16 CHAIR COMFORT: Yes, you'd want them to  
17 regulate, yes, under their current statutes.  
18 Hopefully, there wouldn't be a gap on it.

19 MR. LITTLETON: I think as far as the EPA  
20 is concerned, I think that our existing approach,  
21 which is to take a look at various NORM and TENORM  
22 activities and look at them and see which ones present  
23 high risk to the public, and then if they do, then  
24 determine what type of options are open.

25 That's our approach and any changes here,

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1 I don't think will really have an impact to that  
2 approach. So, I don't think it's going to have any  
3 major impacts on that.

4 CHAIR COMFORT: And that approach can  
5 contain these new materials.

6 MR. SETLOW: Yes, and I think from what  
7 we've seen on the NORM/TENORM universe, the majority  
8 of the impacts are actually coming from the radium,  
9 rather than the uranium as a hazard.

10 If it's oil and gas or if it's going to be  
11 phospho-gypsum, where we're already handling it,  
12 that's really where the risk is.

13 MR. WEAVER: And the water treatment plant  
14 situations where uranium was concentrated by itself,  
15 if you do the risk calculation, as you said.

16 MR. SETLOW: Yes, exactly.

17 CHAIR COMFORT: And then OSHA would --  
18 right now, you have a memorandum of understanding with  
19 us that when we have a licensed site, I think we  
20 basically do most of the checking and then we'll turn  
21 over anything to you that we find.

22 So, some of these few sites that we  
23 currently would be regulating, would no longer have  
24 that NRC oversight. Does that cause you any concern?  
25 I would expect your existing regulatory --

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1 MR. AHIR: I think I should be able to  
2 handle it and we are in the process of updating our  
3 standard anyway. So, any changes needed, we'll  
4 incorporate into that.

5 MR. FINDLAY: I would say we're not. We  
6 have to do separate ruling making from OSHA. MSHA has  
7 a separate rule making process and we have to do a gap  
8 analysis and maybe dovetail or go on the coattails of  
9 OSHA.

10 CHAIR COMFORT: But again, I'm not sure  
11 that there would be a significant need for rule making  
12 because you're not specific to the radio-nuclide. You  
13 just have a radiation --

14 MR. AHIR: We have very generic standards,  
15 so it can incorporate --

16 CHAIR COMFORT: Yes, and the same thing  
17 with MSHA is that the stuff that we're regulating,  
18 we're not adding it -- I don't think we're adding  
19 anything under this proposal.

20 MR. FINDLAY: The only thing I can think of  
21 is that our ionizing radiation standards are for  
22 underground mines only.

23 CHAIR COMFORT: Right.

24 MR. FINDLAY: That's it.

25 CHAIR COMFORT: So, the rest -- yes, and

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1 this wouldn't be adding anything different that you  
2 currently don't regulate.

3 MR. FINDLAY: Okay, well, good.

4 CHAIR COMFORT: That's the --

5 MR. FINDLAY: That's what we'd have to  
6 know.

7 CHAIR COMFORT: The main reason -- a lot of  
8 agencies that are involved were originally added  
9 because again, the group -- still, the group could say  
10 this current recommendation isn't the best approach,  
11 and that's why we are -- actively want you involved,  
12 is that the original proposal could have put more  
13 requirements or tried to give NRC more jurisdiction  
14 over those and we wanted to make sure -- we went that  
15 approach, where we may try to go into the mines or  
16 something like that, that you had -- your agency was  
17 aware and was able to speak of concerns. It's kind of  
18 gone the other way.

19 MR. FINDLAY: Some formal gap analysis  
20 would be needed.

21 CHAIR COMFORT: Needed, yes.

22 MR. FINDLAY: And see what it lays out.

23 CHAIR COMFORT: Okay, anybody have any  
24 other comments that they want to do, otherwise, I'll  
25 open it up to the public. Anybody want to make any

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1 statements from the public right now on this issue?

2 What we're looking for is anything that we  
3 should be concerned of, that we haven't really thought  
4 about in making any type of recommendation.

5 MR. LEFLEUR: I'm Mike LeFleur with RMD.  
6 We're a licensee of the NRC for uranium from drinking  
7 water. One of the things that we've run into, as a  
8 result of working across the country on uranium and  
9 drinking water is, there's a lot more facilities with  
10 high elevated radium levels than we thought and some  
11 of them are quite high and there are quite a few large  
12 cities that produce anywhere from 400 to 800 pounds of  
13 uranium a year.

14 Now, traditionally, this has been going  
15 down the sewer into the POTW. Ninety-five percent of  
16 the uranium will report to the sludge. So, they've  
17 got -- depending on how often they'll land-apply it,  
18 they're going to end up over 150 pounds, quite often,  
19 with uranium in their sludge. It should be licensees.

20 But nobody wants to license POTW's, none  
21 of the agencies. So, what we're doing is taking the  
22 uranium out, not putting it down the sewer. We're  
23 putting it on our resin, concentrating it to six  
24 percent or so, taking it to a uranium processor to  
25 recover it for uranium values.

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1                   If you start taking -- making a  
2                   distinction between taking it out for uranium purposes  
3                   or for water clean up purposes, you're going to end up  
4                   with some funny inconsistencies, I think. The uranium  
5                   should be -- the other thing, we're running into a lot  
6                   of situations where you have sulfates with the  
7                   uranium.

8                   Sulfates usually plug up the resins. So,  
9                   you have to re-generate more often or replace them.  
10                  This is not economic for large systems. They couldn't  
11                  comply with the radio-nuclide rule.

12                  So, we're thinking maybe we're going to  
13                  have to re-generate on site, take the concentrated  
14                  slurry to a processing unit, but you're going to have  
15                  to do some processing right on site, which is going to  
16                  end up another licensing consideration.

17                  So, we're looking at following NRC  
18                  licensing proposals and the agreement states, because  
19                  it's a uniform national law. We would like to see  
20                  radium included under NRC as 11(e)(4). So, it's a  
21                  one-uniform law, a national law.

22                  NRC and their agreement state operation is  
23                  working quite well, I think. EPA has a primacy  
24                  arrangement with the states and it's not quite as  
25                  efficient as NRC. Some states are very slow on

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1 compliance and enforcement on radium and the drinking  
2 water.

3 NRC, in the agreement states, are very  
4 efficient. So, those are some comments I'd like to  
5 throw out at this point.

6 CHAIR COMFORT: Okay, thank you, Mike.  
7 Yes, I will follow up with that. That's one of the  
8 other comments I've gotten across the country when  
9 I've been doing these meetings is, the concern of if  
10 NRC gives up jurisdiction, that the regulation of the  
11 uranium -- because different -- when NRC does it and  
12 gives the authority to the agreement states,  
13 basically, there is a lot of constraints, that there  
14 has to be a lot of consistency with the NRC  
15 regulations.

16 So, there is some variance for making the  
17 regulations more consistent -- more conservative  
18 sometimes. But a lot of it has to be either exact or  
19 equivalent to what we have, and there's been a concern  
20 that if we turn over this, that that doesn't quite a  
21 well apply to the primacy states and EPA and other  
22 potential -- the way it could be regulated.

23 So, if you're working in one state, you  
24 have to do one set of rules and then you go to another  
25 state, you may have another set of rules, and that is

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1 a concern of a few people, I've heard.

2 MR. HEARTY: But it was determined for the  
3 Energy Policy Act and for the new regulations on that,  
4 that purposefully pulling radium and concentrating it  
5 out of drinking water was not going to be subject to  
6 NRC regulation.

7 CHAIR COMFORT: That's correct.

8 MS. MATTSSEN: Right, there was some history  
9 that suggests that that was the intent, yes. So, we  
10 clarified that based on the definition of discrete  
11 source we put in and what we clarified in the  
12 statements of consideration, that definitely is where  
13 it comes out.

14 If somebody sent that off to be processed  
15 for something else, then --

16 MR. LEFLEUR: I'd just like to add one  
17 thing. I think on the Energy Policy Act, it said not  
18 only for health and safety purposes, similar to  
19 discrete radium, but also for national security and  
20 we're pulling out radium on to a resin and we're  
21 taking 20 tons of this material that has about 8,000  
22 or 9,000 pico-curies per gram and we're transporting  
23 it across the country. Is that not a potential issue?

24 MS. MATTSSEN: Well, there was a -- I guess,  
25 a desire to stay out of the TENORM, but that isn't an

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1 exception, where you do have particularly high  
2 concentrations. But that was the legislation.

3 MR. HEARTY: I did want to clear up  
4 something else you said about sites that had become  
5 contaminated with radium -- radium processing sites  
6 that had become contaminated with radium, that NRC was  
7 still looking to regulate that, and since that was a  
8 -- you know, before -- so, this is retroactive to all  
9 types of those facilities.

10 MS. MATTSSEN: Yes.

11 MR. HEARTY: There's a lot of EPA Superfund  
12 sites that we're working on, that have radium on them,  
13 that aren't currently licensed.

14 Would NRC look at licensing those types of  
15 sites, that have residual radium contamination from  
16 historical radium processing, that are not currently  
17 licensed?

18 CHAIR COMFORT: I think that's something  
19 we'll have to look at, but --

20 MR. SETLOW: Well, I had some discussions  
21 with the staff that we're working on, that -- about  
22 that rule, and they're specifically addressed in the  
23 new regulation. It's pretty much on a case-by-case  
24 basis, that NRC is going to be looking at it.

25 There is already an MOU between EPA,

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1 Superfund Program and the NRC on these types of legacy  
2 sites, and so, that for the most part, EPA is going to  
3 have jurisdiction over those sites, but they'll  
4 continue to talk with NRC as we go along.

5 MR. HEARTY: That's a different MOU than  
6 the NRC license site decommissioning.

7 MR. SETLOW: It's just basically saying  
8 that that license -- that MOU is the same one that  
9 they'll continue -- we'll continue to work on for the  
10 legacy sites.

11 So, for example, we're looking at thorium  
12 mantel site in Camden, New Jersey. EPA has had  
13 authority over that because of the CRCLA, but NRC, at  
14 this point, is not necessarily coming in to assert  
15 authority on this legacy site. They have not licensed  
16 -- they didn't license this facility in 1900. So, but  
17 if --

18 MR. HEARTY: I guess the question is, if we  
19 got -- I'm just wondering if any of the changes we  
20 would make would potentially allow the State of New  
21 Jersey to come in and license that site, under their  
22 NORM regulations, if this is a legacy site where  
23 they're not -- the site owners are not looking to  
24 purposefully extract any more thorium from that  
25 material --

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1 CHAIR COMFORT: But it's sitting there  
2 already and they're --

3 MR. HEARTY: It's sitting there already.

4 CHAIR COMFORT: And that's something --

5 MS. MATTSSEN: That would still be --

6 CHAIR COMFORT: Well, I mean, it's --

7 MS. MATTSSEN: Source material now.

8 CHAIR COMFORT: Well, it's still --

9 MR. HEARTY: Gets us out of the ratings.

10 CHAIR COMFORT: It would still be -- I  
11 mean, Cathy is, I guess in some ways, correct that if  
12 the material -- if the site has been terminated and it  
13 was an actively licensed site that it was source  
14 material --

15 MS. MATTSSEN: It's never the --

16 CHAIR COMFORT: -- but if it was one of  
17 these -- like, thorium mantel companies from way back  
18 when, we still don't regulate that, so it would still  
19 need to be --

20 MR. SETLOW: And EPA is -- has asserted  
21 authority over that.

22 CHAIR COMFORT: Right.

23 MR. SETLOW: As has the State of New  
24 Jersey, for this particular case, in doing the  
25 appropriate clean ups, because --

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1 CHAIR COMFORT: Yes, this is posed --

2 MR. SETLOW: -- by the radium that was  
3 present -- thorium.

4 MS. BUBAR: I think it might be a question,  
5 if it's not on the NPL, the Superfund authority would  
6 not come into play, but we are handling it on a case-  
7 by-case basis, and right now, the energies are  
8 specifically directed at the Department of Defense  
9 sites, because there are some issues that are coming  
10 --

11 MR. SETLOW: Right, and it was said that in  
12 the rule, it would be handled on a case-by-case basis  
13 and as appropriate, NRC might bring this forward for  
14 further discussion, if it's deemed to be an issue.

15 CHAIR COMFORT: Well, why don't we go ahead  
16 and call for lunch right now. Basically, if you want  
17 to go downstairs -- well, we'll take you all  
18 downstairs, but you can go to the cafeteria. Across  
19 the street, there's a McDonald's. Down the street,  
20 there's Arby's, Popeye's.

21 I'd like to have people start meeting back  
22 here -- since we're running a little bit later on the  
23 agenda, why don't we meet back here around 1:05 p.m.  
24 and we'll start getting everybody up here, so we can  
25 get a 1:15 p.m. start, to continue this and we'll

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1 continue this discussion a little bit further, if  
2 there's any other comments that we have and then we'll  
3 move on to the other agenda items.

4 You'll have to again, go through the  
5 security to go outside the building, to come back in  
6 and then in all cases, we'll have to escort you back  
7 up here. Thank you.

8 (Whereupon, the foregoing matter recessed  
9 at approximately 12:00 p.m.)

10 CHAIR COMFORT: Okay, we don't go ahead and  
11 start. I think everybody is here, except for  
12 Kristina. Okay, I'll welcome you all back for the  
13 afternoon session of the Part 40 Inter-Agency  
14 Jurisdictional Working Group meeting.

15 Basically, on the agenda right now is  
16 calling for me to do a quick summary and I'll do that  
17 relatively quickly, because I want to make sure there  
18 is no carry over from this morning's conversation that  
19 we want to do.

20 Basically, we went through and went ahead  
21 and did a quick background of what the working group  
22 has done in the past and we got into some discussions  
23 of new issues and all of -- which include things like  
24 the uranium and drinking water has become a big issue  
25 for NRC.

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1                   We also have the Energy Policy Act of  
2                   2005, that we discussed a little bit and how byproduct  
3                   material in the radium was pulled into that and how  
4                   that plays along with this.

5                   There were also some issues of some things  
6                   that we need to be careful about, looking at the  
7                   impact on pre-UMTRCA sites and stuff also. Need to  
8                   make sure that we're aware of that.

9                   In my conversations at lunch time, I did  
10                  have one person that brought up a concern, to make  
11                  sure that if we do go down this approach, that we  
12                  watch how we get rid of exemptions, to make sure that  
13                  there aren't any significant impacts to ongoing  
14                  operations and in this particular case, it was  
15                  somebody who basically had drums of uranium ore that  
16                  they were getting rid of the drums that were  
17                  containing -- that had residue of the uranium ore on  
18                  it, basically, under the unprocessed ore exemption  
19                  40.13(b) and that brought in -- and that itself brings  
20                  in some issues that we do have to be careful about on  
21                  how do we handled using ore and other materials and  
22                  how do we define it in the sense that, in the drinking  
23                  water area we're saying, "Hey, it's not regulated by  
24                  NRC," because the purpose of it is that you extracted  
25                  it for clean water. You're not trying to use the

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1 uranium on it.

2 UNIDENTIFIED SPEAKER: It's a waste.

3 CHAIR COMFORT: It's a waste or -- well,  
4 it's -- yes, at that point, it's a waste, however, if  
5 they want to turn around and use it for uranium  
6 extraction, when does it become licensed?

7 If they say, "Hey, we've decided to take  
8 this material and start using it," is it that point?  
9 Under alternative feeds regulations that we have, it's  
10 generally when it gets to the mill site, that we  
11 consider it now a licensed product or an alternative  
12 feed and you basically, probably do the same thing  
13 under this proposal.

14 Once it goes to that mill site for further  
15 processing or where ever it's going for further  
16 processing, it becomes now under NRC jurisdiction.

17 Well, in this case, this is unprocessed  
18 ore that this person was talking about and it gets to  
19 the site and now it's staying an unprocessed ore. Was  
20 that -- when did it become under NRC jurisdiction? If  
21 it came straight from the mine, generally the way  
22 we've looked at it is, once it leaves the mine, it's  
23 under NRC jurisdiction.

24 The Atomic Energy Act basically says  
25 currently that NRC has jurisdiction over uranium and

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1 thorium once it's removed from its place in nature.  
2 So, we put in that exemption to clarify -- in  
3 40.13(b), to clarify that unprocessed ore being  
4 shipped from a mine to the processing site is exempt  
5 from our regulations.

6 In this new regulatory scheme, you run  
7 into the issue of, "Well, it's not processed yet.  
8 There's an intent to process it once it leaves the  
9 mine and all that stuff, but should you be treating it  
10 as alternate feed or not?" Once it hits the site, is  
11 it now an unprocessed ore kind of thing?

12 My argument would be yes, you'd keep the  
13 40.13(b) in there, the unprocessed ore, that it's  
14 still source -- unprocessed source material, I should  
15 say and that exemption would still be applicable  
16 without interrupting their operations at all.

17 You still do run into the question of is  
18 that shipment and how should that be defined once it  
19 leaves the mine? Is it --

20 MR. HEARTY: But the exemption says ore,  
21 right? It doesn't say source material.

22 CHAIR COMFORT: It does say ore. There may  
23 have to be some change in what it means there, but  
24 it's defining ore as a source material and the  
25 question comes, would that change -- and I expect

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1 that's part of what we'd be doing, is changing that  
2 concentration of ore of -- you know, .05 percent is  
3 not source material, that you would probably be  
4 getting rid of -- you may be getting rid of that, to  
5 some extent.

6 It was a good question that was brought  
7 up, that's brought some implementation concerns of how  
8 you do it.

9 MR. WEAVER: Is that the only place that  
10 the word ore is used?

11 CHAIR COMFORT: I mean, in the definition  
12 of source material, it's used, but that one, for the  
13 exemption specifically, there may be some appendix A  
14 issues that have ore in it. But --

15 MR. HEARTY: Well, there's a definition of  
16 processing.

17 CHAIR COMFORT: Yes, there's a definition  
18 of --

19 MS. MATTSSEN: Of unprocessed.

20 CHAIR COMFORT: Of unprocessed.

21 MR. WEAVER: Once you break an eight inch  
22 diameter piece of rock into a four inch diameter piece  
23 of rock and it goes through the grizzly, we've  
24 considered it processing.

25 MR. HEARTY: Right, that's in the

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1 definition of processing.

2 MR. WEAVER: Well, and so, that's about  
3 beneficiation of processing. Ore is a mineral  
4 resource economics terms.

5 MR. HEARTY: Right.

6 MR. WEAVER: It's an ore if somebody is  
7 willing to pay enough to recover it. It's not an ore  
8 if it's not worth anything to somebody. So, I would  
9 stay way away from using ore in anything we do in the  
10 future. That's a mineral resource economics term.

11 CHAIR COMFORT: Yes, and that's been --

12 MR. WEAVER: I would stay with something  
13 very physical like -- I mean, beneficiation was a cute  
14 term. But processing, that's the real key here, I  
15 think. And so, your example, it's awful hard to think  
16 of something that leaves a mine, that hasn't been  
17 processed in some way.

18 CHAIR COMFORT: Well, this basically says  
19 ore -- well, when it leaves the mine, it hasn't been  
20 concentrated --

21 MR. WEAVER: That's a different term.

22 CHAIR COMFORT: -- for uranium.

23 MR. WEAVER: Concentrated is a different  
24 term.

25 CHAIR COMFORT: But unprocessed --

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1 basically, un processed ore is defined -- and this has  
2 become an issue here, because you have folks -- you  
3 can get ore samples and things like that and if  
4 somebody encapsulates that ore sample --

5 MR. WEAVER: We licensed our ore sample.

6 CHAIR COMFORT: Yes, do you have to --

7 MR. WEAVER: Licensed ore sampling  
8 stations.

9 CHAIR COMFORT: But the pure definition of  
10 unprocessed -- let's say, unprocessed ore means ore in  
11 its natural form, prior to any processing, such as  
12 grinding, roasting and beneficiating or refining.

13 MR. WEAVER: Right.

14 CHAIR COMFORT: So, that's basically what  
15 you were saying on it. The 40.13(b) actually says  
16 that it's any person exempt from the regulations and  
17 the part -- to the extent that such person receives,  
18 possess, uses or transfers unrefined and unprocessed  
19 ore containing source material.

20 So, basically, you -- the ore in that  
21 definition is kind of, strange because you define  
22 source material as ore containing greater than .05  
23 percent and now it's defining ore as containing source  
24 material, which are the individual uranium and  
25 thorium, and that's --

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1 MS. MATTSSEN: Inconsistent.

2 CHAIR COMFORT: -- one of the difficulties  
3 with the definition of source material.

4 MR. HEARTY: But the problem you posed was  
5 an already licensed facility bringing additional  
6 radioactive material onto their licensed site.

7 CHAIR COMFORT: But right now, what's  
8 happening with it is, if you basically said that  
9 material, since it hasn't been processed, you know, to  
10 any great extent or if you define it as considered  
11 unprocessed ore for shipment from the mine to the  
12 mill, that if there's been no processing and no  
13 concentration of the material, under this approach,  
14 would that material not be unprocessed ore exempt  
15 under 40.13(b), would it instead be naturally  
16 occurring radioactive material, and now, once it gets  
17 to the site, is that material on the drum that's left  
18 over, is it unprocessed ore or is it basically,  
19 material that's not under NRC jurisdiction?

20 MR. HEARTY: But my thing would be is, if  
21 they try to decommission the site and they've got a  
22 yard full of all these barrels that have the residual  
23 in there, your requirements would require them to  
24 account for the residual radioactivity at the site.

25 CHAIR COMFORT: Yes, that's true. But

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1 that's true about any -- any naturally occurring  
2 radioactive material, we'll look at it as part of our  
3 --

4 MR. HEARTY: Above background.

5 CHAIR COMFORT: Above background, right.

6 MR. SETLOW: Well, there's another example  
7 and it's what happened with the material that was  
8 determined to be licensable as an alternate feed out  
9 of the rare earth facility in California.

10 In that particular case, it was a pre-RCRA  
11 waste, which had been developed and dumped into some  
12 pits and now, the company wanted to take that sludge  
13 and wanted them to get rid of this material from the  
14 state, and so, the question then was, okay, how can we  
15 do it -- deal with it? Is it a RCRA material, and  
16 because it was a sludge, it was no, it's not, because  
17 it wasn't a solid.

18 Then it was, well, is it going to be  
19 subject to DOT labeling restrictions, because it's  
20 radioactive and when, in fact, does it become an NRC  
21 licensed material, and so, what happened was, as far  
22 as NRC was concerned, it became -- as an alternate  
23 feed, it was a licensed material once it hit the gate  
24 of the uranium mill.

25 But what happened was that the State of

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1 California went ahead and just classified this as a  
2 source material, and so, then it automatically was  
3 able -- they were automatically able to move it from  
4 California to Utah as source material, rather than --  
5 so, it had that trail all the way from California to  
6 Utah, without making that transfer.

7 CHAIR COMFORT: Okay, because the issue on  
8 this person is that we get rid of 40.13(a) and we get  
9 rid of 40.13(b). How do they transfer those drums and  
10 get rid of them, as you start getting into the  
11 clearance-type issues and stuff that we don't want to  
12 talk about?

13 But anyway, so, in the morning, we  
14 basically went through and were discussing the new  
15 information and before we continue on, did anybody  
16 have any extra thoughts at lunch time they want to  
17 bring up on that topic? Things that could impact,  
18 eventually, any type of recommendations that we want  
19 to go forth or consider?

20 (No verbal response)

21 CHAIR COMFORT: And I'll ask members of the  
22 public, have you got anything additional?

23 (No verbal response)

24 CHAIR COMFORT: Well, if that's the case,  
25 then we'll move on into the next area, which is the

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1 legislation and alternatives discussion.

2 Basically, this one, this area, what I'm  
3 hoping to get some discussion is, the group, when they  
4 originally recommended going forth with this, believe  
5 the best and most clean method to do it would be  
6 through legislation.

7 As I told you, in the history of the  
8 Commission at that time, didn't think that we'd be  
9 very successful with legislation and was looking at  
10 alternatives that we may be able to try to pursue.

11 The staff itself has done a little bit of  
12 looking at that issue, without great success. There  
13 is a couple of areas, and there really is to issues  
14 that have to be looked at, is legislation the best way  
15 -- actually, there's three things. Are there any  
16 alternative and if there are alternatives, are the  
17 agencies acceptable to something other than  
18 legislation, implementing such a thing?

19 In the past, we've looked at things like  
20 memorandums of understanding, but we can't do a  
21 memorandum of understanding, give another agency  
22 jurisdiction they don't already have. The MOU is  
23 really used to clarify basically, jurisdictions that  
24 we both have similar areas in. So, that wasn't  
25 looking like it was a good idea.

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1 Other places that we looked at for  
2 alternatives on doing this process is, could we change  
3 -- put in an exemption, and we found -- basically, we  
4 still main jurisdiction by putting an exemption that  
5 doesn't allow -- still under NRC jurisdiction, we've  
6 just determined that we don't want to regulate it, but  
7 it doesn't give the other agencies an opportunity to  
8 regulate it, and therefore, there could be a potential  
9 health and safety gap that's determined.

10 So, right now, what I'd like to do is open  
11 it up to -- does anybody have any alternatives and  
12 I'll suggest a couple, if nobody else does, but also,  
13 do they still feel legislation is the best way to do  
14 and what caveats maybe we should be watchful for?

15 I know Brian had a suggestion -- or  
16 basically, was like, if we do go forward with  
17 legislation, that we should certainly be working with  
18 all the agencies that would be impacted by that  
19 development of the legislation.

20 MR. SETLOW: That the working group would  
21 have some sort of a say, in terms of what that might  
22 look like, in terms of wording, before it goes up  
23 through to the Commission.

24 CHAIR COMFORT: Yes, so that it basically  
25 includes what the needs of the working group -- or

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1 recommendations, without going -- taking anything away  
2 or giving something that people don't want to put  
3 forward, because we're the ones who evaluated the  
4 issues.

5 MR. REGNIER: Well, as we discussed  
6 informally before we convened, certainly, there is --  
7 as the Commission pointed out in one of their, I  
8 think, papers, there is always a very high risk if you  
9 send something for legislation to Congress, that  
10 you'll get something other than what you asked for,  
11 because many other factors come into play, when  
12 Congress is drafting legislation.

13 So, from that perspective, if -- I think  
14 it is important to know by ability of other  
15 alternatives, maybe if you could discuss the merits of  
16 changing the percentage of -- the definition, whether  
17 that buys you anything.

18 CHAIR COMFORT: Going down the alternative  
19 route, the first issue to look at is, going that route  
20 without legislation, basically says NRC is making some  
21 sort of change in either the way that they interpret  
22 their existing statutes or that there is a method in  
23 the statutes that allows them to -- I won't say  
24 arbitrarily, but to go ahead and make a decision that  
25 we no longer have jurisdiction over such material.

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1           But that's basically an effort, NRC -- if  
2 you say could be acceptable to do it that way, then it  
3 puts the bag without as much easy way to go with it,  
4 to the other agencies to accept that they now have,  
5 and agree with, that that legislative change gives  
6 them authority and pulls it out from the Atomic Energy  
7 Act.

8           Ed basically said that there is one place  
9 in the Atomic Energy Act that could be looked at to  
10 provide an alternative and that's when they define  
11 source material in the Atomic Energy Act in definition  
12 Z, they put the term source material means uranium,  
13 thorium and any other material which is determined by  
14 the Commission, pursuant to the provisions of Section  
15 61 to be source material, and ores containing one or  
16 more of the foregoing materials, in such  
17 concentrations as the Commission may, by regulation,  
18 determine from time to time.

19           Now, there's two leaps you have to make  
20 with that. One, you have to look at and say, when  
21 they're talking about, in the first part of the  
22 definition, uranium and thorium, they don't meant any  
23 uranium and thorium. They mean only -- it's already  
24 extracted or concentrated uranium and thorium, because  
25 if you don't do that one, it doesn't matter what your

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1 percentage concentration is. All you're doing by that  
2 percentage is defining what the ore that we're  
3 considering source material is. So, you're not  
4 gaining yourself anything.

5 So, it's really -- by changing that  
6 concentration, which they say we can do from time to  
7 time, has to be looking at -- that the extracted  
8 uranium and -- or that uranium and thorium contained  
9 within it, isn't itself source material until it's  
10 been extracted.

11 So, now it comes down to, what's that word  
12 concentration from time to time mean? We've set a  
13 concentration of .05 percent by weight, but do they  
14 really mean -- again, as we talk about the history,  
15 the intent was to make sure there was an available  
16 supply.

17 Was that phrasing really going to mean --  
18 the intent of it to mean, what's the available -- make  
19 sure that there's material available for when we need  
20 it and on what level is that, and could you change  
21 that word from concentration? When it says  
22 concentration, instead of meaning an exact percentage,  
23 to define it differently, such as any concentration  
24 that has whatever purpose, that's purposely extracted  
25 or whatever, could you do it that way?

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1 My OGC is not too keen on changing things  
2 that we've interpreted in one way for 50 years, just  
3 to, of course, meet the needs of this group or -- if  
4 the Commission really felt it was important perhaps,  
5 we may be able to do it that way, but it's difficult  
6 and if you change that percentage level, you are  
7 removing some material and again, it's looking at the  
8 intent -- the first part is only meaning extracted  
9 uranium and thorium. The second part really covers  
10 the concentration of the .05 percent and all and if  
11 you change that, you could get rid of some of the  
12 activities and you have to set what level that would  
13 be for it, and hopefully, I made some sense on that.

14 Does anybody have any comments on that  
15 type of approach?

16 MR. SETLOW: I think one of the problems  
17 continues to be any of the states which follow the  
18 CRCPD Part N, which says that TENORM is those  
19 materials, with the exception of AEA materials.

20 So, basically, it just throws out anything  
21 with uranium or thorium from the licensing constraint.  
22 So, it doesn't solve a problem for those particular  
23 states.

24 CHAIR COMFORT: If you change the  
25 percentage and you basically said that uranium and

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1 thorium -- you know, again, you said the uranium and  
2 thorium in the Part A. You'd have to go along with a  
3 change and what that sometimes is meant to be, is it  
4 all -- is the uranium and thorium in your body, once  
5 it's been removed and processed, is that -- not even  
6 removed, but it's removed from your body or somehow  
7 done something with it, is that source material or is  
8 that rocks containing it, is that source material  
9 while it's sitting there? That's where the difficulty  
10 comes.

11 MR. SETLOW: Well, I don't know and you  
12 have to take a look at the flip side of it. If you  
13 change the percentage, what's economic today? Then  
14 all the sudden, the number may have gone down from .05  
15 percent, given the current price of uranium.

16 So, if you're doing that, you're making it  
17 even more difficult to exempt some of this stuff, and  
18 so, the question is whether or not the --

19 CHAIR COMFORT: Well, I don't know that it  
20 has to be in the -- the number or the percent has to  
21 be economic-based. It was based on economics of --  
22 back then, again, to ensure a supply. It wasn't --  
23 anything below that .05 percent was considered -- it  
24 wasn't worthwhile going -- too difficult and expensive  
25 for the Government to go after at that point.

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1                   Certainly, with today's technology, you  
2 could probably go down to a lower number, but do we  
3 need that material at the lower, and from the sense  
4 I've gotten, from the different groups I've talked to,  
5 we don't need -- we've got an adequate supply out  
6 there, that we don't need to ensure the Government  
7 has access to those lower numbers.

8                   So, what's potentially a higher number  
9 that we need to ensure that -- that we can do -- do  
10 you want to go and say, "Hey, we've got plenty of it  
11 already. We don't need any of it." Then basically,  
12 no ores become source material and is that what we  
13 want to do?

14                   That, as an approach, is to say, "Hey,  
15 it's going to be 99 percent or greater uranium to be  
16 considered an ore portion of it," but once it's been  
17 extracted or concentrated further, now it comes under  
18 the A definition. That's a way that you may be able  
19 to, I guess, pull it off, but it adds some questions.

20                   MS. MATTSEN: One argument for changing  
21 that to do however much is -- whatever concentration  
22 is actually used for the uranium -- I mean, used for  
23 recovery of uranium, would be that the number changes  
24 over time. The value of uranium went way down, now  
25 it's way up again. Could it go even higher?

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1 CHAIR COMFORT: Right, and that --

2 MS. MATTSSEN: It's still a pretty odd  
3 approach, given the history, but that would be an  
4 argument.

5 CHAIR COMFORT: Basically, what Cathy is  
6 saying is, right now, if there is a need -- the  
7 uranium supply starts drying up, that we don't find  
8 any more deposits and we've been using it left and  
9 right and stuff, the way the current regulations are  
10 written, we can say, "Hey, we're taking control -- the  
11 Government is taking control and regulating ores that  
12 contain the uranium to whatever level we want."

13 If we go this other approach that the  
14 group is recommending and all, you're kind of going  
15 away from that approach and instead you're saying, "We  
16 just don't get involved until it's actually going to  
17 be used, but we're not ensuring the adequate domestic  
18 supply."

19 Right now, there's not a feeling that  
20 there's not going to be enough, but by changing the  
21 percentage rate and going that way under the existing  
22 Atomic Energy Act, you leave that in place that, if in  
23 50 years from now, we find out that there's not an  
24 adequate supply of uranium, we can drop that  
25 concentration back down to something.

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1 MR. HEARTY: So, this is the only material  
2 that we're worried about keeping an adequate supply  
3 of. Every other material that NRC regulates is either  
4 for national security, safeguards reasons or for  
5 health reasons, for health and safety reasons.

6 Why wouldn't we set a number that was  
7 based on risk and health and national security  
8 concerns, as opposed to supply concerns?

9 CHAIR COMFORT: Well, the only -- the  
10 biggest problem with setting it on risk is -- the  
11 problem is, it's everywhere in nature and stuff and do  
12 you regulate the natural deposits in nature and how  
13 far do you go with that, because once you start saying  
14 this is a level that's based on risk, people are going  
15 to say, "My back yard is higher than that number. Are  
16 you going to come up -- I'm a danger and stuff."

17 MR. HEARTY: Until we started this working  
18 group, most of the people that regulated on .05  
19 percent thought it was a health based number,  
20 potentially, and not that it was based on early  
21 supplies.

22 CHAIR COMFORT: Yes. I agree with that, to  
23 a certain extent, but we don't -- again, it's how it's  
24 applied. That's where the inconsistency comes in and  
25 the population, in my opinion, is getting smarter on

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1 this and they're going to start getting more  
2 questions.

3 A lot of people you talk to, they don't  
4 know what uranium and thorium are, when you even bring  
5 it up. But with more knowledge based society, I think  
6 people are going to start seeing these inconsistencies  
7 and as products are being used from it, you run into  
8 the inconsistencies at these sites. How do you deal  
9 with the fact that you've got this stuff in nature at  
10 higher concentrations than what we're saying you've  
11 got to clean up, a lot of times, and we're regulating  
12 on that basis a lot.

13 Whereas, if you change the jurisdiction or  
14 you change that approach, that's the difficulty. Most  
15 of the material that NRC regulates is basically man-  
16 made, other than the uranium and thorium really, and  
17 now the radium, and we can control how much of that is  
18 made, and that's what we regulate, how it's made, how  
19 much is made and so on.

20 This is there. There's nothing we can  
21 control. It's already in place. So, it almost --  
22 there is a reason or rationale for having a different  
23 scheme for regulating it, because you don't know how  
24 much it is -- how much of it's there and it is an  
25 issue though, because the material is there. It has

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1 a health and safety impact.

2 I was actually looking at Amazon the other  
3 day -- or was it that? It was one of the websites  
4 talking, it was about an issue on Amazon, that they  
5 had some uranium ore on there and it was getting lots  
6 of play as to, "Ghee, I add it to my soup to make it  
7 bubble better and all and stuff."

8 But that stuff is out there. There are  
9 sites that sell ore and all and we -- basically, it's  
10 allowable under our current exemptions. But there is  
11 still some health and safety risk. If you go to  
12 unitednuclear.com, they sell lots of ores with -- and  
13 they advertise that it's got this high counts per  
14 minute and all and stuff, which certainly is well  
15 above anything that we would normally require  
16 regulation and yet, we exempt it. Is there a better  
17 way to do it.

18 Under the current scheme, we don't have  
19 any type of health and safety. Whereas, if we went to  
20 naturally occurring -- I mean, if we turned it into  
21 NORM, at least the states and all -- or we can drop  
22 that number or change how we regulate it, under the  
23 unprocessed ore-type regulations.

24 But there's a lot of things that go --  
25 have to be decided on that, as to how you're going to

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1 regulate it. But if you do it pure on risk on this,  
2 because it's natural, it's very difficult. Do you  
3 take the sandbox sand that came from that beach that  
4 has thorium in it? How do you regulate that? Should  
5 we be regulating it? Maybe, it depends upon the  
6 concentration.

7 MR. REGNIER: So then, is there a  
8 reasonable percent concentration it can be raised to,  
9 that would then -- see if I'm thinking right on this,  
10 it would then turn everything below that into NORM,  
11 which could then be regulated by the states, and yet,  
12 still give NRC authority over most fuel cycle  
13 operations?

14 CHAIR COMFORT: Most fuel cycle operations,  
15 once you get it out of -- probably -- the problem is  
16 that the mill, you're probably still below -- or you  
17 may -- depending upon what level you put it at, you're  
18 still -- it's still basically natural material without  
19 a lot of -- I don't think a lot of concentration.  
20 It's starting to concentrate in the process, in the  
21 yellow cake and all.

22 But I -- but you may be able to find some  
23 level there, that captures most. The question is,  
24 what do you want to capture and all and are there  
25 other concentrations of -- or activities that deal

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1 with uranium that you want to capture, and I'm not  
2 sure. That's something that you maybe want to look  
3 at. You've got any idea, based on your --

4 MS. MATTSSEN: Further exempting material  
5 and is potential health and safety, you need to have  
6 a raising number.

7 CHAIR COMFORT: Yes.

8 MS. MATTSSEN: We'd be exempting, by  
9 regulation and stuff that is a health and safety  
10 concern, potentially, which is quite different than a  
11 legislative change. It gives it to somebody else.

12 CHAIR COMFORT: Yes, and I guess that's  
13 where the -- ore would be not regulated. We would be  
14 giving an ore, that we raised the concentration level,  
15 to somebody else.

16 MS. MATTSSEN: Yes.

17 CHAIR COMFORT: But once that ore become  
18 processed --

19 MS. MATTSSEN: We're talking about the  
20 exemption, I thought too.

21 CHAIR COMFORT: I think probably -- well,  
22 --

23 MR. REGNIER: The definition.

24 MS. MATTSSEN: Okay.

25 CHAIR COMFORT: Yes, the definition would

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1 allow you to regulate -- or give up jurisdiction on  
2 ores that contain, but once you start processing that  
3 ore --

4 MS. MATTSSEN: Well, for practical purposes,  
5 the two numbers have always been the same.

6 CHAIR COMFORT: Right.

7 MS. MATTSSEN: The difficulty you would  
8 create by regulating, based on whether it's ore or  
9 not, we already have enough difficulty with that  
10 issue, whether something ore or not ore. So, having  
11 those two numbers of different concentration would  
12 present different problems.

13 MR. REGNIER: Well, if you put them both at  
14 the same concentration though, then you wouldn't be  
15 exempting anything below it, I think, and then, the  
16 question is, would the state step in and regulate what  
17 was the NORM, to alleviate the health and safety  
18 concern?

19 MS. MATTSSEN: If you raise the number in  
20 the exemption --

21 MR. REGNIER: As well as in the definition  
22 --

23 MS. MATTSSEN: -- you are exempting it, and  
24 it wasn't exempt before.

25 MR. REGNIER: But not if you raise it in

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1 the definition, because then it's NORM and states  
2 would have the authority to regulate it.

3 MS. MATTSEN: No, only the --

4 MR. REGNIER: No?

5 MS. MATTSEN: Only stuff that --

6 MR. HEARTY: It has to be removed from the  
7 AEA.

8 MS. MATTSEN: -- continues to be --

9 MR. HEARTY: It can't be exempted by  
10 regulation. It has to be not subject to the AEA.

11 MR. REGNIER: Which is what you would  
12 accomplish by changing the definition, right? I'm  
13 just thinking out loud.

14 MS. MATTSEN: If you just change the  
15 concentration in the definition and not the other  
16 words in the definition, then you would only change  
17 the status of certain concentration ores, as to  
18 whether they'd be AEA material or not.

19 MR. REGNIER: Okay.

20 MS. MATTSEN: But if you then exempted at  
21 the same concentration, you'd be exempting more  
22 material than is currently exempted and that we  
23 recognize as a health and safety issue.

24 CHAIR COMFORT: Cathy, could you raise the  
25 number -- the limit to a number that you would -- for

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1 ores, that you could basically raise it to a number  
2 high enough that you would get rid of most of these  
3 activities, such as mineral extraction, but even if  
4 you concentrated it above that -- I mean, to a certain  
5 number, it would still be -- or when you were  
6 concentrating the mineral extraction, that  
7 concentration would still be below that number that  
8 you set for ore, okay.

9 So, now that all you're left with is  
10 things that are higher concentrated and now, they're  
11 licensed by NRC, but they're not really -- you're not  
12 going to find them in nature that we're really cutting  
13 out right now, if you put that number up high enough.

14 Let's say, you picked a number like six  
15 percent or something and said, "Hey, if you  
16 concentrate -- as long as it's below six percent in  
17 the ore, it's no longer considered source material."

18 MS. MATTSEN: Yes.

19 CHAIR COMFORT: You concentrated it above  
20 six percent. The only way you're going to do that is  
21 if you're really intentionally doing it under that  
22 approach and why do we care about the 40.13(a),  
23 because you knocked out anything of the low levels  
24 that you're really trying to keep out anyway, and you  
25 go to just a pure decommissioning, that we would do

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1 for the other levels.

2 I mean, 40.13(a), the real purpose of that  
3 is to --

4 MS. MATTSSEN: You'd have a lot of materials  
5 that end up not ore --

6 CHAIR COMFORT: Right.

7 MS. MATTSSEN: -- for other reasons, like  
8 in mineral processing.

9 MR. WEAVER: Some of it would --

10 MS. MATTSSEN: But then --

11 CHAIR COMFORT: You'd have to look at  
12 changing the definition of what ore is at the same  
13 time.

14 MR. WEAVER: Some of us run on a tour of  
15 Metropolis and Paducah and went to where they received  
16 the yellow cake from Kotter Corporation Mill and  
17 Cannon City, there back East, and we went to the lab  
18 there, where they were doing their assay samples and  
19 they said, "Oh yes, we got this ore that we analyzed,"  
20 because what they do is, they take the yellow cake and  
21 re-dissolve it, because they think there's some  
22 impurities in it.

23 So, I mean, they were calling what they  
24 got -- they were calling the yellow cake ore, there at  
25 that facility.

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1 CHAIR COMFORT: For example, this Amazon  
2 one, they had taken down the site by the time I found  
3 it and all, but I was able to see an image and it  
4 looked like they may have been talking about U-238 and  
5 calling that ore, and that was what was in the  
6 container and that's clearly not ore on it.

7 But yes, you run into an issue -- and I  
8 see where Cathy is coming from, it's come out of the  
9 Part A of the definition that they say, uranium and  
10 thorium is source material and you have to come up  
11 with some way at the same time, that yes, you cleared  
12 out the ore portion of it, but the uranium and  
13 thorium, once you start processing it, it becomes  
14 under NRC jurisdiction.

15 MR. HEARTY: And that's not even -- was not  
16 even clear. I mean, earlier in the working group, I  
17 think Dennis Sollenberger was talking about basically,  
18 the way that could be interpreted is any atom of  
19 uranium or thorium is source material.

20 CHAIR COMFORT: Right, but until it leaves  
21 its place in nature, it's not under NRC jurisdiction,  
22 but once it is -- so, even though it's in the ore, and  
23 that's where the 40.13(a) comes in, even if you  
24 process that ore, that it's no longer natural ore or  
25 whatever -- or ore, but it's below .05 percent, we

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1 exempted that uranium and thorium. But we're  
2 exempting the uranium in thorium in that case, and in  
3 40.13(a), we're not exempting the ore, and that  
4 uranium and thorium is still going to be place, no  
5 matter where you do it.

6 MR. HEARTY: Right.

7 MR. RATHBONE: Gary, let me ask, if you  
8 simply go out and mine uranium ore, if you go down and  
9 dig it up and bring it up, what we talked about  
10 earlier, regulated "purposely extracted" -- remove the  
11 uranium ore from the earth and brought it up -- I'm  
12 not talking about in situ leaching. I'm just talking  
13 about the physical act of mining.

14 Now, is that change from the state of  
15 nature, is that something that we have --

16 MR. HEARTY: Well, EPA would consider that  
17 TENORM now.

18 MR. RATHBONE: Right.

19 MR. HEARTY: And so would the states.

20 CHAIR COMFORT: NRC, the way that I've  
21 understood it, basically, considers that while it's on  
22 the mine site, as long as you're not doing any  
23 extravagant processing --

24 MR. RATHBONE: Any chemical actions on it

25 --

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1 CHAIR COMFORT: It's still in its place of  
2 nature. Once it leaves the mine site on a truck, then  
3 it becomes under NRC jurisdiction.

4 MR. RATHBONE: Okay, but the essence of it  
5 is that it's on its way to a mill and in the mill,  
6 it's going to be processed, purposely extracted  
7 uranium and thorium and the chemistry of it is going  
8 to be changed and concentrated.

9 And so, clearly then, it's in our --

10 CHAIR COMFORT: Right, but under existing  
11 regulations, if a hobbyist or hiker goes through and  
12 grabs a rock and carries it off, it is now source  
13 material, if it's above -- contains above .05 percent  
14 uranium and thorium.

15 But we allow them to basically possess it  
16 under 40.13(b), which says you can have unprocessed  
17 ore.

18 Now, under this new one, basically, if the  
19 mine -- if the rock goes -- if the mined ore goes to  
20 the mill, it would be licensed by NRC. If it -- the  
21 hobbyist carries it off and does whatever he does, as  
22 long as he's not trying to take out the uranium and  
23 thorium, it's no longer licensed by NRC.

24 MR. HEARTY: And the problem is, it's just  
25 not one hobbyist because there is how many billions of

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1 tons of mine spoils each year?

2 CHAIR COMFORT: Yes.

3 MR. HEARTY: I mean, it's by far --

4 CHAIR COMFORT: I mean, one of the issues  
5 that we have run in to, in the past, under our  
6 regulations is when you get a site -- particularly  
7 like these mineral extraction ones, that we've run in  
8 to, you've got a bunch of big pieces of slag and  
9 people come by, "Oh, that's a nice rock. I'll put it  
10 in my yard or garden or use it as my foundation or  
11 break it up for gravel bed," and then you have --  
12 under our current regulations, we have to go through  
13 and, "Hey, that's licensed material. You've got to  
14 bring it all back and dispose of it purposely and  
15 stuff."

16 Under this other one, that's one of the  
17 difficulties, is a high enough health and safety risk  
18 that the other agencies are going to pick up and say,  
19 "Hey, you shouldn't be using this type of ore."

20 I know back when you were talking about  
21 it, you were doing a study of that.

22 MR. SETLOW: Right, and it's just the  
23 legacy waste primarily, because the modern  
24 requirements for mining and permitting, either from  
25 the Federal agencies or the state agencies, require

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1 reclamation pretty quickly, and so, that's materialist  
2 and just left out forever, and that was where the big  
3 problem was with -- the material had not been  
4 reclaimed and that individuals came along and said, "I  
5 need stucco or need sand and gravel to make the  
6 foundation of my house," and they came and used and  
7 all of the sudden, they're dealing with 600 micro-R  
8 per hour inside the house and so many radon levels.

9 MR. RATHBONE: And the point that you  
10 raised about the .05 percent in the original, what was  
11 the -- you mentioned the basis for that having to do  
12 with uranium supply or something.

13 CHAIR COMFORT: Well, the Atomic Energy Act  
14 --

15 MS. BUBAR: It was based on economics,  
16 basically.

17 DR. RATHBONE: What?

18 MS. BUBAR: It was based on economics.

19 CHAIR COMFORT: Well, the reason --

20 DR. RATHBONE: The economics of extracting  
21 uranium?

22 MR. HEARTY: Extracting uranium for the  
23 Government to make it.

24 DR. RATHBONE: That is not necessarily the  
25 same as the supply.

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1 CHAIR COMFORT: Yes, the reason -- Congress  
2 put in the Atomic Energy Act that we would set the  
3 concentration, but that concentration was based upon  
4 making sure we had an adequate supply for National  
5 Defense.

6 Now, what the decision of .05 percent was,  
7 it was economically, at that time, only feasible to go  
8 down to that .05 percent, so why worry about anything  
9 below that?

10 We just had a discussion on that. Now,  
11 that economics doesn't really play a role in it,  
12 because we have an adequate supply, we believe. The  
13 question is, will we have an adequate supply in the  
14 future, that we want to keep changing it?

15 DR. RATHBONE: From a historical basis,  
16 basically.

17 MR. HEARTY: But one of the things that  
18 started this group was NUREG-1717, showing that that  
19 exemption at that level, there were possibly very high  
20 exposures --

21 CHAIR COMFORT: Yes.

22 MR. HEARTY: -- to unregulated members of  
23 the public or workers. Now, we kind of looked at that  
24 and said maybe that's not as bad, but our document  
25 says, "But there still could be other ways out there

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1 that people are being exposed to this type of  
2 material."

3 So, if we try to raise that concentration  
4 limit -- and we haven't addressed those other ways out  
5 there that people could be exposed to this, I don't  
6 think that's going to fly too well with the public.

7 DR. RATHBONE: Your basis for raising it or  
8 your way of viewing it now would be from the  
9 perspective of public safety, is that right?

10 MR. HEARTY: I'm just thinking that that  
11 would be more consistent with the way NRC regulates  
12 things these days, is more risk informed.

13 CHAIR COMFORT: But again, it's looking at  
14 what Loren said on it, the radium -- it looks at a lot  
15 of the facilities that he's looked at as the bigger  
16 player in health and safety and outside of extracted  
17 uranium for the purposes under the Energy Policy Act  
18 that we now have just begun regulating, there are  
19 still a lot of scenarios that NRC doesn't regulate  
20 that radium, which would have a greater health and  
21 safety impact.

22 Basically, we're saying -- the idea is --  
23 part of this whole group's idea is, would the other  
24 agencies be able to, under their current  
25 jurisdictions, when they receive this material, be

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1 able to fill that gap for health and safety?

2 So, we're not leaving it. That's the  
3 thing, if we do an exemption, we're leaving a big  
4 hole. If we raise that and say, "We're raising our  
5 exemption level," we've got to do it in such a way  
6 that these other agencies can pick up, and that's the  
7 difficulty.

8 How do you do -- change the concentration  
9 level, that you still give them, those agencies, the  
10 jurisdiction?

11 MR. HEARTY: And I thought one of our basis  
12 facts was that we can't just change the concentration  
13 level because we're still keeping within the Atomic  
14 Energy Act and that prevents OSHA from regulating it.

15 CHAIR COMFORT: Yes, if you change the  
16 exemption in 40.13(a), you're correct on that. If you  
17 change -- as I said, do a two part change, kind of,  
18 one is the concentration of the ore, that you're  
19 defining what source material is, because NRC only has  
20 jurisdiction over source material and that's defined  
21 as uranium and thorium, that both uranium and thorium  
22 in ores, containing greater than .05 percent, okay.

23 What you'd have to do is basically change  
24 the interpretation of that first part of the uranium  
25 and thorium to not be just any atom of uranium and

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1 thorium, but only those that are extracted and that's  
2 where you get into difficulty with my OGC is, we've  
3 kind of taken a look that we regulate most atoms of  
4 uranium and thorium and we've been doing that for a  
5 long period of time.

6 And so, now to change after 50 years, what  
7 we've been interpreting that to mean, is a difficulty  
8 and that's why that alternative becomes more --

9 MR. REGNIER: I thought you said earlier --  
10 I guess I misunderstood you, that the first clause in  
11 the definition did not mean every atom.

12 CHAIR COMFORT: No, as I was saying --

13 MR. REGNIER: That it did mean extracting.

14 CHAIR COMFORT: No, we'd have to change it  
15 to mean extracted, to pull off --

16 MR. REGNIER: And what was the legislative  
17 history -- I can't imagine --

18 CHAIR COMFORT: That's why we --

19 MR. REGNIER: I can't imagine it meant  
20 every atom, because then you'd be regulating the  
21 entire -- every piece of soil on the globe.

22 CHAIR COMFORT: Well, it's after it's  
23 removed from its place in nature. So, once it's moved  
24 -- but now that's --

25 MR. REGNIER: But that's not in the

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1 statute.

2 MS. MATTSEN: Yes.

3 CHAIR COMFORT: Yes, it is.

4 MR. REGNIER: It is, after it's moved from  
5 its place --

6 MS. MATTSEN: Yes.

7 CHAIR COMFORT: Yes.

8 MR. REGNIER: That is in the statute?

9 MS. MATTSEN: Yes.

10 CHAIR COMFORT: Yes.

11 MR. REGNIER: Well, how have you got it?

12 CHAIR COMFORT: That's actually in the --

13 MR. REGNIER: Looking for loop-holes here.

14 CHAIR COMFORT: I'll have to find it, but

15 I know that there are the words in there somewhere.

16 Actually, well, one of the areas where it is used is

17 under Section 65 in reporting, "The Commission is

18 authorized to issue such rules, regulations or orders

19 requiring reports of ownership, possession,

20 extraction, refining, shipment or other handling of

21 source material as it may deem necessary, except that

22 such reports shall not be required, with respect to A)

23 any source material prior to removal from its place of

24 deposit in nature, or B) quantities of source

25 material, which in the opinion of the Commission, are

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1 unimportant, where the reporting of which will  
2 discourage independent prospecting for new deposits."

3 So, basically --

4 MR. WEAVER: But that's a reporting  
5 section.

6 CHAIR COMFORT: Yes, but you can't -- how  
7 do you regulate something if you can't require anybody  
8 to report it?

9 MS. MATTSSEN: You can't license with it.

10 CHAIR COMFORT: You can't license it or --

11 MR. HEARTY: How do you have a general  
12 license that allows people to take title of source  
13 material in the ground?

14 MR. REGNIER: That sounds like you have to  
15 regulate while it's still in the ground. That's  
16 weird.

17 MS. MATTSSEN: What general license?

18 CHAIR COMFORT: Yes, there's a --

19 MR. HEARTY: There's a general license to  
20 take title of source material.

21 CHAIR COMFORT: Yes, to take title of  
22 source material, but that's after it's been -- you  
23 don't -- and that just -- you can own it and not  
24 possess it, so you have -- so, it's going to be -- I  
25 can be Company A over here, but Company B is actually

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1 doing everything for me under their license. But I  
2 can still have title to it and stuff. I just can't do  
3 anything under that title, and that's 40 --

4 MR. WEAVER: One perspective that -- I  
5 mean, that they haven't quite put in the middle of the  
6 table is one Fred is going to be very familiar with,  
7 because his predecessor Wyndell Character was always  
8 very interesting when he talked about the Department  
9 of Transportation regulations.

10 This difficulty you have between sister  
11 and brother Federal agencies about jurisdiction and  
12 not being able to give up your own, making sure the  
13 other has, is not a problem at the state level,  
14 because we can be kind of, deputized in a sense and  
15 have in our rules, some of the Department of  
16 Transportation radiation regulations, because we were  
17 encourage -- we aren't limited in that way, we're  
18 encouraged to be part of the way that the Federal  
19 Department of Transportation rules are enforced, in  
20 the State of Colorado, for instance.

21 And so, from a state perspective, which  
22 regulates all radioactive material under a Radiation  
23 Control Act that's based on the model State Radiation  
24 Act, that most of the states have -- probably not all.

25 Some of these difficulties you're

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1 grappling with are just not the same problem. And so,  
2 to the degree that a state is assertive with regard to  
3 something that's been called to its attention, it can  
4 implement any of this and can implement it as non-AEA  
5 or AEA or TENORM or whatever because it's regulation  
6 of radioactive material under a Radiation Control Act  
7 that basically does define it as anything that emits  
8 ionizing radiation. So, it's down to the atom,  
9 whatever radio-nuclide it is.

10 So, I mean, some of this is the difficulty  
11 of -- NRC exempted -- OSHA can't go in there, that's  
12 the problem you're really working solving. But for  
13 the states as a practical matter, if there's the will  
14 to move in and do something, it will happen.

15 MR. HEARTY: But you can't regulate and NRC  
16 exempted license -- I mean, --

17 CHAIR COMFORT: Well, most of our --

18 MR. HEARTY: -- if a person is exempt  
19 under the AEA, from having this material, you can't  
20 take Federal preemption. The states can't preempt the  
21 Federal, under the Atomic Energy Act. The Federal  
22 Government has supremacy under the Atomic Energy Act.  
23 It can't be transferred to the state. It's not like  
24 EPA.

25 CHAIR COMFORT: We have an exemption at the

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1 .05 percent, depending upon the compatibility --

2 MS. MATTSEN: Compatibility B, all  
3 exemptions are Compatibility B.

4 CHAIR COMFORT: B, which says they have to  
5 be the same, right?

6 MS. MATTSEN: Because NRC makes decisions  
7 on what's exempt.

8 CHAIR COMFORT: So, you can't start  
9 regulating the source material at .03 percent. It's  
10 exempted at the Federal level there.

11 MR. WEAVER: There are ways to give  
12 attention to things that don't fall into the  
13 particular categories you're describing.

14 CHAIR COMFORT: Yes.

15 MR. WEAVER: We were able, very well, to  
16 deal with the thorium that was the subject of the  
17 Colorado OAS petition to NRC five years ago. We were  
18 able to find a way to deal with that, even though it  
19 was technically something that NRC hadn't seen as  
20 being -- within the orthodox framework, was difficult  
21 to deal with --

22 CHAIR COMFORT: Well, is this a general  
23 license that you're talking about?

24 MR. WEAVER: This is a different situation.  
25 But I mean, yes.

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1 CHAIR COMFORT: But doing -- I mean, trying  
2 to change doing a concentration level, as we've just  
3 been discussing, is very difficult because of the  
4 concept of how the current regulation is written and  
5 what the actual words -- the uranium and thorium mean  
6 in Part A of the definition, is it atoms?

7 Even looking at this thing I just read on  
8 the Section 65 of reporting, is where it says any  
9 source material prior to removal from its place in  
10 naturally, basically could be read to say that  
11 Congress was saying, "While it's in the ground, it's  
12 still source material. We just can't regulate it at  
13 that time," and that's one of the things that we're  
14 pushing to say, all atoms of uranium and thorium --  
15 they meant at that point, and so, again, changing the  
16 interpretation to fit a change of concentration and  
17 still be able to achieve what we're trying to do,  
18 because again, once you -- even if you change that  
19 level of what you call an ore, you still run into some  
20 difficulties of the uranium and thorium once it's be  
21 processed.

22 Below that level, it's no longer an ore,  
23 so you're talking uranium and thorium need to be  
24 licensed or something.

25 MR. HEARTY: But we don't license uranium

1 or thorium. We license persons.

2 CHAIR COMFORT: Right.

3 MR. HEARTY: And so, the idea is we want to  
4 regulate persons that are involved in the fuel cycle,  
5 in getting that material, uranium and thorium, out of  
6 the ground, getting it to a mill, processing it and  
7 dealing with the disposal of the waste from that.  
8 That's what NRC wants to regulate.

9 CHAIR COMFORT: And it's not just fuel  
10 cycle. It could be uranium dioxides for chemical  
11 experiments or whatever. But yes, concentrated  
12 material, we want to regulate.

13 MR. HEARTY: So, then why doesn't the AEA  
14 state that it will regulate persons that are involved  
15 in these activities?

16 CHAIR COMFORT: Well, that's what we're  
17 trying to push it towards.

18 MR. HEARTY: And then you can set up  
19 regulations that are based on the risks from specific  
20 activities and concentrations --

21 CHAIR COMFORT: And I think that's what the  
22 original recommendation was.

23 MR. HEARTY: Okay, because it seemed like  
24 we were straying away from that, alternatives.

25 CHAIR COMFORT: Yes, the alternative is,

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1 how do you implement that? Is there another way that  
2 we can implement it under existing legislation,  
3 without going back to Congress and changing that, and  
4 that's where we're running into difficulties, without  
5 redefining -- or re-interpreting, not redefining, but  
6 re-interpreting what certain parts of the Act mean or  
7 what certain words mean, such as maybe ore or what  
8 they meant in definition A, you get into a lot of  
9 difficulty.

10 So, it's a much, much cleaner way and I  
11 think that's what the group originally decided, was  
12 that you -- to really get it to go through, you need  
13 to go through legislation.

14 The difficulty is two-fold, going through  
15 legislation, one, just getting Congress to act upon  
16 it, it's very difficult, and as Ed said, basically  
17 when they do act upon it, are you going to get what  
18 you really asked for or is it going to change in some  
19 other way? Are you going to end up regulating  
20 additional things instead or are you going to give up  
21 more authority than what you were really looking for?

22 So, those are the pitfalls that you could  
23 potentially run under.

24 MS. BUBAR: Gary, just as a point of  
25 clarification, so, this discussion that we've just

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1           been having on changing the definition, would not be  
2           a legislative change, because we're talking about that  
3           being an interpretation under our requirements of the  
4           .05 percent?

5                       CHAIR COMFORT: Yes, the alternative would  
6           be some change in -- using -- as I said earlier,  
7           Congress has basically already given us the ability to  
8           change what concentration an ore is. Can you somehow  
9           use that in combination with some re-interpretations  
10          of what other words that aren't clearly defined in the  
11          Act mean, can you do that?

12                      Now, I've approached OGC and it's gone to  
13          the OGC with that kind of idea and what I've gotten  
14          feedback on is that OGC is not too keen on changing  
15          the interpretation of something that we've been -- had  
16          a single interpretation for 50 years on.

17                      MS. BUBAR: Right, so the options really  
18          are the original legislative changes.

19                      CHAIR COMFORT: Right.

20                      MS. BUBAR: MOU and -- and MOU's --

21                      CHAIR COMFORT: Well, MOU is not --

22                      MS. BUBAR: -- which isn't really viable,  
23          because address the jurisdictional issue, or using  
24          this clause of interpreting --

25                      CHAIR COMFORT: Right.

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1 MS. BUBAR: -- the .05 -- or interpreting  
2 the concentration to --

3 CHAIR COMFORT: Those are the ones that  
4 we've identified and we're certainly open for other  
5 alternatives.

6 MR. SETLOW: Right, and when we did this in  
7 the beginning -- Cathy remembers this well, that there  
8 were three alternatives and that was -- one was no  
9 change. A second was some sort of legislative  
10 alterative, or NRC changing either up or down, its  
11 concentrations for the source material.

12 When we had gone through all our  
13 machinations and looked at all of the different  
14 sources of exemptions that are in the 1717 and found  
15 that there were not a whole heck of a lot of them that  
16 really were as hazardous as we thought, it was decided  
17 that it was a lot cleaner to only have two  
18 recommendations out of the three because things didn't  
19 work out with the idea of the MOU's, and we explored  
20 that a lot.

21 It would basically come down to doing the  
22 legislation or no action, and so, we -- EPA felt that  
23 that -- the legislative option was perhaps the  
24 cleanest and one of the easier options that could flow  
25 forward, as long as we felt it was a good, simple

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1 legislative fix, and so, that's the one that we had  
2 recommended.

3 Certainly, it would make a little bit of  
4 our lives a little easier.

5 MR. WEAVER: Has the Energy Policy Act  
6 handling the radium question made it even more easy?

7 MR. SETLOW: Well, it think it's -- no, not  
8 necessarily, but it -- because that came after our  
9 recommendation for this working group. But it's  
10 consistent in the application in the way that it was  
11 written, to how we would have done it if we were going  
12 to do it for transferring that authority or making it  
13 cleaner, in terms of what NRC was trying to regulate,  
14 basically, those materials which have been  
15 concentrated purposefully or from which the material  
16 is being used for a specific kind of purpose, for its  
17 radiation -- radio-nuclide content, rather than  
18 incidentally, where it's a waste or a residue or  
19 whatever it's going to be.

20 MS. MATTSSEN: I think if we go to Congress,  
21 that our chances of getting what we ask for and not  
22 something different is improved by the Energy Policy  
23 Act, because we'll be saying, "Well, it's consistent  
24 with something you guys already did."

25 MR. SETLOW: That's right, "Oh, it's just

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1 something we forgot to do and by the way," and  
2 whatever, however you choose to sell it.

3 MS. MATTSEN: This is the same as --  
4 consistent approach to that --

5 MR. SETLOW: Yes, and we would --

6 MS. MATTSEN: But steering into some other  
7 direction and being less likely than it might have  
8 been before.

9 MR. SETLOW: Right, and then I think the  
10 other piece too was the question of how much NRC was  
11 going to be willing or able to take on, as far as  
12 licensing activity. That was a concern as well. We  
13 were discussing this back in 2001 and 2002.

14 MR. AHIR: This is the first meeting I'm  
15 here, so please forgive my ignorance, but I have a  
16 very basic question. When you exempt a process or  
17 industry, does that mean that you give up jurisdiction  
18 over it?

19 CHAIR COMFORT: No, all we're doing is  
20 basically, when we provide an exemption to a person,  
21 we're basically saying, "We won't regulate you." We  
22 still have the authority to, but under our  
23 regulations, we've determined that it's --

24 MR. AHIR: But you expect other agencies to  
25 take over regulations in that now.

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1 CHAIR COMFORT: No, they don't have the  
2 authority to take over. That's the problem, if we  
3 tried to go some sort of route of trying to provide an  
4 exemption, we still have jurisdiction over it, it's  
5 still under the Atomic Energy Act, so therefore, as  
6 you've heard a lot of the legislatures from other  
7 groups say they can't regulate AEA material, so  
8 therefore, it would go into an empty space.

9 MR. AHIR: If you still have jurisdiction  
10 over it, how do you expect to protect those workers  
11 that you exempted?

12 CHAIR COMFORT: Well, the exemptions that  
13 we currently have in place presumably already provide  
14 that, or they wouldn't be -- the exemption wouldn't be  
15 done.

16 We do analysis on most exemptions that we  
17 put in place now, that show that it's not going to be  
18 a significant impact to health and safety for the  
19 public or the environment.

20 MR. AHIR: Basically, you don't need  
21 anything from the other agencies. It's already --

22 CHAIR COMFORT: On that case, but what  
23 we're looking at here could be some situations where  
24 you get higher levels of material that do have some  
25 potential for health and safety impacts and if we

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1 exempt it, that potential is still there and nobody is  
2 overseeing it.

3 If we change jurisdiction, it's just that  
4 NRC is not overseeing the health and safety impacts.  
5 But OSHA and EPA and the states are overseeing that.

6 MR. AHIR: If the NRC still has the  
7 jurisdiction, we cannot regulate that.

8 CHAIR COMFORT: That's correct.

9 MS. MATTSSEN: That's right.

10 CHAIR COMFORT: So, that's why we're  
11 looking for a clean way that we can grant over -- or  
12 that the jurisdiction can transfer over to those  
13 agencies on it and the easiest way is legislation, but  
14 are there any ways that we can take this material out  
15 of the Atomic Energy Act and define it as something  
16 else.

17 MS. HILL: On your second example -- well,  
18 on the first number, you said we would have looked at  
19 it -- the impacts before hand, which is why we gave  
20 the exemption.

21 CHAIR COMFORT: Right.

22 MS. HILL: Then you said there's another  
23 situation where you might have higher levels and if  
24 it's exempt, it would fall through the cracks.

25 Well, what about what you just said

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1 before? Wouldn't you have looked at the impacts?

2 CHAIR COMFORT: Well, if we could -- what  
3 that was really going towards, if we could grant it --  
4 if by providing exemption, we could transfer  
5 jurisdiction, then we would be saying -- we'd do an  
6 analysis and say, "We've exempted this, but these  
7 other agencies are picking it up, so there's no health  
8 and safety."

9 But since we can't do that, yes, you're  
10 correct, that we would never go up to that level  
11 because we'd find that there's a health and safety  
12 impact.

13 MR. AHIR: But can you transfer  
14 jurisdiction without legislation?

15 CHAIR COMFORT: In most cases, no.

16 MS. MATTSSEN: No.

17 CHAIR COMFORT: That's what we're looking  
18 at, is there something in our statutes or your  
19 statutes that would allow you to either take it or for  
20 us to get it out of our statutes?

21 MR. AHIR: Obviously, that is not --

22 CHAIR COMFORT: Well, as I said, there are  
23 ways that you may, but it would be very, very  
24 difficult and -- because the path forward would not be  
25 straight. Just even the public perception would

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1 probably be that we're trying to pull something over  
2 somebody and all. It would be much, much cleaner to do  
3 it a proper legislative way and stuff.

4 MS. BUBAR: Which is really what the  
5 original analysis concluded.

6 CHAIR COMFORT: Right, that's exactly it.

7 MS. BUBAR: That legislation is the -- not  
8 the only, but probably just the cleanest route to just  
9 --

10 MR. AHIR: To us, it sounds like it's the  
11 only way to go.

12 MS. BUBAR: Well, unless you all point  
13 something out that wasn't discussed before --

14 CHAIR COMFORT: Right.

15 MS. BUBAR: -- which is some new  
16 legislative jurisdiction given to you or some new  
17 interpretation of current jurisdiction that would fill  
18 this gap.

19 CHAIR COMFORT: And I don't think we've  
20 found anything like that.

21 MR. RATHBONE: Yes, where would that  
22 happen? This was as of several years ago.

23 MS. BUBAR: Two-thousand-three?

24 CHAIR COMFORT: The paper was 2003, when  
25 the original recommendation --

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1 MR. WEAVER: In a couple of sentences, a  
2 poster example is the zirconium industry -- and  
3 Charlie is here, but basically, there was worry that  
4 there might be risky exposures to workers in that  
5 industry and some really good staff were probed into  
6 that and it seems like the things you do for silica or  
7 other kinds of just basic worker protection methods  
8 were sufficient to ensure that you would deal with  
9 most any of the radiation related questions in that  
10 particular industry.

11 And so, the good news was that this  
12 potentially risky situation could have been -- really  
13 would be handled by what is routinely done in an  
14 MSHA/OSHA sense at those facilities. Is that a fair  
15 recount?

16 CHAIR COMFORT: Well, basically what it was  
17 is, actually, our document showed that there was a  
18 potential for some higher exposures than we expected.  
19 But after we got better -- it wasn't based on real  
20 good data --

21 MR. WEAVER: It's a modeling exercise.

22 CHAIR COMFORT: Yes, and the conservatisms  
23 in there were way too conservative and industry came  
24 in and pointed that, "Hey, we were looking at things  
25 totally wrong on how it's running in the industry,"

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1 and they presented data to the group and the  
2 Commission, that showed this did not have nearly the  
3 impact that we were showing in this one document.

4 MR. HEARTY: But a lot of that impact was  
5 mitigated because --

6 CHAIR COMFORT: Because of other  
7 regulations, right.

8 MR. HEARTY: Right, yes, being regulated  
9 elsewhere.

10 CHAIR COMFORT: Yes, I mean, some of it was  
11 based on that we were modeling practices incorrectly,  
12 but some of it, we weren't also accounting for the  
13 fact that there were other agencies regulating, in the  
14 case of this material themselves, that had in -- in  
15 their own requirements, that were helping reduce the  
16 dose.

17 MS. HILL: And if I recall from the  
18 reading, that was non-radiation kind of regulations.

19 CHAIR COMFORT: Right.

20 MR. HEARTY: Right.

21 CHAIR COMFORT: I'll ask Charlie from the  
22 public if he --

23 MR. SIMMONS: Thanks for the introduction,  
24 Ken. I'm not compelled to speak. My name is Charlie  
25 Simmons and I've worked with the zircon and zirconium

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1 industries and other mineral industries for probably  
2 about 15 years now, in the NORM and TENORM and  
3 unimportant quantities area.

4 What Ken is relying is really an outgrowth  
5 of the publication of the document NUREG-1717, which  
6 was a compilation done by NRC's then contractor of  
7 historical studies, that had been done over many  
8 years, which evaluated, among other things,  
9 occupational exposures in the mineral processing  
10 areas, including the grinding of zircon and zirconium.

11 As has been -- through the rather  
12 significant occupational exposures that were estimated  
13 in that document in the order of many rems, in some  
14 cases, through inhalation and direct exposure  
15 pathways, the industry was compelled to take a good  
16 close look and say, "My God, either A, we have a real  
17 problem here or B, we're being essentially libeled."

18 And so, consequent analysis of the real  
19 world situations, examination of industrial  
20 operations, sampling and some updated dosimetry, using  
21 the more modern ICRP-68 dose conversion criteria,  
22 suggested that the historical information had  
23 dramatically overstated exposures and as was  
24 concluded, is that in mineral processing operations,  
25 there is a potential exposure to other toxic metals,

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1 including the crystalline silica, which is a well  
2 known bad actor in minerals industry, and through the  
3 subsequent normal industrial hygiene and program  
4 specific or standard specific exposure controls, to  
5 things like the crystalline silica, the manganese, the  
6 other toxic constituents, which might be present in a  
7 mineral situation, the collateral effect was the  
8 reduction in the inhalation exposure to airborne  
9 radio-nuclides if they exist in those facilities and  
10 in some grinding or bagging operations, there is, in  
11 deed, a potential exposure to all airborne dusts,  
12 including any naturally occurring radio-nuclides.

13 So, in mineral processing operations that  
14 are well managed and compliant with industrial hygiene  
15 practices and the standards that are controlling today  
16 for inhalation exposure, I think that the data is  
17 limited really to what we had presented, but I think  
18 it would be representative of other situations as  
19 well, have controlled inhalation exposures  
20 tremendously.

21 Just for the -- in addition to that - and  
22 I'll take any questions too, there is a couple of  
23 things I would just like to say for the benefit of the  
24 group, in that as you go forward in looking at the  
25 issues that you're confronted with today, there will

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1 be published in early '08, the proceedings from the  
2 IAEA's fifth NORM symposium, which was held in Spain  
3 this last Spring, which was a world forum on NORM  
4 issues as they are rising in both Europe and around  
5 the world.

6 There's much interesting work that has  
7 been done by others, some very interesting stuff  
8 that's coming out of Europe, in terms of occupational  
9 exposures to a variety of things, as well as some very  
10 good recent information coming from IAEA, which I  
11 would encourage -- even recognizing we were all  
12 constrained by our own statutes and limitations, there  
13 is good information that's available from IAEA, with  
14 regard to for example, study of -- the concepts of  
15 exclusion, exemption and clearance from regulatory  
16 systems.

17 Their document RSG 1.1, IAEA has come up  
18 with two recent either published or soon to be  
19 published, safety guides dealing with minerals  
20 industries.

21 One is the zircon and zirconium industry.  
22 Another one is going to be the titanium industry.  
23 Phosphate industry is impressive.

24 And so, IAEA, even though it's  
25 traditionally been looking at the energy-specific uses

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1 of atomic energy, has also, over the last few years,  
2 taken a good look at the natural materials as well and  
3 what role they play in radiation protection.

4 Well, worthwhile information to become  
5 educated on. But anybody have any questions or  
6 comments or other interests in the mineral or sands  
7 industry in particular, I'm happy to address them.

8 CHAIR COMFORT: Thank you.

9 MR. SETLOW: I would add that they've also  
10 published a guide on radiation safety practices for  
11 the oil and gas industry and they're currently working  
12 on publication of one on phosphate industry as well.

13 So, it's a long list of industries that  
14 they are looking at where NORM/TENORM as a waste, has  
15 -- needs to be taken account of for radiation  
16 protection purposes, primarily for the industry.

17 CHAIR COMFORT: Okay, any other comments on  
18 the legislation and alternatives areas and stuff, that  
19 anybody wants to add? I think we've basically come  
20 down to the conclusion that legislation still seems to  
21 be the most appropriate way that the agencies would be  
22 acceptable to having this transition done, if that's  
23 what we decide we want to do.

24 Okay, moving into the next area of agenda  
25 is basically trying to look at what options do we have

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1 to go from here?

2 The original recommendation was, of  
3 course, to try to change jurisdiction to allow NRC  
4 just to regulate material, uranium and thorium that  
5 was purposely extracted or concentrated, for the  
6 purpose of using that uranium and thorium.

7 Does anybody have -- does everybody still  
8 feel the same way, that best recommendation of the way  
9 to move forward? Are they acceptable? Do you have  
10 any other options that you'd like to discuss, that you  
11 don't think it's worthwhile to do at this point or  
12 you're concerned about it? I'm opening up for --

13 MR. FINDLAY: His statement was  
14 interesting, in that it sounded to me like they  
15 presented -- you presented data after a proposal was  
16 made and then changed the proposal? Is that what  
17 happened?

18 CHAIR COMFORT: No, what it was is, we had  
19 put out a NUREG that had data that was collective  
20 historical information that we had done -- our  
21 contractor had done calculations on of the dose  
22 impacts.

23 We were looking at basically -- this was  
24 the NUREG-1717 document that's referenced in the SECY-  
25 03-0068 --

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1 MR. FINDLAY: But then, the companies --

2 CHAIR COMFORT: But basically, they came  
3 and said, "We have additional information," because  
4 it's -- for the zirconium industry calculation,  
5 basically the contractor used data from basically one  
6 paper they had had before and then they added  
7 conservatisms on top of that, to get their  
8 calculations and in the midst of our discussions, Mr.  
9 Simmons came in and basically gave us information to  
10 show that those calculations were probably incorrect  
11 -- had improper assumptions and were probably way too  
12 conservative and based on the information that he was  
13 able to provide, as well as us looking at -- doing our  
14 own evaluations, we were able to determine that the  
15 doses, based on these practices and stuff, were  
16 significantly lower than what was portrayed in that  
17 book, to the point that actually, we do have a  
18 requirement that if we're going to use NUREG-1717 as  
19 a reference, that we have to go through the  
20 information in there to make sure nothing has changed  
21 or shouldn't be re-evaluated in some way.

22 Some of the calculations in there were  
23 able to be done with very good data, so they're pretty  
24 good. Others, we weren't using -- we didn't have  
25 available at the time, the best data and when we get

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1 additional data, we will review it and update it.

2 But it wasn't that we made our  
3 recommendation on this group as a whole and he came in  
4 and said, "Here's the new data," and we changed our  
5 recommendation. It was just that one publication had  
6 information that was updated, and that happens with  
7 most documents that we have, you've got to get new  
8 information.

9 MR. FINDLAY: Yes, that public openness --

10 CHAIR COMFORT: Right.

11 MR. FINDLAY: -- the additional empirical  
12 data that can clarify --

13 CHAIR COMFORT: And that's very helpful and  
14 that's one of the reasons why we find having the  
15 public available in this meeting -- this group's  
16 meetings has been very useful, is to make sure that we  
17 aren't overlooking things and we hope they will  
18 continue to participate through the process.

19 MR. WEAVER: As a compliment to NRC staff,  
20 there was actually a gap between the meetings, where  
21 there was really some calculation done, I mean, some  
22 really hard ciphering done to check the industry  
23 information and make sure that this really was useful  
24 new information that lead to a slightly different view  
25 of that industry.

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1                   And so, there was a gap of a year or so,  
2 because of taking it under consideration. It was the  
3 way it ought to work, actually.

4                   CHAIR COMFORT: And that's kind of the  
5 purpose of the meeting in the same way, we would just  
6 want to make sure that we haven't gotten any new data  
7 that would significantly change the recommendations  
8 that we had prior to this and again, I'm looking for  
9 -- does everybody agree right now that the previous  
10 recommendation was the best, or do they want to come  
11 up with alternatives as to how we should proceed from  
12 here?

13                   MR. REGNIER: Again, my question, was there  
14 a discussion, and if so, what were the pros and cons  
15 of having NRC's jurisdiction be related to the fuel  
16 cycle, instead of any use of uranium, assuming that  
17 there might be some uses for which people would  
18 extract uranium that weren't fuel cycle oriented?

19                   CHAIR COMFORT: Actually, the original  
20 focus -- if I remember correctly, was we were going to  
21 limit to the fuel cycle itself because that's what  
22 source material is really -- the whole intent of it is  
23 to lead to that.

24                   However, we looked at that -- the purpose  
25 of having that uranium out there when it's extracted

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1 and all. You still have some more significant effects  
2 a lot of times and when it's combined with other  
3 materials, you may be controlling those other  
4 materials.

5           Once you're starting to extract it, you  
6 don't have those roles as much, and even more so now,  
7 with what we've done with the radium, it just makes  
8 more sense to keep it broader, I think.

9           We're doing it with the radium and  
10 basically looking at anything that's being used for a  
11 specific purpose in a couple of categories that we're  
12 going to regulate and this would again, try to keep it  
13 consistent, not just the fuel cycle, but the any  
14 products.

15           I've gotten phone calls on people using it  
16 for glazes in pottery. You've got labs using uranyl  
17 acetate and all and stuff. They would certainly be  
18 controlled potentially under other methods and stuff,  
19 and I guess that is an option though, do we limit it  
20 or try to limit, just to the fuel cycle? Does anybody  
21 have any thoughts?

22           MR. HEARTY: If you pull it out of source  
23 material and byproduct material in that, it could  
24 potentially be regulated as a metal under RCRA,  
25 because it wouldn't have that specific exemption.

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1 CHAIR COMFORT: Right, and is that  
2 something -- is that -- does the group think that  
3 there's a better way to do it? I mean, that's what  
4 we're here for, to discuss that as an alternative.

5 MR. SETLOW: It definitely makes it cleaner  
6 out of RCRA because I guess, the regulatory decision  
7 that was made by EPA was to definitely exclude the AEA  
8 and we never did go in to do anything for the radium.

9 MR. HEARTY: But then we still run into the  
10 problem of having uranium coming out of -- out of the  
11 fuel cycle or out of purposefully extracted uranium  
12 now potentially mixing -- we have a -- that becomes a  
13 mix waste, if it has a chemical characteristic or  
14 something with it, where uranium acetate or something  
15 would not be a mixed waste. I'm just --

16 It's getting back into that pedigree of  
17 defining waste for disposal versus having the same  
18 type of material from --

19 MS. MATTSEN: We'd be leaving something to  
20 somebody else, that we had, in fact, been regulating,  
21 where most of this, we hadn't been regulating, even  
22 though it was our jurisdiction. We had been exempting  
23 them under .05 percent and uranium/thorium does go  
24 into products, other than -- they're used for other  
25 purposes, other than the fuel cycle and it gets very

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1 highly concentrated for -- the thorium never did get  
2 into the fuel cycle and that's possible, it's not  
3 exact.

4 MR. HEARTY: And there's a lot of  
5 exemptions for different types of potteries, thorium  
6 welding rods, all of that is in there.

7 MS. MATTSEN: Right, so, we didn't want to  
8 just kind of drop all that stuff, because it's going  
9 further than we needed. We just want to get out of  
10 the incidentally concentrated things that -- the  
11 TENORM area.

12 CHAIR COMFORT: But I see the opinion. It  
13 does make a -- if you did put it specific that NRC is  
14 only regulating the source material that's going into  
15 the fuel cycle, you do get out of the issue of mixed  
16 wastes and stuff, when you're dealing with hazardous  
17 waste combined with uranium and thorium, outside of  
18 that much smaller area now, and that may lead to  
19 easier historical -- for the material.

20 That's the benefit, I guess, of going that  
21 way, but as you stated, we've been regulating all of  
22 this and it would actually be more consistent and  
23 that's part of what we see as one of the benefits with  
24 the Energy Policy Act, is the more consistent we can  
25 stay with what they had in there, the more likely we

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1 could get legislation for --

2 MR. HEARTY: Can you -- I'm sorry.

3 MR. REGNIER: I was going to say, the real  
4 motivation behind the Energy Policy Act though was  
5 definitely security.

6 MR. HEARTY: Right.

7 MR. REGNIER: And use in the material and  
8 dirty bombs, which isn't --

9 CHAIR COMFORT: Which isn't as really of a  
10 concern of what we're talking about here, right.

11 MR. REGNIER: Talking about it, the  
12 question, I guess, is whether the states then and the  
13 other agencies would pick up the regulation that stuff  
14 like pottery and welding rods or whatever --

15 MS. MATTSSEN: Well, but isotopically  
16 separated material is a security concern.

17 CHAIR COMFORT: Right.

18 MS. MATTSSEN: So, we'd have that  
19 complexity, if we wanted to make sure we keep that  
20 part of it.

21 CHAIR COMFORT: Yes.

22 MR. HEARTY: Can you re-read the  
23 definition, again, that you read earlier and see how  
24 that would fit, if we put in uranium instead of radium  
25 or thorium instead?

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1 MS. MATTSEN: Well, the first part of  
2 11(e)(3) for radium is, "Any discrete source of radium  
3 226 that is produced, extracted or converted after  
4 extraction before, on or after August 8, 2005, for use  
5 for commercial, medical or research activity," and the  
6 discrete source is defined as radio-nuclide that has  
7 been processed, so that it's concentration within the  
8 material has been purposely increased for use for a  
9 commercial, medical or research activities.

10 So, although these words aren't exactly  
11 what we had, it would have been, I think, more  
12 complicated to do so, when you're talking about a  
13 broader range of things, then just uranium and  
14 thorium. The end result is the same as what we were  
15 trying to get at, at that time.

16 MR. HEARTY: So, could you put discrete  
17 sources of uranium and thorium and want to regulate  
18 that?

19 MS. MATTSEN: Except I mean, we could  
20 potentially, but --

21 MR. HEARTY: But isn't that what we're  
22 talking about?

23 MS. MATTSEN: But the definition -- as  
24 discrete source is defined and has byproduct material  
25 is defined, what the means is what gets purposely

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1 concentrated for use and the discrete source doesn't  
2 add anything. If anything, it tends to confuse people  
3 because they think once it's not discrete anymore,  
4 it's not going to be regulated, although it is.

5 MR. SETLOW: Yes, and with the AEA -- with  
6 the exception of this one new clause and under the  
7 Energy Policy Act of 2005, there's nothing that says  
8 discrete source of uranium.

9 MS. MATTSSEN: For consistency, we could  
10 consider using the words discrete source, again, but  
11 just to make it look the same.

12 MR. HEARTY: But isn't that what we're  
13 talking about?

14 MS. MATTSSEN: But the definition that we  
15 have --

16 MR. HEARTY: We're using that to get NRC  
17 away from having to regulate water resins that have  
18 radium in it, because it's not being purposely made  
19 for commercial use.

20 We don't want to regulate uranium that's  
21 from the same source. It seems like the same language  
22 would get us there.

23 MR. RATHBONE: We set off to do this under  
24 our NORM rule, specific -- the discrete source. So,  
25 you would just add to this, uranium and thorium?

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1 MR. HEARTY: But we're talking about taking  
2 away the definition of source material.

3 CHAIR COMFORT: You basically change the  
4 definition of source material to be consistent with --

5 MS. MATTSSEN: To be used with --

6 CHAIR COMFORT: Through legislation.

7 MR. HEARTY: I thought it was passed that.  
8 I thought we're to the discussion --

9 CHAIR COMFORT: We're passed the discussion  
10 of legislation.

11 CHAIR COMFORT: So, we're basically saying  
12 now, do we want to go forth with a previous  
13 recommendation and do we want to -- or do we want to  
14 make changes to that and basically saying couldn't we  
15 just use those words too?

16 MS. MATTSSEN: There's two pieces of this  
17 that are different than what we had. One was using  
18 the term discrete source and we can go back and forth  
19 and consider whether or not it would be easier to have  
20 the same words in there, or uranium and thorium, as we  
21 do for radium.

22 But it's going to be regulated under a  
23 different part of the regulations anyway.

24 MR. WEAVER: For uranium, the important  
25 distinction is whether it's enriched or depleted or a

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1 natural.

2 MS. MATTSEN: But the words we had has the  
3 same -- draws the same line, with respect to the --  
4 because of the definition of discrete source and some  
5 other words in the definition of byproduct material.

6 So, whether we use that exact wording or  
7 not, we'd be trying to accomplish the same thing.  
8 It's just a matter of semantics and which way is going  
9 to be clearer. But the other part --

10 MR. SETLOW: But what that does is it will  
11 take something like zircon and throw that back into  
12 the regulatory mix again, because if -- because zircon  
13 contains uranium and thorium and radium in its matrix.

14 And so, if you say that it's a discrete --  
15 it's got a discrete source of uranium and thorium,  
16 it's produced or extracted or converted for use, for  
17 a commercial metaphor, for research activity, I guess,  
18 then what I'm thinking is that it goes into that  
19 product and then it falls back into the regulatory  
20 regime of NRC and I --

21 MR. REGNIER: My view is that the term  
22 discrete source is very confusing, actually. It's  
23 maybe not something that we should try to perpetuate  
24 in another part of the regulation, and particular with  
25 the regulation, such as the discrete source, it really

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1 isn't a discrete source, but for health and safety  
2 reasons, you've chosen to -- I think it might.

3 It's a rather confusing and not very  
4 descriptive term.

5 MS. MATTSEN: That's what we had concluded  
6 a few years back when we were talking about it. For  
7 discussions, we often use the word discrete versus  
8 diffused and it was okay for that. But using it in a  
9 definition when you really don't --

10 CHAIR COMFORT: What do you want to --

11 MS. MATTSEN: -- when you're really trying  
12 to capture something broader, the word discrete  
13 normally gets you --

14 MR. RATHBONE: What would you suggest then?

15 MS. MATTSEN: Well, I think sticking with  
16 what we had is probably better.

17 CHAIR COMFORT: Yes, but again, that part  
18 of it will be worked out when we develop the  
19 legislative package --

20 MS. MATTSEN: But that part --

21 CHAIR COMFORT: -- and that would be  
22 worked out --

23 MS. MATTSEN: That particular piece doesn't  
24 have any ultimate effect on exactly where we're trying  
25 to draw the line, it's just a matter of which is going

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1 to be more confusing and which is going to sell better  
2 to Congress and whatever.

3 But the other piece of this that's  
4 different is before, commercial, medical and research  
5 activities, and that would affect the Military, unless  
6 our OGC changes their mind, with the interpretation  
7 that they put into the rule, or certain activities of  
8 the Military.

9 When radium is used in certain activities  
10 in the Military, isn't not byproduct material and I  
11 don't think we really need to put that confusion into  
12 that.

13 MR. HEARTY: I'm really confused now.

14 CHAIR COMFORT: Yes, if we go towards that  
15 approach and you particularly take out Military,  
16 defining it as source material and you have like, the  
17 depleted uranium ammo and things like that, would that  
18 now fall under source material or not, under this  
19 definition?

20 MS. MATTSSEN: Right, as we work this --

21 CHAIR COMFORT: That's what we have to do  
22 --

23 MS. MATTSSEN: -- rule making for the most  
24 -- most of the time, we're thinking for commercial,  
25 medical and research activity covered it all, that it

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1 was the same thing as what we were doing in this group  
2 before, that if you purposely extracted concentrate  
3 for use of the radium, that it -- that this meant the  
4 same thing, but towards the end of the process.

5 MR. HEARTY: Okay, but I mean --

6 MS. MATTSEN: There was a decision that we  
7 --

8 MR. HEARTY: -- what is the stuff -- the  
9 start of this whole conversation -- we were talking  
10 about NRC wanting to regulate it, similar to how  
11 they're doing the radium and now, with the radium, it  
12 might be easier to make the change. But they're not  
13 --

14 MS. MATTSEN: I think this thing -- the  
15 specific language --

16 MR. HEARTY: They're not related at all.

17 MS. BUBAR: We were talking about maybe  
18 incorporating some of the specific language, as  
19 opposed to what was in the original proposal, and I  
20 think we're saying that's not necessarily a good  
21 approach, although the intent --

22 MR. HEARTY: So, do the states understand  
23 what radium they regulate and what -- under their  
24 statutes, and what radium the NRC regulates under the  
25 EP Act, because it doesn't seem clear to me at all.

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1 MS. MATTSEN: Well, the states regulate --

2 MR. WEAVER: Well, we regulate it all,  
3 because Colorado has adopted the new definition  
4 already. It's in place in Colorado, so it's in effect  
5 right now, the new type of byproduct material, but we  
6 regulated it before and now, we just have a little  
7 different definition. But we still regulate it now.

8 MS. MATTSEN: Most of the states did  
9 regulate discrete radium differently than TENORM  
10 anyway, because under Part C, when they use  
11 radioactive material, if you had a radium source or  
12 you had processed uranium in a source, that got  
13 regulated under -- that was covered under Part C and  
14 not Part N.

15 So, what we're doing really, is very  
16 consistent with most of the state regs anyway.

17 MR. WEAVER: That was a concept called the  
18 Licensing State Concept and they actually went through  
19 a whole process of putting in place, sealed source and  
20 device reviews for radium devices using the licensing  
21 state, rather than the agreement state concept.

22 So, this was how you did the very same  
23 thing for radium devices that you did for NRC type  
24 devices, Atomic Energy Act devices. So, you really  
25 had an equivalent structure and states went through

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1 and got approved as licensing states, as you know.

2 So, yes, I mean, what you said, that by  
3 analogy for the discrete or sealed source type  
4 situations.

5 CHAIR COMFORT: Going back to what Brian  
6 was coming up with is the intent of the words are kind  
7 of what we'd be doing, but the purpose of the words is  
8 different. Remember, the EP Act was doing it on  
9 security and we're not doing it on that. So, the  
10 words could be a little bit different on what ends up.

11 MR. HEARTY: And what are we doing this on?

12 CHAIR COMFORT: Naturally occurring  
13 radioactive materials that's -- I'll call it diffused,  
14 but it doesn't meet the definition of either extracted  
15 and concentrated for the use of -- or for the use in  
16 certain areas. We're trying to do a parallelism on  
17 that, that the stuff that isn't would be regulated by  
18 not NRC, and anything that is would be regulated by  
19 NRC. That's for the use of the uranium and thorium.

20 MS. MATTSSEN: Well, another goal of the EP  
21 Act was to put consistency into the regulation of  
22 radioactive material and that had already been around,  
23 but it was the security that the impetus done. And  
24 so, that was --

25 CHAIR COMFORT: So, we're kind of doing a

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1 follow up for --

2 MS. MATTSEN: If they get it done, but the  
3 idea was also, that the accelerator-produced material  
4 and concentrated uranium would get regulated in a more  
5 consistent manner.

6 MR. REGNIER: I guess we're certainly not  
7 going to be trying to draft legislative language here,  
8 certainly not today.

9 MS. MATTSEN: No.

10 MR. REGNIER: I would presume that for the  
11 legislative option, one would be looking at maybe  
12 either both redefining source material or particularly  
13 addressing NRC's jurisdiction, and I guess one thought  
14 on that would be in that regard -- wouldn't want to  
15 think about it being limited to the fuel cycle and  
16 more of the pros and cons or try to figure out what  
17 the disadvantage of that would, assuming that the  
18 states and other agencies could pick up the regulation  
19 of stuff like pottery.

20 CHAIR COMFORT: Or the chemical uranium  
21 uses and all and stuff, and that's why I'd rather put  
22 this discussion up now, instead of legislative  
23 language -- you know, is that a recommendation that  
24 we'd prefer to do?

25 Now, I think we did go back -- back when

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1 we did the original group, we had started out on fuel  
2 cycle, but I can't remember exactly why we expanded,  
3 and I think it's more because we had been regulating  
4 it. They were just discrete materials -- that there  
5 is a little -- usually with the discrete materials,  
6 you're going to have a little bit more health and  
7 safety concerns with it, that we wanted to stay  
8 involved with that and felt that NRC may have the  
9 better experience in dealing with those, rather than  
10 moving it to the other agencies.

11 Again, remember, the real intent of this  
12 group is for the low levels of source material is what  
13 we were looking for.

14 MS. MATTSEN: Right.

15 CHAIR COMFORT: What's the best way to  
16 regulate those? So, this ended up -- there are -- the  
17 recommended approach basically gets rid of some of the  
18 areas that have higher concentrations that we did,  
19 again, a purpose pedigree versus a health -- a risk  
20 pedigree on it.

21 So, you're not picking up things like the  
22 water industry and all, and that's, I guess, one of  
23 the other things that we should be looking at is, if  
24 we're going to go forward, should we be trying to pick  
25 up things like that? Do we think that the health and

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1 safety provided by the other agencies is sufficient  
2 for those materials?

3 In the same way, are they sufficient for  
4 all those other materials? What's the best way? Does  
5 anybody have any opinions on that, that they want to  
6 voice? Or do they feel the original approach is still  
7 the best?

8 MR. SETLOW: Well, our position, I guess,  
9 is still that the original proposal is still the best,  
10 it's the cleanest and we've already demonstrated, I  
11 think, in -- for drinking water treatment and for  
12 sewage/sludge, that we do have an approach that will  
13 work.

14 CHAIR COMFORT: And I'll also offer up to  
15 the public, if they have any options that we haven't  
16 discussed here, that they think we ought pursue or  
17 consider here, certainly speak up for them.

18 MR. LEFLEUR: Mike LeFleur again. We  
19 basically take contaminated water and run it through  
20 an ion exchange facility and discharge compliant  
21 water. It meets the various standards for drinking  
22 water or for discharge into a stream or whatever.

23 We do the same identical process if the  
24 source is drinking water, if it's a pit lake, if it's  
25 a uranium mine drainage. Some -- get rid of your

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1 regulatory authority over with drinking water, you'd  
2 still have authority over other sources of ground  
3 water, more than likely.

4 So, I don't see why we should have  
5 different regulatory licensing regimes for the same  
6 identical process.

7 All of our health and safety requirements  
8 and our NRC license and our states licenses are  
9 identical, except for on the NRC, if it's a general  
10 license client, you don't have financial assurances.  
11 But other than that, everything is identical.

12 So, we should maintain that consistency.  
13 So, I would recommend that you don't do anything to  
14 the existing laws. If you're going to change  
15 something, I would recommend that you increase your  
16 authority over radioactive materials, like radium in  
17 the drinking water.

18 But for all these other issues on uranium,  
19 source material, I would keep it the same. It's  
20 working and it's consistent across the country.

21 MR. RATHBONE: And you like it like it is.

22 MR. LEFLEUR: I sure do.

23 CHAIR COMFORT: I have a question for you.  
24 When you're like, cleaning up the ground water from  
25 mines and all and stuff, the purpose there is to clean

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1 up the ground water, to meet some sort of thing.  
2 You're not trying to get the uranium for a purpose,  
3 although eventually, it may be used for one, but the  
4 primary purpose while you're doing that is, you're  
5 trying to help reduce the contamination of the ground  
6 water or what?

7 MR. LEFLEUR: At these prices, we've been  
8 approached by a lot of companies that have uranium in  
9 their mine drainage or in pit lakes. They've been  
10 putting flocculent into -- put it down on the bottom  
11 with their other heavy metals.

12 But now, with the price of uranium, they  
13 want to recover the uranium.

14 CHAIR COMFORT: So, you're doing it for  
15 recovery purposes on that?

16 MR. LEFLEUR: For a profit.

17 CHAIR COMFORT: Okay, to get the uranium --

18 MR. LEFLEUR: But it's the same process.

19 CHAIR COMFORT: I understand and I've heard  
20 you say in the past for in situ leach or ISL  
21 facilities, you're kind of looking at the same thing  
22 and we're licensing those, but why are we not looking  
23 at the other?

24 Again, all we're defining is, what's the  
25 purpose? If you're going at it for the uranium to

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1 sell the uranium and use it, that's one thing. But  
2 cleaning up the -- yes, it's the same process, but --

3 MR. LEFLEUR: You're trying to make a  
4 distinction between -- let's call it -- in your  
5 environmental reports, waste management, section of  
6 the EA, where somewhere, you're going to send it to a  
7 land fill, Utah or something, or we would send it to  
8 a processor or might even become a processor  
9 ourselves.

10 MR. RATHBONE: Yes, but see, it's kind of  
11 interesting because what you're saying is that your  
12 primary purpose -- let's say in the original, is to  
13 clean up the ground water.

14 But then, along comes -- it becomes price  
15 of uranium dependent, and so, when uranium is a few  
16 dollars a pound or so, well, you're just cleaning up  
17 ground water. You're not -- but when the price gets  
18 up to where it is now, then it goes into this -- you  
19 can say it becomes mixed.

20 In other words, you really are purposely  
21 extracting.

22 CHAIR COMFORT: Well, the definition  
23 becomes really a --

24 MR. RATHBONE: Yes, I know, but if the  
25 price fell, then well, throw it away.

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1 MR. LEFLEUR: No, we never throw it away  
2 because it reduces our disposal cost.

3 CHAIR COMFORT: The question becomes --

4 MR. LEFLEUR: You can always have it  
5 processed, even if it's five dollars a pound.

6 CHAIR COMFORT: For the drinking water in  
7 particular, would you be extracting the uranium from  
8 that, if you didn't have the regulation that says you  
9 have to clean the drinking water?

10 The end result of -- that you found a more  
11 efficient way to dispose of the material that actually  
12 provides your profit is -- and is probably a more  
13 health and safety-wise better way is great. But the  
14 overall purpose on that one is that you're only doing  
15 it -- the only reason your operation there is there,  
16 is to clean the drinking water.

17 On these other sites, you're saying, "Hey,  
18 I've got a high enough concentration that it's worth  
19 me to clean it up. There's nothing else requiring me  
20 to do it, but I'm doing it because I want to get the  
21 profit out of the material," and yes, it's the same  
22 thing or process, and I understand your concern, as to  
23 why are they being regulated differently, is what  
24 you're saying now.

25 On the other hand, you could go -- well,

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1 I guess that's still going fuel cycle. So, it would  
2 still under the -- you know, the differences, so that  
3 wouldn't go.

4 But again, the question also becomes --  
5 particularly on the case with drinking water, is NRC's  
6 regulation of it causing unnecessary burden that the  
7 states could be achieving the health and safety for,  
8 but adding a cost that basically makes it prohibitive  
9 for people to drink clean water, and that's something  
10 that we're also --

11 MR. SETLOW: It also introduces a dual  
12 regulatory scheme, for what's being proposed by Mr.  
13 LeFleur here, where EPA has had the responsibility  
14 through the Safe Drinking Water Act and the Clean  
15 Water Act, for regulating -- as also CRCLA, for making  
16 sure that ground water sources are cleaned for use for  
17 drinking water now and into the future or for assuring  
18 that discharges from mines and other facilities also  
19 has a potential of remaining pure and clean, such that  
20 if it eventually becomes drinking water source or used  
21 for other reasons, it's clean and those hazardous  
22 components are gone.

23 Third, under CRCLA, what we have, where we  
24 considered it as a hazardous constituent, we mandate  
25 the clean up of these sites, and so, what's being

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1 proposed here is a fragmentation of that EPA  
2 jurisdiction to suddenly move it NRC, solely because  
3 of one hazardous component is present, which means an  
4 assumption of burden for NRC, EPA, the states and the  
5 regulated operator of the facility. I think it's a  
6 recipe for being unsuccessful.

7 MR. LEFLEUR: As to CRCLA, if we process  
8 the resins to recover the uranium, then our waste  
9 becomes 11(e)(2), goes into a tailings pond and we are  
10 basically outside of CRCLA.

11 MR. SETLOW: EPA has no -- actually, it  
12 encourages recycling of materials for those  
13 situations, where they could be recyclable, if in  
14 fact, the removal of uranium from a waste stream  
15 could, in fact, be recycled for use -- for that  
16 mineral as a product, would reduce the actual  
17 potential cost to the Federal Government or to the  
18 facility or the PRP, then that's certainly not  
19 something that we say has to go to be a waste.

20 All of these Acts recognize the ability to  
21 recycle as something that should be promoted and we  
22 certainly are not saying that this should  
23 automatically go to be a waste. This is an  
24 opportunity, certainly, for your company to do what  
25 it's proposing.

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1                   But I'm just saying, as an overall  
2 proposal, that this is not something that we would  
3 necessarily feel is workable.

4                   MR. LEFLEUR: NRC has done recently, in the  
5 RIS, the enforcement discretion and proposal, if they  
6 eliminate a legislative approach, they go back to the  
7 general license. That would eliminate a lot of the  
8 cost for community water systems to stay under NRC  
9 jurisdiction and it's a very consistent, time tested  
10 regulatory scheme and I'd like to keep it under that.

11                  CHAIR COMFORT: Yes, it reduces, but it  
12 still adds -- but there would still be additional  
13 resources. It just wouldn't be as much a specific  
14 licensing or anywhere close to the amount that you  
15 need --

16                  MR. LEFLEUR: Right, you get the full  
17 reimbursement.

18                  CHAIR COMFORT: Well, thank you.

19                  MS. MATTSSEN: Do you know what the legal  
20 status is of the water treatment facility that uses  
21 specific licensed person to come in and do the  
22 processing? Are they really under enforcement  
23 discretion right now, or is the licensee completely --  
24 specific licensee completely responsible for the  
25 material, even on site, at the -- do you know where

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1 that is with the legal interpretations?

2 CHAIR COMFORT: You're talking about if you  
3 have somebody coming in --

4 MS. MATTSEN: And you have more than 15  
5 pounds.

6 CHAIR COMFORT: Well, under -- the way the  
7 regulatory information summary works is the facility  
8 itself is the one providing the enforcing discretion.  
9 That doesn't prohibit them from having a contractor  
10 come in and do the work, but they are the ones  
11 responsible for it on the operation and all versus --

12 MS. MATTSEN: But they really do that need  
13 that enforcing discretion if they're over 15 pounds,  
14 even though some specific licensees do look for the  
15 work in handling --

16 CHAIR COMFORT: Well, if there are specific  
17 licensees, such as the license that was set up for  
18 WRT, they have the full responsibility, is my  
19 understanding on how it works.

20 So, they wouldn't need -- the facility  
21 wouldn't need an enforcement discretion. They're not  
22 the ones in the possession. It's the specific  
23 licensee who has it and all. But in the other case,  
24 if they're going under enforcement discretion, the  
25 contractor -- a contractor can't come in and get

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1 enforcement discretion. It's only the CWS that can  
2 have the enforcement discretion.

3 MS. MATTSEN: Right, I know that part. So,  
4 if this whole process took a long time, the people  
5 that were using licensees like that, wouldn't have to  
6 be under a long-term enforcement discretion because --

7 CHAIR COMFORT: Well, if they were using  
8 that, but if that --

9 MS. MATTSEN: That type of licensee would  
10 be responsible for the process.

11 CHAIR COMFORT: Right, but if they were  
12 doing it themselves or running under it, they could be  
13 under the enforcement discretion for whatever period  
14 the NRC determines -- they decided that we aren't  
15 going to be successful or it's too long, or that we  
16 want to put an end -- put an end to it.

17 Any other options or considerations?

18 MR. REGNIER: I guess I'll just make a  
19 statement that -- as I'm just getting started now with  
20 the working group here and I don't fully have all the  
21 background from before, before I can be able to give  
22 a DOE endorsement of that approach, I'd want to try to  
23 get a little better handle on the regulatory  
24 alternatives, maybe think about the fuel cycle option  
25 and then discuss it with my management and then, our

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1 General Counsel.

2 CHAIR COMFORT: But you'd also want to look  
3 at, would any of these changes -- what would they  
4 particularly do to -- if you're talking about changing  
5 the AEA, how that would impact DOE overall.

6 MR. REGNIER: Yes.

7 CHAIR COMFORT: And how they regulate.

8 MR. RATHBONE: That would probably be true,  
9 everybody wouldn't.

10 CHAIR COMFORT: But certainly --

11 MS. MATTSSEN: But particularly DOE though,  
12 because of the --

13 CHAIR COMFORT: Yes, DOE has the same  
14 statute basically, giving them -- so, any change we do  
15 would particularly impact them.

16 On the other agencies, what you're  
17 basically doing, as far as we've heard and seen is  
18 that we'd basically be removing the designation of  
19 AEA, which would allow them to accept the material.  
20 So, their statutes wouldn't really need any changing  
21 at all and they have to perhaps, change their programs  
22 a little bit, to adopt a more direct approach of  
23 looking at uranium and thorium.

24 But NRC and DOE would potentially have to  
25 do significant changes to the regulations themselves

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1 on it, depending up how you've incorporated source  
2 material into your regulations and how you write it.  
3 You'd have to go through Rule Making to change that.

4 But what I'm looking at -- and I guess  
5 what I'm looking at right now is, we have -- the other  
6 option right now, instead of making a decision, is to  
7 hold off and feel that we need another meeting.

8 If DOE needs more time, but everybody else  
9 is relatively acceptable, what we may be able to do is  
10 work with DOE to see -- and if they pull out any  
11 additional information, we may have to have another  
12 meeting. But if that's not the case, assuming  
13 everybody feels okay with the current recommendation,  
14 then we could look at further steps, including DOE.

15 So, I guess, Ed, you're saying you'd like  
16 to have some more time to take a look at the issues  
17 and stuff.

18 What I'd like to do is go around to each  
19 of the groups and see if anybody -- how everybody else  
20 feels, if they think we should hold off a little bit  
21 more time and then have another meeting, after people  
22 have more time to absorb this, it's been five years,  
23 if anybody thinks hey, things haven't really changed,  
24 we're acceptable, because NRC would like to move  
25 forward in part, because we do have some requirements

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1 from our -- direction from our Commission to do  
2 something. But we can go back and talk to the  
3 Commission, if necessary.

4 MR. HEARTY: The next step, if -- at the  
5 end of this meeting, was then to be -- send something  
6 to each of the agencies --

7 CHAIR COMFORT: Well, if everybody is  
8 acceptable with a recommendation, that they feel  
9 pretty much, it's the way to go forward, at this  
10 point. That doesn't mean they're not going to go back  
11 to their management and have a talk.

12 But if you feel that -- one of the  
13 proposals and the next steps is, if the recommendation  
14 is still what we want or some variation of that  
15 recommendation and it's still acceptable, our proposal  
16 is that we would go to your agencies with a formal  
17 letter, describing a little bit of the background of  
18 what we've been doing and what the recommendation of  
19 the group was, with the name of a contact from the  
20 agency, and basically say, "We would like a formal  
21 letter back, saying that -- not that you're  
22 necessarily support, but you don't have any objection  
23 to us moving forward with the recommendation."

24 MR. HEARTY: But no suggested legislative  
25 changes, because to me, it's all going to be in the

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1 implementation.

2 CHAIR COMFORT: Well, I would expect in the  
3 letter that we would basically say, if we're going  
4 forward with a legislative approach, we would look at  
5 involving the other agencies, and Joan can step in on  
6 this one.

7 When we developed legislation, we would be  
8 basically letting the other agencies see it before we  
9 proposed it, wouldn't we?

10 MS. OLMSTEAD: I think in this case we  
11 should.

12 CHAIR COMFORT: Yes.

13 MR. RATHBONE: So, it's basically --  
14 absolutely, I think that taking a step of proposing  
15 legislation to a certain extent, ups it a little bit  
16 and I think we'd want to have a consultation with our  
17 General Counsel's office and Ed would probably want to  
18 with his, in particular, and probably for everybody  
19 else.

20 MR. HEARTY: That's the only reason I could  
21 see maybe meeting again here in a couple of months.

22 MR. RATHBONE: I think that's right.

23 MR. HEARTY: Have that on the table, we  
24 could look at it and then include that in the letters  
25 to the agency heads.

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1 CHAIR COMFORT: That's what I was going to  
2 say, could we -- potentially before we send out this  
3 letter, develop some draft legislation that goes along  
4 and maybe have the staff member level see it through  
5 an informal e-mail, but do it through an e-mail  
6 process, rather than -- unless we feel that there is  
7 significant discussion --

8 MR. RATHBONE: I would just speculate that  
9 there's sort of a if/then here, and if it were the  
10 case that we came to the conclusion that legislation  
11 was, in some sense, desired or something like that, in  
12 DOE, then I would think probably some -- higher  
13 probability and addition session of some sort should  
14 be done.

15 If not, and it's more or less, they stay  
16 the course, with respect to prior actions and  
17 decisions, then I can say that that would reduce the  
18 likelihood for the need for another session.

19 So, there's a certain contingency aspect  
20 to it.

21 CHAIR COMFORT: Now, do people -- if we do  
22 the process that today, we basically, at the staff  
23 level say, the recommendation that was previously  
24 there was worthwhile to continue pursuing and  
25 legislation, I think we decided, were going to do

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1 anything, is probably the most appropriate way to do  
2 it, would it be beneficial that basically, we draft up  
3 something legislatively-wise and then provide it to  
4 you guys, and then have a meeting and then after that  
5 meeting, follow up with a formal letter that says,  
6 "This is what we've worked out. This is what we're  
7 suggesting. Does your agency have any objection to  
8 it?" Does that sound like a reasonable --

9 MR. AHIR: We still have to check with our  
10 solicitor before we commit the agency to anything.

11 CHAIR COMFORT: Right, on all of this, I  
12 think most of the staffs are going to have to go back  
13 there, but basically the stuff on this one is, is we  
14 would meet one more time, but with legislation in hand  
15 -- you guys would be sent it ahead of time, the draft  
16 legislation that we'd be looking at and then, we would  
17 meet a period of time after you had time to go speak  
18 with your management, as well as legal counsels on it  
19 and stuff, and then we'd meet.

20 The meeting may -- you may desire to bring  
21 your legal counsels, if the discussion so warrants or  
22 if a significant concern or comments or changes are  
23 there that you guys want to discuss, and then at that  
24 working group hopefully, we would hash-out -- that one  
25 would be a pure hash-out the legislation.

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1 Nobody is committed to it at this point,  
2 but do you feel it's worthwhile putting the resources  
3 for another meeting on this end to do that? Then  
4 we'll go forth with a letter saying, "Are you  
5 acceptable with this?"

6 MR. WEAVER: I think you need to present  
7 two or three alternatives because it may be possible  
8 that just a word or two change in the Act, then gives  
9 you several options that are rule making level and if  
10 the distinction is just to move from a concentration  
11 cut point, .05 percent, more towards something that  
12 involves a purpose of use for commercial, medical or  
13 research, something that's more of that type, there  
14 may be several different options.

15 So, you really are -- I think there's a  
16 little subtlety here. You may just need one or two  
17 adjustments in the Act, to be able to then set  
18 something in motion that implements, and a definition  
19 is not very good at setting a requirement.

20 A definition is there so you understand  
21 things. Implementing is what you do within those  
22 constraints of the definition. And so,  
23 implementation, some sort of rule making that helps  
24 distinguish, with just a word or two change in the  
25 Act, it may not even be the ones we're thinking about

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1 right now.

2 There's some subtlety here that I think  
3 maybe this group could help form for you a little  
4 bit, from the different agency perspectives. So, you  
5 may want it -- I guess I'm seconding another round of  
6 feedback from some of the wisdom here.

7 CHAIR COMFORT: Yes, but would it be worth  
8 for us to take a stab at the legislation first and  
9 send it to you, and then have that second --

10 MR. WEAVER: Always with several  
11 alternatives, never put anything forward without three  
12 good alternatives, yes. Not just the one thing --

13 CHAIR COMFORT: That's what you guys are  
14 suppose to do, is come up with the alternatives.

15 MS. BUBAR: So, if I may re-state, what  
16 you're saying is, one of the alternatives might be to  
17 take the language that's in there already with just  
18 some minor changes --

19 CHAIR COMFORT: To see if we can --

20 MS. BUBAR: And then the implementation  
21 would come to rule making, and the second option would  
22 be the specific language that was in the Commission  
23 paper.

24 CHAIR COMFORT: There's really three --  
25 you'd have one that was in the original recommendation

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1 and then a third would be what's in the EPA Act or  
2 very similar to that, I would say.

3 MS. HSUEH: One thing that I'd like to  
4 bring up is that right now, we are assuming OAS and  
5 CRC PD representing the states, other states, and that  
6 if this is going to impact the states, do we need the  
7 individual state to look at these draft language?

8 And so, is it border line -- the people  
9 that we have here, or people here can comment on this,  
10 CRC PD representative -- my question would be, do you  
11 think that it should be shared with all the other  
12 states, or basically, OAS and CRC PD can kind of make  
13 the decision?

14 MR. WEAVER: You asked two questions. One,  
15 the states will want to see it. It's really just a  
16 question of timing and so, at some point, I think each  
17 state, for itself, will want to look at the  
18 implications of this.

19 CHAIR COMFORT: At some point, when we go  
20 forth with a final recommendation that we're actually  
21 asking at a higher level, as to do you accept it, I  
22 know our agency can't do anything at a high level very  
23 quickly. So, we're not going to be able say, "Hey, we  
24 need this in two weeks."

25 It's going to be more like a two to three

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1 month turnaround. Everybody is going to want to be  
2 looking at that, is the way that I'm going to guess,  
3 and that would give you sufficient time to potentially  
4 get it out to the states through OAS and CRC PD.

5 But that's something that -- how long do  
6 you think you would need to get back a response, when  
7 we get to that point that we send a letter out?

8 MS. MATTSEN: Weren't we planning, when we  
9 went for more formal buy in by the Federal agencies,  
10 to also go to every state?

11 CHAIR COMFORT: Well, the question is, do  
12 you go through every state through CRC PD and OAS or  
13 do you go directly to every state, and Ken would  
14 probably be able to speak on that.

15 MR. WEAVER: The answer is yes, both have  
16 been done and we should just figure out what is more  
17 --

18 MS. MATTSEN: And that's something -- and  
19 agenda item for the next meeting.

20 CHAIR COMFORT: Well, that's something you  
21 could look up in between, to OAS and CRC PD and all  
22 and you know, if we go forth -- or as we go forth, but  
23 right now, what I'm feeling -- and please state if I'm  
24 wrong, that we still feel the overall intent  
25 recommendation that we had originally is still

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1 applicable and we'd like it to go through legislation.

2 But to get there, what we'd like to do is  
3 basically have NRC develop some sample legislation at  
4 the working group level with some alternatives, that  
5 we'll send out to the working group and then meet on  
6 that and that meeting can also be -- if you need to  
7 bring additional support that you need, either OGC or  
8 whatever, but you'd also, hopefully, be discussing a  
9 little bit at the internal levels of some of your  
10 management on it.

11 So, we'd have a meeting some period of  
12 time after that, that we sent it to you, come back,  
13 discuss it and then from there, hopefully have enough  
14 of a consensus on what the legislation should say at  
15 this level, to then go forth and send out formal  
16 letters to the agencies, OAS, CRC PD and/or states,  
17 that say this is what we're doing and what we're  
18 proposing.

19 We've gotten support at the lower level  
20 from the working group, but we're trying to confirm,  
21 does the agency as a whole, support this movement to  
22 go forward with the legislation, of which then when we  
23 got that back, we'd send it forward to the Commission  
24 and say hopefully, "Yes, we've worked on this with the  
25 working group. The agencies either support or don't

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1 object to us moving forward with it," and frankly, in  
2 that other group, we could potentially work on what  
3 the language of the letters should be and what levels  
4 of management they should go through.

5 Some agencies may want to go to the top.  
6 Some may say there's some division or area below  
7 that's more appropriate for it to be sent, but where  
8 is the most place to send it? Then when we get it  
9 back, we'd go to the Commission and say, "We've gotten  
10 the support from all these different groups and this  
11 is what we recommend going forward to."

12 MR. REGNIER: I guess from my perspective,  
13 it does sound like, from what I've heard, that most  
14 likely the legislative way would be the way to go.  
15 But I'd like to -- but no having fully thought it  
16 through, I guess I'd like to get a better feel in my  
17 own mind that none of the regulatory approaches would  
18 be viable.

19 Then, maybe the trade off on whether you'd  
20 want to go -- would depend on what the legislative  
21 options would be. It depends on the merits of those,  
22 whether one might want to give more thought to the  
23 regulatory option.

24 CHAIR COMFORT: As to -- I guess, I'm not  
25 sure I'm understanding the difference --

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1 MR. REGNIER: Well, I'm saying --

2 CHAIR COMFORT: The regulatory option is to  
3 basically do it without doing any legislative change.

4 MR. REGNIER: Right and if the legislative  
5 changes look awkward, maybe the regulatory options  
6 might look better.

7 CHAIR COMFORT: If you start having  
8 problems, and I think we've found that -- unless we  
9 can discover some regulatory options that are better  
10 flushed out and I certainly would appreciate if you  
11 can look at that, what I would suggest is at the next  
12 meeting, we basically have two agenda items.

13 One is kind of a follow up to some of the  
14 discussion -- because everybody has just been  
15 refreshed on this, so there may be some additional  
16 items they bring in, after a little bit of thought.  
17 But if we could forth and have on agenda items saying,  
18 "Are there any alternatives that we didn't think of,  
19 that people thought of in the meantime," but we still  
20 would go develop a legislative alternatives, so you  
21 can compare them at that meeting and all, and we'd do  
22 that at the next meeting.

23 That would give you hopefully enough time  
24 to go back, evaluate yourself and with your  
25 management, as to if you're still acceptable and if we

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1 find that agencies have gone back to all of your  
2 managers and anybody feels some balking going on that,  
3 yes, you thought this sounded good, but it's just  
4 flushed out in your agency and there's a problem, we'd  
5 want to hear it, certainly at the next meeting too.

6 MR. HEARTY: So, and like Ken was saying,  
7 if your proposed legislative change is a small change  
8 or a clarification change there, and then the idea is  
9 to implement it with regulatory changes, we'd want to  
10 see both.

11 We've talked about it already, about  
12 dumping the .05 and 40.13A and removing that, if we  
13 changed the legislation.

14 CHAIR COMFORT: We may be able to come up  
15 with some rough ideas, but I don't know if we'd get  
16 into the detail. It's really -- once we don't have  
17 legislation to do something, we have to remove those  
18 parts that we no longer have jurisdiction over and  
19 stuff.

20 So, yes, we could still exempt things  
21 under .05 percent that have been purposely used, but  
22 the end result may be that that's really -- now,  
23 you're talking that becomes instead of an entry  
24 barrier, that's the way it's intended right now, that  
25 the only reason you're leaving it is an exit barrier

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1 and now, you're getting kind of close to things like  
2 clearance and all.

3 MR. HEARTY: That's what some of us need  
4 though. Our agency is specific --

5 MS. MATTSEN: Deciding that kind of detail  
6 of how we were regulating what's left --

7 MR. HEARTY: But I think those are big  
8 questions you're going to want to think about before  
9 you start making changes, right?

10 CHAIR COMFORT: Well, we have to go -- when  
11 we make the changes, we can't just say, "Okay, the  
12 legislation is changed." We have a whole rule making  
13 process, of which everybody comments on and stuff.

14 So, if there's something that's  
15 significantly impacting your group from that one  
16 change that we're proposing, that's outside of what we  
17 currently have, you'd be coming in and commenting in  
18 the proposed rule stages and say, "Hey, this causes us  
19 a significant problem because," and we would look at  
20 that and determine, is that a merit as to why we  
21 shouldn't make that change?

22 MR. HEARTY: Okay.

23 CHAIR COMFORT: But the actual  
24 implementation of the legislation that says, "We're  
25 not regulating this part anymore," is at a higher

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1 level and that's where it has to be decided.

2 Now, I understand, I think, a little bit  
3 where you're coming from is, if there is a significant  
4 impact to what you're doing from that legislative  
5 change at the regulatory change, your agency is going  
6 to balk at that and --

7 MR. HEARTY: What we want to know is, our  
8 clean up of environmental source material going to  
9 fall under NRC or is it going to fall under the  
10 states? Are we going to be restricted in our disposal  
11 options, if you take out the .05 percent exemption or  
12 are we going to have other disposal options that  
13 become available through state regulated facilities?

14 CHAIR COMFORT: Yes, and that's --

15 MR. HEARTY: That's the reason we're here.

16 CHAIR COMFORT: I think that -- because you  
17 are going -- we've been applying .05 percent  
18 generally, as far as I've seen, for a disposal option,  
19 more for the bulk people with low concentrations of  
20 uranium and thorium. It hasn't usually been used on  
21 a specific license purposely using the material and  
22 stuff, and you're in that quasi category that --

23 MR. HEARTY: Right, because in that  
24 category, the licensee can to it --

25 CHAIR COMFORT: Right.

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1 MR. HEARTY: -- per exemption request and  
2 send it to the same type of facility.

3 CHAIR COMFORT: Right, so --

4 MR. SETLOW: And under CRCLA, it will make  
5 no difference because it's still going to be a risk-  
6 based.

7 CHAIR COMFORT: Right.

8 MR. SETLOW: Where we determine the  
9 concentration of the --

10 CHAIR COMFORT: It's really, the concern  
11 they come into is, are we going to do something with  
12 their material, which is, I guess, licensed to be --  
13 well, you're not --

14 MR. HEARTY: If we fall under -- if you  
15 talk about removing that .05 exemption and having that  
16 exit barrier, then if we fall -- if our material,  
17 because it was originally processed for its uranium or  
18 thorium and now, potentially, if we go retroactive,  
19 would fall back under the NRC, then the facilities  
20 that now look to that exemption, RCRA facilities and  
21 the such, to allow source material to come in and be  
22 disposed of appropriately in those facilities, that  
23 might hamper that.

24 CHAIR COMFORT: Now, if the legislation had  
25 something that says those facilities that you

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1 grandfathered in your facility, the way that it's  
2 currently being done, you wouldn't have as big an  
3 issue.

4 MR. HEARTY: That might be why I was  
5 looking towards the radium and the byproduct  
6 materials, that didn't really try to affect the  
7 disposal of those materials too much.

8 CHAIR COMFORT: Right. So, okay, that's  
9 seen here.

10 MR. RATHBONE: Why don't we try the  
11 following, if we try and work up something for the  
12 maximum legislative change, I gather, it sort of  
13 mimics what's in the Energy Policy Act 2005 -- from  
14 the non-rule, as kind of a high water mark and then  
15 the next one is -- what you were saying, to a  
16 relatively minor statutory legislative change or  
17 something, and then the third one that Ed was talking  
18 about, doing by regulation or something and then some  
19 parameters of that, with respect to the CRCLA and  
20 respect to role of states and things like that.

21 I'm just looking at it, and then I think  
22 in our minds, let's just, we'll have to have another  
23 meeting and hash this out and share this thing that  
24 I'm talking about -- by e-mail or whatever, with your  
25 own folks and eliminate a little bit of the confusion

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1 back and forth, kind of a clearer path forward.

2 I do think that Kevin is right. I think  
3 you're going to have to have -- build some kind of  
4 state sharing this -- OAS in particular, and whatever  
5 it -- kind of, the next time around with this,  
6 otherwise, I think you're going to lose a cycle,  
7 because they will want to know and they will be deeply  
8 offended if they don't know.

9 MR. WEAVER: I sent Gary's materials to  
10 Debbie Gilley and to Paul Schmidt, and they've also  
11 responded --

12 MR. RATHBONE: They will want to --

13 MR. WEAVER: So, however you want --

14 MS. MATTSSEN: Do we need to look more in  
15 depth at the waste issue?

16 MR. RATHBONE: I think you're right. I  
17 know, I wouldn't go --

18 MS. MATTSSEN: We weren't really thinking of  
19 any possibilities along the line --

20 MR. RATHBONE: There's issue in that, that  
21 I don't -- I personally admit that I don't fully  
22 understand it.

23 MS. OLMSTEAD: I was thinking too, when we  
24 put out the options, I think it would be important for  
25 people to look at it from your different agency

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1 perspective, with each option, say how it impacted and  
2 your thoughts on it, because that way, we'll get the  
3 feedback back. If we have to choose something -- we  
4 can have a more detailed discussion when we all meet.

5 MR. RATHBONE: There will be varying  
6 degrees of legal concern of hand-wringing or whatever  
7 you want to call it. DOE will be deeper and wider and  
8 maybe others, may not be as much, depending on how  
9 close it cuts to value things, but that would be my  
10 thought.

11 MR. SETLOW: And Ed, as far as positions,  
12 it would probably behoove you to speak with Al  
13 Peterson, who is still in the area, because he was the  
14 representative from DOE for this working group and  
15 Alexander Williams also participated from time to time  
16 in their discussions with Andy Wall before they agreed  
17 to the recommendation that was sent forward.

18 So, it would probably behoove you to  
19 review with them, where they were previously.

20 CHAIR COMFORT: Okay. So, does anybody  
21 object with that, the path forward? Kevin?

22 MS. HSUEH: I just have one question and  
23 it's regarding the time frame. I know that there's a  
24 lot of things that I see in the group, having been  
25 done, and I'm just wondering how months are we

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1 thinking about to have this done?

2 Right now, we are -- our current schedule  
3 is to have this report to the Commission some time  
4 next April. How much more time do we need?

5 MR. RATHBONE: I would like to get this  
6 thing that I've just described laid out fairly  
7 quickly, and whatever consultation is needed,  
8 whatever, a week or two.

9 MS. BUBAR: A week or two?

10 CHAIR COMFORT: I was going to say, we're  
11 going to be awfully busy.

12 MS. HSUEH: So, is our goal still some time  
13 in April or --

14 MR. RATHBONE: I think it's better --

15 CHAIR COMFORT: But that's going to be  
16 something that we're going to have to have internal  
17 meetings, particularly to coordinate with OGC, because  
18 they're going to be the experts of the legislation and  
19 all, and we're going to need a lot of input from them.

20 Based on how long that is, I think we can  
21 come back and figure out how long -- how long do you  
22 guys need to look at a package?

23 MS. HSUEH: I think that's something that  
24 I'd like to see --

25 MR. RATHBONE: I'm really more concerned

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1 about substance in the papers than I am schedules, but  
2 I know -- when I listen to the discussion around here,  
3 it's growing this way and growing that way and  
4 including more, bureaucratically, I know this means  
5 more time.

6 CHAIR COMFORT: Well, I don't think it's  
7 growing that much. We've got a couple of extra steps  
8 that we didn't envision in there, but it's going to  
9 give us a cleaner product at the end, I agree with  
10 that.

11 It's really just narrowing down the steps  
12 and internally, we can take care of some of the others  
13 things with times and dates and all. But I really  
14 want to make sure that everybody has an adequate  
15 amount of time look at things, but that we're not  
16 pushing off this process.

17 MS. BUBAR: Would it be realistic to say by  
18 February we would intend to get the group back  
19 together again?

20 CHAIR COMFORT: I would expect no later  
21 than that.

22 MS. BUBAR: That would mean maybe need the  
23 paper to react to --

24 CHAIR COMFORT: I'd be looking that we  
25 would get all these alternatives and stuff to them.

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1 Again, I'd have to coordinate with OGC, but as soon as  
2 possible, we would try to get this to them and give at  
3 least, probably two weeks. Is that going to be  
4 adequate, to look at the documents and then have a  
5 meeting after that, with your managements and all?

6 MS. HILL: I don't know. Two weeks should  
7 be adequate in our own office, but I don't about  
8 interacting with multiple components.

9 CHAIR COMFORT: I understand that. If you  
10 notice coming down that track, we can say, "Hey, we're  
11 sending you this document January 15<sup>th</sup> and all, and  
12 we'd like to meet with you," and we're telling you  
13 that at the end of December or something, is that --  
14 can you get them set up on the schedules to be ready  
15 to look at it?

16 MS. HILL: We can try.

17 CHAIR COMFORT: If we send you the stuff  
18 and a week later, we get a bunch of comments back, we  
19 can certainly consider that.

20 Would it more reasonable to try like a, as  
21 a good compromise, a three week period in between?

22 MR. REGNIER: That sounds better, because  
23 I suspect there will be several offices and then DOE  
24 that will be interested. It's always difficult to get  
25 quick feedback from GC.

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1 CHAIR COMFORT: What I also plan on doing  
2 is, when we go forth with this, there's going to be a  
3 couple of other issues and I'm hoping people will be  
4 able to provide me feedback for the next step, the  
5 best way to go in legislation and all, or regulatory  
6 alternatives. Do we need to get the support from the  
7 other agencies?

8 I think most people would like to get  
9 their feedback from their management sending it to us.  
10 Any comments?

11 MR. FERATE: You are planning in sending  
12 the package out, it will have at least one proposed  
13 language and possibly, several options of proposed  
14 language for legislative changes in the Act?

15 CHAIR COMFORT: That's what the proposal is  
16 to do. You can go back and see -- and if we have any  
17 additional details or things that we discover while  
18 we're developing it, of how a certain regulation may  
19 or may not be impacted, we would probably provide you  
20 that also at that time, just to identify it.

21 That's part of what the discussion on that  
22 meeting would be is, if we go forth with that  
23 language, does it have impacts on you that were  
24 unexpected? That would be something that you'd be  
25 wanting to look at. Any other comments?

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1 MS. HILL: Since I am new to this, is the  
2 NUREG-1717 on your website, on your publication?

3 CHAIR COMFORT: Yes, you can just to our  
4 publically available --

5 MS. HILL: Okay, and I hate to do this to  
6 anybody, when I sometimes had work like that, but how  
7 long will it take for the transcript to be available?  
8 That will be helpful in jogging my memory.

9 COURT REPORTER: Your delivery is set for  
10 seven days.

11 CHAIR COMFORT: Okay.

12 COURT REPORTER: When it gets on the  
13 website is up to you.

14 CHAIR COMFORT: Okay, thank you very much.

15 MS. HILL: Thanks, because I thought it  
16 would be a long time out.

17 MS. HSUEH: We will appreciate your  
18 feedback on the meetings, so if you have a time,  
19 please give us the feedback form. Thank you.

20 CHAIR COMFORT: Right. I'll try to send  
21 out an e-mail to everybody when the transcript is  
22 available and attach a link to it and all.

23 Thank you all very much, and we'll arrange  
24 and have contact with you very soon, as to when the  
25 next meeting is going to be and provide you that

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1 legislation and all. Thank you.

2 COURT REPORTER: One comment, I mis-spoke,  
3 your delivery is actually 10 days.

4 CHAIR COMFORT: Okay.

5 (Whereupon, the foregoing matter concluded  
6 at approximately 3:25 p.m.)

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