

MINUTES
RADIATION MANAGEMENT ADVISORY COUNCIL
April 21, 2004 Regular Meeting
Tulsa Technology Center, Peoria Campus
3850 North Peoria
Tulsa, Oklahoma

Approved RMAC
September 9, 2004

MEMBERS PRESENT

David Gooden
Nadine Barton
Rod Beuttel
Donald Brewer
Steve Clark (arrived at 10:10)
George MacDurmon
Steve Woods

MEMBERS ABSENT

Monte Goucher
Karen Jennings

DEQ STAFF PRESENT

Scott Thompson, Land Protection Division
Mike Broderick, Land Protection Division
Dale McHard, Land Protection Division
Pamela Bishop, Land Protection Division
Pam Dizikes, Legal Division
Myrna Bruce, Secretary Board and Councils

OTHERS PRESENT

The Attendance Sheet is attached as an
official part of these Minutes.

Notice of Public Meeting -- The Radiation Management Advisory Council convened for a special meeting at 10:00 a.m. on April 21, 2004 in the Council Oak Room at the Tulsa Technology Center Peoria Campus, 3850 North Peoria, Tulsa, Oklahoma. This meeting was held in accordance with 25 O.S. Sections 301-314 with notice of the meeting given to the Secretary of State on December 3, 2003 with an amendment on February 19, 2004. The Agenda was mailed to interested parties and posted at the entrance doors of the Department of Environmental Quality more than twenty-four hours prior to the meeting. Dr. David Gooden, Chair, called the meeting to order.

Roll call was taken and a quorum was confirmed. Mr. Dale McHard introduced DEQ staff and members of the public. Mr. McHard and Dr. Gooden welcomed Mr. Rod Beuttel to the Council.

Election of Council Chair for CY 2004 -- Dr. Gooden requested Mr. Dale McHard to preside over the election of officers. Mr. McHard called for nominations. Mr. Donald Brewer nominated Dr. Gooden for Chair. Second was by Mr. Steve Woods. Dr. Gooden accepted stating that he takes seriously the responsibilities and the activities associated with this position and that he appreciates being elected again and will try to serve the DEQ and the people of Oklahoma well.

Roll Call

Donald Brewer	Yes	Steve Woods	Yes
Rod Beuttel	Yes	George MacDurmon	Yes
Nadine Barton	Yes	David Gooden	Abstain

Motion Carried

Election of Council Vice-Chair for CY 2004 -- Dr. Gooden called for nominations for Vice-Chair. Mr. Donald Brewer nominated Steve Woods. Dr. Gooden seconded. Mr.

Woods accepted stating that he appreciated serving in this roll and appreciated the opportunity to make the RMAC presentation to the Environmental Quality Board.

Roll Call			
Donald Brewer	Yes	Steve Woods	Abstain
Rod Beuttel	Yes	George MacDurmon	Yes
Nadine Barton	Yes	David Gooden	Yes
Motion Carried			

Approval of Minutes - December 3, 2003 -- Dr. Gooden called for approval of Minutes of the December 3, 2003 Special Meeting. Mr. Woods made a motion to approve and Dr. Gooden made the second.

Roll Call			
Donald Brewer	Yes	Steve Woods	Yes
Rod Beuttel	Abstain	George MacDurmon	Yes
Nadine Barton	Yes	David Gooden	Yes
Motion Carried			

Report on the actions taken by the Environmental Quality Board -- Dr. Gooden called Agenda Item #9 and called upon Mr. Mike Broderick. Mr. Broderick reported that the Radiation Management Rules taken to the Environmental Quality Board on February 27, 2004 meeting had an unexpected change to Subchapter 19, X-ray Fluorescence instruments used for lead-based paint detection. It had been noted that all of the effected people could possibly have not been notified for comment, therefore, staff decided to ask the Board to not consider that item. He added that the Environmental Quality Board did pass all of the other Radiation Management rules that were on their agenda. Mr. Broderick commended Mr. Woods for his presentation of these complex rules to the Board. Mr. Broderick advised that those rules are expected to go into effect in June 2004.

Report on proposed changes to Subchapter 19, X-ray Fluorescent instruments used for lead-based paint detection -- Mr. Broderick reported that this section would be brought before this Council at its next regular meeting, September 9, 2004. Mr. Broderick received comments from the public answering questions and concerns of the Council and members of the audience.

Report on proposed changes to Radiation Management rules with regard to changes in 10 CFR Part 35, Medical Use of Byproduct Material -- Mr. Broderick advised that these rules would come before the Council for adoption by reference of the federal rules to fulfill Nuclear Regulatory Commission (NCR) requirements as an agreement state. Mr. Broderick provided information to the Council and answered questions regarding several changes that would need to be made to the rule and brought before the Council at the next meeting.

Report on possible future rulemaking proposals including x-ray and accelerator fees Mr. Broderick advised staff is working on rulemaking issues that will re-align and make changes to the current fee structure. Mr. Broderick opened the floor to discussion.

Report on fusion imaging techniques and the potential impact of such on Radiation Management Section activities -- Ms. Pam Bishop provided an overview of a National

Symposium of Fusion Imaging and Multi-Modalities meeting she had attended in February. She reported that there are many new technologies and techniques stating that concerns were raised as to how the regulatory arena would keep up with the new technologies to have people trained to operate and to work on the equipment. Ms. Bishop added that there are current legislative bills that will require licensure for radiological and nuclear medicine technologists. Mr. Broderick added that these new requirements would cause a need for additional staffing with a steep learning curve.

Report on activities of the Radiation Management Section --- Mr. Broderick reported that among the ongoing activities already discussed, the Section is also paying attention to emergency management issues.

Report on proposed state legislation regarding DEQ/Radiation Management --- Mr. Scott Thompson, Director, Land Protection Division, reported on funding issues, bills that had passed. Mr. Thompson answered questions on these issues.

Report on recent developments regarding Central Interstate LLW Compact --- Mr. Thompson stated that the lawsuit is still ongoing and answered questions about the LLW Compact.

New business --- Dr. Gooden allowed Mr. George Johnson of Capitol X-ray Service in Tulsa to provide information regarding the issues being faced and the nature of industrial radiography.

Announcements were made and the meeting was adjourned at 12:15 p.m.

A copy of the hearing transcript and the sign in sheet are attached and made an official part of these Minutes. Please note an addition to the transcript is a reference index.

Examples of how to use this index:

The first listing is \$10,000 [1] 98:15 --- the term \$10,000 was used [1] one time in the transcript on page 98 line 15.

Another listing is accelerator-produced [5] 25:8 37:19 38:20 70:12,15 --- This term was used [5] five times on page 25 line 8; page 37 line 19 ; page 38 line 20; and page 70 lines 12 and 15.

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DEPARTMENT OF ENVIRONMENTAL QUALITY
RADIATION MANAGEMENT ADVISORY COUNCIL
STATE OF OKLAHOMA

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TRANSCRIPT OF PROCEEDINGS
HELD ON APRIL 21, 2004, AT 10:00 A.M.
IN TULSA, OKLAHOMA

* * * * *

REPORTED BY: Christy A. Myers, CSR

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MEMBERS OF THE COUNCIL

- MR. MACDURMON - MEMBER
- MR. WOODS - VICE-CHAIR
- MR. CLARK - MEMBER
- MR. JENNINGS - MEMBER
- MR. BUETTEL - MEMBER
- DR. GOODEN - CHAIR
- MS. BARTON - MEMBER
- MR. GOUCHER - MEMBER

STAFF MEMBERS

- MYRNA BRUCE - SECRETARY
- MIKE BRODERICK - DEQ
- SCOTT THOMPSON - DIVISION DIRECTOR
- PAMELA BISHOP - DEQ
- PAM DIZIKES - LEGAL
- DALE MCHARD - DEQ

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PROCEEDINGS

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DR. GOODEN: Ms. Bruce, would you please call the roll.

MS. BRUCE: Mr. Brewer.

MR. BREWER: Yes.

MS. BRUCE: Mr. Buettel.

MR. BEUTTEL: Here.

MS. BRUCE: Ms. Barton.

MS. BARTON: Here.

MS. BRUCE: Mr. Woods.

MR. WOODS: Here.

MS. BRUCE: Mr. MacDurmon.

MR. MACDURMON: Here.

MS. BRUCE: Dr. Gooden.

DR. GOODEN: Here.

MS. BRUCE: For the record absent are Mr. Goucher, Mr. Clark, and Ms. Jennings.

DR. GOODEN: Mr. McHard, would you preside over the election of the new Council Chair, please?

MR. MCHARD: Yes, sir. I believe I'm required to say this, but I'll

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1 certainly repeat it for the benefit of
2 those in the public, as well as the new

3 Council Members that are here today.

4 And that is that the law requires
5 that the Council elect both a Chair and a
6 Vice-Chair for each year during -- actually
7 at the start of the first meeting of that
8 calendar year, and that happens to be
9 today.

10 Therefore, I am saying that we will
11 be electing a Chair. I will say that the
12 fact -- there is no bar to the current
13 Chairman being re-elected. However, I
14 think it's under the Rules of Robert that
15 it's wise that the person who makes the
16 nomination should know that the person they
17 nominate will actually serve if elected.

18 So with that, I'll say, are there
19 nominations for the position of Chair of
20 the Radiation Management Advisory Council?

21 MR. BREWER: I nominate Dr. David
22 Gooden.

23 MR. WOODS: Second.

24 MR. MCHARD: Dr. Gooden has been
25 nominated by Mr. Brewer, seconded by Mr.

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1 Woods. I call for additional nominations.

2 A second time, I make that call. A third

3 time and final time, I call for
4 nominations. I rule that the nomination
5 process is over. All those in favor of --
6 this is going to be a roll call vote.

7 MS. BRUCE: Mr. Brewer.

8 MR. BREWER: Yes.

9 MS. BRUCE: Mr. Beuttel.

10 MR. BEUTTEL: Yes.

11 MS. BRUCE: Ms. Barton.

12 MS. BARTON: Yes.

13 MS. BRUCE: Mr. Woods.

14 MR. WOODS: Yes.

15 MS. BRUCE: Mr. MacDurmon.

16 MR. MACDURMON: Yes.

17 MS. BRUCE: Dr. Gooden.

18 DR. GOODEN: Do you need my vote?

19 MS. BRUCE: I'll say abstain.

20 DR. GOODEN: Abstain.

21 MS. BRUCE: I won't say an

22 absolute no.

23 DR. GOODEN: I've said before

24 that I really take seriously the

25 responsibilities and the activities

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1 associated with this position and I

2 appreciate being elected to it and will try

3 to serve the DEQ and the people of Oklahoma
4 well. Thank you.

5 Mr. McHard, would you preside over
6 the election of Vice-Chair?

7 MR. MCHARD: I think you can now.

8 DR. GOODEN: Great. We now need
9 to elect a Vice-Chair for the year 2004.
10 Do I hear nominations, please?

11 MR. BREWER: I nominate Steve
12 Woods.

13 DR. GOODEN: I second that.

14 Are there other individuals that we
15 would like to have considered? Let's close
16 the nominations and, Ms. Bruce, if you
17 would call the roll.

18 MS. BRUCE: Mr. Brewer.

19 MR. BREWER: Yes.

20 MS. BRUCE: Mr. Beuttel.

21 MR. BEUTTEL: Yes.

22 MS. BRUCE: Ms. Barton.

23 MS. BARTON: Yes.

24 MS. BRUCE: Mr. Woods.

25 MR. WOODS: Abstain.

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1 MS. BRUCE: Mr. MacDurmon.

2 MR. MACDURMON: Yes.

3 MS. BRUCE: Dr. Gooden.

4 DR. GOODEN: Yes. Mr. Woods.

5 MR. WOODS: If I could, I would
6 like to make a quick speech.

7 I appreciate your support and your
8 election as Vice-Chair and I enjoyed
9 serving this last year as Vice-Chair and it
10 was a worthy opportunity to make a
11 presentation to the DEQ Board and that was
12 very enjoyable. I hope to be able to serve
13 the State of Oklahoma another year and I
14 hope we'll have an exciting year of new
15 regulations and possibly some changes.
16 Thank you.

17 DR. GOODEN: Thank you, Mr.
18 Woods. Mr. McHard, would you welcome and
19 introduce the new Council Members, please?

20 MR. MCHARD: Yes, sir. Mr.
21 Buettel, will you stand up so everybody can
22 see who I am talking about. This is Rod
23 Buettel. He is employed by AEA Technology
24 and he lives in or near Ketchum. We're
25 trying to figure that out.

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1 And with that, I will say that he is

2 introduced. We certainly welcome you to
3 the Council, Rod, and look forward to
4 working with you on the Council for however
5 long you're on it.

6 MR. BEUTTEL: Thank you.

7 MR. MCHARD: So, welcome.

8 DR. GOODEN: I've known Rod for a
9 number of years and on behalf of the
10 Council, I would like to welcome you, also.
11 I look forward to working with you and I'm
12 pleased that we're bringing your expertise
13 to the Council. Thank you.

14 Let's consider approval of the
15 Minutes of our last meeting.

16 MR. MCHARD: Mr. Chairman, may I
17 say something --

18 DR. GOODEN: Absolutely.

19 MR. MCHARD: -- before that? I
20 have handed out to the Council Members a
21 document that looks like this, it's several
22 pages long and it is Christy Myers'
23 transcript of Mr. Woods presentation to the
24 Board on February 27th. It's rather a
25 compliment to Mr. Woods. It really has no

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1 official function here at this meeting.

2 I've also passed out the draft

3 Minutes that look like this. They are
4 labeled as such, of the December 3rd
5 meeting of the Council. And I will say for
6 the record that they are still draft in the
7 sense that they never became final.

8 What happened was that the -- these
9 draft Minutes went to the Members of the
10 Environmental Quality Board at a date of
11 about February 10th or so to prepare them
12 to vote on the Radiation Management rules
13 that were before that Board. And the
14 Minutes through a variety of things that
15 happened, never became final.

16 As far as you not having those
17 before this morning, I take full
18 responsibility for that. I thought you'd
19 already gotten them and it turned out that
20 you hadn't, so I have to take
21 responsibility for handing them out today.

22 And with that, I will -- I will shut
23 up, I guess. I'll answer any questions you
24 have about what I've said.

25 DR. GOODEN: Any discussion

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1 regarding the draft Minutes of the December
2 3rd meeting?

3 MR. WOODS: I'll make a motion to
4 approve.
5 DR. GOODEN: Second. Ms. Bruce,
6 would you call the roll?
7 MS. BRUCE: Mr. Brewer.
8 MR. BREWER: Yes.
9 MS. BRUCE: Mr. Beuttel.
10 MR. BEUTTEL: Abstain.
11 MS. BRUCE: Ms. Barton.
12 MS. BARTON: Yes.
13 MS. BRUCE: Mr. Woods.
14 MR. WOODS: Yes.
15 MS. BRUCE: Mr. MacDurmon.
16 MR. MACDURMON: Yes.
17 MS. BRUCE: Dr. Gooden.
18 DR. GOODEN: Yes. Agenda Item
19 No. 7, Introduction of Members of the
20 Public. Mr. McHard, would you help us in
21 that regard?
22 MR. MCHARD: I will. It appears
23 that there is some people here in the room
24 that did not sign in and we would very much
25 like for you to sign in.

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1 But the ones who have signed in, I
2 will introduce. George Johnson with

3 Capitol X-ray is this gentleman here with
4 the sweater on. John Pryor with Grand
5 Gateway and EDA; is that correct, sir?

6 MR. PRYOR: That's correct.

7 MR. MCHARD: Okay. And Eric
8 Bartoletti with American Airlines. It's
9 nice to see you again, Eric.

10 MR. BARTOLETTI: Thank you.

11 MR. MCHARD: That means that you
12 three did not sign in. I will ask you to
13 sign in. We should sign in here, also.

14 (Inaudible, due to talking over each
15 other). Yes, sir, this is our official
16 record of the meeting. Visitors, we're
17 required to collect by law. Okay.

18 This is going to be Eric Mitchell
19 and he's with American Airlines. Mr.
20 Chairman.

21 MR. EDWARDS: John Edwards.

22 MR. MCHARD: John Edwards. And
23 who are you with?

24 MR. EDWARDS: American Airlines.

25 MR. MCHARD: American Airlines,

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1 John Edwards.

2 MR. CHAPIN: I'm Robbie Chapin

3 with American Airlines.

4 MR. MCHARD: All right. Mr.

5 Chapin with American Airlines. Are any of

6 the visitors who signed in planning to give

7 a statement before the Council? Mr.

8 Johnson and Mr. Bartoletti. Okay. I need

9 to make note of that. And did you get the

10 two names, Mr. Chairman, that want to

11 speak?

12 DR. GOODEN: Yes, I did. Thank

13 you.

14 MR. MCHARD: There's that.

15 DR. GOODEN: Mr. McHard, would

16 you also --

17 MR. MCHARD: Just a minute,

18 David.

19 DR. GOODEN: Okay.

20 (Mr. Clark entered the room)

21 MR. MCHARD: Mr. Clark just

22 arrived. Welcome, Steve.

23 MR. CLARK: Thank you.

24 MR. MCHARD: How are you?

25 MR. CLARK: Sorry to disrupt

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1 everything.

2 MR. MCHARD: Well, were you held

3 up by the fog, like the rest of us?

4 MR. CLARK: Well, I was just held
5 up.

6 MR. MCHARD: Okay. For those of
7 you who don't know Mr. Clark, this is Steve
8 Clark from Phillips 66 in Bartlesville.
9 And I just introduced a while ago, Rod
10 Beuttel, the gentleman in the purple shirt
11 from Ketchum, he's with AEA Technology. Do
12 you know him?

13 MR. CLARK: No. I'm pleased to
14 meet him.

15 MR. MCHARD: Okay.

16 DR. GOODEN: Steve, welcome.

17 MR. CLARK: Thank you.

18 DR. GOODEN: Mr. McHard, would
19 you now help us with the introduction of
20 staff, please?

21 MR. MCHARD: I certainly will.

22 I'm going to start over here with Ms.
23 Bruce, Myrna Bruce, who is the secretary to
24 all the Councils and the Board, the EQ
25 Board. Next to her is Christy Myers, our

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1 transcriptionist. And while I'm there, I
2 will point out to you that we are recording

3 the proceedings and they will be recorded
4 not only with a transcription machine but
5 also audio, so we ask that if you have
6 something to say, please speak up. If you
7 wish to come up to the podium, there is a
8 microphone there that will be recording
9 you. If you cannot hear something that's
10 said, feel free to interrupt and ask that
11 it be repeated.

12 Next would be Scott Thompson, in the
13 blue shirt at the back. He's the Director
14 of the Land Protection Division, of which
15 Radiation Management Section is a part.
16 And he's here to give us some information
17 about various things that the Council is
18 interested in.

19 In the white coat here in front of
20 me is Pam Dizikes, she's our attorney. And
21 then to my immediate right, I better not
22 forget this guy because I did one time and
23 that was embarrassing because he's my boss.
24 This is Mike Broderick, he's the Program
25 Director for the Radiation Management

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1 Section. And next to him is Pamela Bishop,
2 who is our Senior Health Physicist in that

3 section. I believe that is everybody on
4 the staff that's here; is that correct?

5 MS. BARTON: Yourself.

6 MR. MCHARD: Myself. Who am I?
7 I'm Dale McHard. I work in Radiation
8 Management on a part-time basis. One of my
9 primary jobs is to be the secretary to this
10 Council, which I have done for many, many
11 years and I handle all the arrangements and
12 all of that kind of stuff. But I'm glad
13 Christy does the Minutes.

14 DR. GOODEN: And does a very fine
15 job.

16 MR. MCHARD: Yes, she does.

17 THE REPORTER: Thank you, very
18 much.

19 MR. MCHARD: Back to you, Mr.
20 Chairman.

21 DR. GOODEN: Thank you. Agenda
22 Item No. 9, Report on the Actions Taken by
23 the Environmental Quality Board. Mr.
24 Broderick, please.

25 MR. BRODERICK: Okay. As those

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1 of you who were at the December meeting
2 will remember, we had a very large rules

3 package that was passed by the Council or
4 was recommended by the Council to the
5 Environmental Quality Board. The meeting
6 did take place February 27th.

7 There was one unexpected thing that
8 happened shortly before the meeting. One
9 of the items in that rules package was
10 basically a change to how we regulate x-ray
11 fluorescence instruments. I'm going to
12 talk about that in the next item. Anyway,
13 we had sent notice out about that to the
14 effected people. And some of them had
15 problems with their mail, I guess you'd
16 say, and they basically found out about the
17 change at a very late date and had some
18 concerns about it.

19 We debated -- we would have been
20 within -- at least legally, correct, we
21 could have gone ahead and submitted it to
22 the Board. But we do try to give everybody
23 a chance to say their piece and the people
24 who are effected by the regulations, we try
25 to give them an opportunity to express

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1 their concerns and have their concerns
2 considered by the Council.

3 So we asked the Board to not pass
4 the Subchapter 19, which dealt with XRF.
5 And the Council -- pardon me, the Board
6 went ahead and did not -- they passed all
7 our other rules but they did not pass that
8 one, which is what we had requested.

9 Dr. Gooden was going to make the
10 presentation. He basically had some
11 surgery, so he asked Mr. Woods to cover for
12 him. And Steve Woods, I must say, did a
13 commendable job of making the presentation.
14 I was very impressed and pleased with how
15 he did on that.

16 MR. WOODS: Thank you.

17 MR. BRODERICK: There was a lot
18 of rules, a complex presentation, and he
19 handled it very well. But the rules have
20 been passed, to my knowledge, unless --
21 Scott, unless you know something I don't.
22 But nothing has been done by the Governor
23 or Legislature on them, so -- but we expect
24 -- basically, we expect that to happen
25 routinely and for those to go into effect.

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1 I believe this fall is when most of them
2 actually go into the effective date. And

3 Pam Dizikes is mouthing something, which I
4 can't hear.

5 MS. DIZIKES: June.

6 MR. BRODERICK: June, pardon me.
7 This summer, then, they'll go into effect.
8 That's all I have for No. 9.

9 DR. GOODEN: Mike, thank you.
10 And I've heard nothing but good reports on
11 Steve's handling of the presentation to the
12 Board, also. And on behalf of the Council,
13 I appreciate your participation in that,
14 Steve.

15 MR. WOODS: You're welcome.

16 DR. GOODEN: Mr. Broderick and
17 Ms. Bishop, would you lead us through our
18 discussion regarding x-ray fluorescence?

19 MR. BRODERICK: Okay. On the x-
20 ray fluorescence, as I mentioned, there
21 were some people who had some concerns
22 about the changes we were making to that
23 rule.

24 When we put this agenda together, we
25 had agreed to meet with some

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1 representatives of the affected industry.
2 Unfortunately, we've given them two dates

3 or ranges of dates, and said why don't you
4 get a group together and come meet with us
5 in this range, and we've done that twice
6 with them and they haven't been able to put
7 a group together.

8 We still expect to be able to meet
9 with them and before our next Council
10 meeting, have some changes and we will --
11 certainly we will listen to their concerns.
12 I don't know if we'll be able to address
13 all of their concerns or not, but we will
14 pay attention to them. We are responsive
15 when we can be.

16 DR. GOODEN: No member of the
17 public is here specifically to hear
18 information regarding this issue?

19 MS. BARTON: I would just like to
20 ask one question. What was the main
21 concern of the people that they didn't want
22 this passed?

23 MR. BRODERICK: The main one was,
24 frankly, the fee.

25 MS. BARTON: The fee.

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1 MR. JOHNSON: Question. The new
2 alloy analyzers -- I know this says lead

3 based paint.

4 MR. BRODERICK: That's right.

5 MR. JOHNSON: But the new alloy
6 analyzers that are being marketed now and
7 some are now here in Oklahoma that has an
8 americium 241 isotope, are they going to
9 fall under this Subchapter 19 or is that a
10 licensing situation?

11 MR. BRODERICK: Subchapter 19 is
12 strictly for x-ray fluorescence instruments
13 to be used for lead based paint detection,
14 which the alloy analyzers are not, as you
15 well know, for lead based paint detection.

16 Now, if they have a large enough
17 source of americium 241, there is a
18 separate rule from the NRC and which we
19 have adopted, as you know, about -- for
20 certain types of generally licensed devices
21 that requires registration and so forth and
22 payment of a fee, basically, to track
23 those. If they have enough americium 241,
24 then they could fall under that.

25 MR. JOHNSON: What would be your

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1 guess as to the total number of --

2 approximate number of the lead-based paint

3 cobalt 57 analyzers here in the state?

4 MR. BRODERICK: For the cobalt 57
5 analyzers, which are not the ones that
6 caused the controversy -- cobalt 57 has
7 been regulated effectively under the
8 Subchapter 19 for several years. I believe
9 there are three. There's not very many.

10 The other type, the Niton, which has
11 cadmium 109 in it, it ends up there are a
12 lot more of them out there than we thought.
13 We knew about roughly twenty-some before
14 this, but since then we've kept count and
15 it ends up there are, I believe, somewhere
16 50 to 75 of these. There is a much larger
17 number of them in the state than we had
18 thought.

19 But anyway, we will have a meeting
20 and I -- or I will -- I'll just tell you,
21 George, there is no plans to extend this to
22 lead-based paint -- from lead-based paint
23 to include those alloy analyzers. I
24 certainly --

25 MR. JOHNSON: In a short period

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1 of time, and I think Mr. Buettel could
2 probably answer that, in a short period of

3 time, the cadmium 109 that these other
4 analyzers would become reactor grade
5 material instead of an accelerator
6 material. A lot of that's been at issue
7 right now. Am I correct in that, Mr.
8 Buettel?

9 MR. BRODERICK: They're shifting
10 their production mode, where it has been
11 mostly accelerator produced, they are going
12 to produce it with the reactor?

13 MR. JOHNSON: Yes.

14 MR. MCHARD: I have a request
15 that anybody from the public that speaks,
16 that they give their name each time so that
17 we have an accurate record, please. Thank
18 you.

19 DR. GOODEN: Okay. We were
20 discussing the XRF issue. Mr. Burnside,
21 did you get to hear most of that
22 discussion?

23 MR. BURNSIDE: Scott caught some
24 of it for me.

25 DR. GOODEN: Okay. Do you have

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1 some thoughts you would like to bring
2 before the Council?

3 MR. BURNSIDE: Yes, sir. I'm
4 Mike Burnside with Burnside Associates. I
5 have a Niton XL 309 x-ray fluorescence
6 analyzer, also teach classes for the
7 University of Oklahoma, (inaudible) getting
8 into the lead-based paint program. I was -
9 - Mr. Broderick, was -- is there 50? I
10 guess -- how many of those are on the
11 private side? Do you know how many --

12 MR. BRODERICK: I don't know
13 offhand. There are a number that are on
14 government agencies, I don't know
15 percentages.

16 MR. BURNSIDE: The -- you know, I
17 can -- you know, from my personal
18 viewpoint, I understand the need for
19 keeping track and knowing where these
20 things are at. That aspect of it, from the
21 -- I guess the private side of it, the
22 contracting basis of it, depending on what
23 the fee is, our -- you know, just from our
24 operating cost normally, you know, at one
25 time we proposed a \$500 fee and that's a --

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1 that digs into somebody -- somebody's
2 operating expenses really fast.

3 You know, I have no objection
4 against having the registration, knowing
5 where those sources are at or anything,
6 just the fee, the biggest problem I would
7 have would be with -- because myself, I do
8 quite a few, I know others -- a lot of the
9 state agencies, where they're under grants
10 or budgets anyway, where it's going to be
11 coming out of some of theirs that -- to
12 reflect and, you know, there's other groups
13 that have theirs that strictly do
14 federally-funded work or they have state
15 money, that would eat into their operating
16 budget. That's -- I guess, that's what I
17 just wanted to address, mainly the fee
18 issue.

19 DR. GOODEN: Let me -- while
20 you're still here to give us some input,
21 let me tell the Council what I think the
22 issues are regarding XRF, because we may
23 not be real well informed on that and maybe
24 you can help us in that regard.

25 We have two types of devices. We

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1 have a device that contains cadmium 109
2 that can be produced both by accelerator

3 and as a byproduct material, is my
4 understanding.

5 And then we have a part that has
6 cobalt 57, which is -- can only be produced
7 by accelerator. My understanding is that
8 the accelerator-produced instruments have
9 required a registration for several years
10 or many years.

11 MR. BRODERICK: Since about 1995.

12 DR. GOODEN: But the cadmium 109
13 byproduct material device has not required
14 a registration because of the general
15 license issued by the NRC; is that pretty
16 close to correct?

17 MR. BRODERICK: Yes, sir.

18 DR. GOODEN: For the Council
19 Members, those instruments that contain
20 Cadmium 109 as a byproduct material, the
21 state has no way of knowing where those
22 devices are and has no registration on
23 them.

24 So this issue that we are
25 considering, not necessarily at this

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1 meeting, but this issue that's being
2 considered is one of, is there a need to

3 know where all of these instruments are and
4 will there be some fee associated with this
5 registration. Is that fair?

6 MR. BURNSIDE: Right.

7 DR. GOODEN: Now, we've heard a
8 couple of numbers thrown out. You're the
9 only one here in this industry. Do those
10 numbers seem reasonable to you that there
11 are maybe like 70 -- 50 to 70 of these --

12 MR. BURNSIDE: I don't know. I
13 don't know how many on a -- I guess you
14 would say on the public side, you know,
15 different agencies having them. Of those
16 who -- or I would say on the contracting
17 who actually pursue it for a living, I
18 would guess -- the ones that I can think of
19 off-hand, I would say 20 to 25. And I know
20 with public entities, there is -- public
21 entities have a few. I mean, they probably
22 -- public entities have more than --

23 DR. GOODEN: Does your company
24 have more than one?

25 MR. BURNSIDE: No, I just have

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1 one.

2 DR. GOODEN: And the number of

3 millicuries in these cadmium 109 devices
4 are about what?

5 MR. BURNSIDE: The majority of
6 them are 10 millicurie sources. You can
7 get them all the way up to a 40 millicurie
8 source. They are going to vary from a 10
9 to 14 to a 40 millicurie source. I don't
10 know -- on the private side, the different
11 cost aspect, I don't know of anybody that
12 has a 40 millicurie source.

13 DR. GOODEN: Okay.

14 MR. BURNSIDE: I have a 14 and
15 just the cost is exurbanite.

16 DR. GOODEN: And cadmium 109, is
17 that a relatively long half-life so you
18 don't have to --

19 MR. BURNSIDE: It's 15 month
20 half-life.

21 DR. GOODEN: 15 months. So do
22 you replace it about every 15 to 30 months?

23 MR. BURNSIDE: Yeah, somewhere --
24 mine, typically I replace it anywhere from
25 15 to 18 months, depending on -- depending

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1 on how busy I am, how slow it's getting.
2 The resourcing on the 14 millicurie, I

3 believe right now is \$3,890.00

4 DR. GOODEN: Well, I've spoken to
5 staff a bit about this particular issue. I
6 was very pleased that they handled this the
7 way they did in December, mainly that there
8 was some concern among the XRFers and that
9 this being the case, the DEQ pulled back on
10 their desire to go forward with that
11 regulation until this issue could be
12 addressed within the community. And I
13 think staff is willing to get together with
14 a group of your people and discuss this
15 matter further.

16 Whether we will resolve it,
17 particularly in favor of the interest of
18 that group right now as opposed to the
19 interest of the state, I can't say. But
20 they are certainly willing to do that.

21 I told Mr. Broderick that, if you
22 wish, you can have a couple of members of
23 the Council there to be a part of this
24 discussion. We can't all go, because that
25 would constitute a meeting, but if you want

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1 a couple of us to be there just to listen
2 in on it and be a part of it, we would be

3 pleased to do that.

4 MR. BURNSIDE: Okay.

5 DR. GOODEN: So that being the
6 case, we'll go forward with that. Any
7 other comments regarding that?

8 MS. BARTON: I have a question.

9 DR. GOODEN: Yes.

10 MS. BARTON: I'm trying to think
11 of how appropriately to ask you this. What
12 is the -- is it an increase or decrease of
13 business that you all had from the XRF and
14 the lead-based paint asking for risk
15 assessment or an inspection? Where do you
16 stand since the rule has passed, as far as
17 volume of requests for services?

18 MR. BURNSIDE: Since the new HUD
19 rule?

20 MS. BARTON: Yes.

21 MR. BURNSIDE: It's increased.

22 MS. BARTON: It has increased?

23 MR. BURNSIDE: Yes.

24 MS. BARTON: And what about the
25 fees that the majority of providers charge?

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1 What is that running on an average?

2 MR. BURNSIDE: Typically, where

3 my fees are at on a house inspection, if
4 it's associated with the Tulsa area where I
5 don't have to -- I don't have travel costs,
6 95 percent of those are only \$200 a house.
7 Of course, that depends on the square
8 footage. That's the typical house, up to
9 2,000 square feet.

10 MS. BARTON: Is that what the
11 majority of people in that range are
12 charging? Is that for the inspection only,
13 not risk assessment?

14 MR. BURNSIDE: Yes, inspection
15 only. To be honest, I'm probably at the
16 lower end scale because I do more volume.
17 Costs, I hear from the western part of
18 Oklahoma, is that they do get more for
19 their inspections. I'd say --

20 MR. BRODERICK: They probably
21 travel farther, too, though.

22 MR. BURNSIDE: Yeah, yeah, you
23 get into the mileage, and the travel can
24 really -- I've had sometimes where the
25 travel costs were more than the inspection

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1 itself. But I would say you're looking at
2 anywhere -- that's going to be your

3 starting point, it's just going to go up
4 from there for the inspection costs.

5 MS. BARTON: Okay. I teach real
6 estate and I take a survey of realtors and
7 ask how many, and I'm really disappointed
8 in the amount of people that are not asking
9 for an inspection.

10 MR. BURNSIDE: I will say my
11 private inspections for somebody who's not
12 going through government funding, one way
13 or another, I may average two private
14 inspections a month.

15 MS. BARTON: That's
16 disappointing.

17 MR. BURNSIDE: You know, and
18 typically when those are -- those are
19 houses that cost is usually not a factor,
20 you know, it's not the \$100,000 to \$200,000
21 houses, it's the \$600,000 and on up houses,
22 they are wanting to have everything
23 evaluated.

24 MS. BARTON: Okay. I appreciate
25 that and I would just like to go on the

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1 record for representing the public point of
2 view that I do understand the cost of that

3 \$500.00 fee.

4 When you see what he's saying here
5 that there are not many outside of the
6 government funding that they get, you know,
7 part of their thing they're asking for --
8 that they're asking for these lead-based
9 paint inspections and that will affect the
10 small operator and that's all I have to
11 say. I don't know whether that's
12 appropriate, but I do want to go on the
13 record for that.

14 DR. GOODEN: Are there any other
15 questions from the Council?

16 MR. MACDURMON: Is there an
17 advantage that the cadmium device has over
18 the cobalt 57 device?

19 MR. BURNSIDE: It does have a
20 longer half-life, is really the primary
21 advantage. The other -- the main advantage
22 when I first purchased my unit, I bought it
23 in January of 1997. The major advantage at
24 the time, the Niton versus the other
25 manufacturers, the Niton has built-in

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1 software where you did away with
2 handwritten forms while I'm doing the

3 inspection. I actually have a little
4 barcode scanner where I scan all my
5 inspection stuff, so it actually cut out
6 more office time. So that was the primary
7 advantage that led me towards the cadmium
8 source.

9 MR. MACDURMON: Yeah, I was just
10 wondering, do people -- is one of the -- is
11 one of the issues that, up until now,
12 anyway, that cadmium was generally licensed
13 and the cobalt 57 required a state
14 registration, so you could avoid the state
15 registration by going with the cadmium.

16 MR. BURNSIDE: Not typically.
17 Because when everybody got into it, you
18 know, that wasn't an issue at that point.
19 Really, the biggest selling point was that
20 it had the built-in software capabilities
21 where we cut out our office time
22 tremendously.

23 MR. MACDURMON: Thank you.

24 DR. GOODEN: Any other questions?
25 Questions from the public?

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1 MR. BURNSIDE: The only other
2 thing I would like to -- one thing, and I

3 hope there is a good means of tracking it,
4 is XRF's coming in from out of state. I
5 don't know if there is any good means or
6 mechanisms for doing that, if something's
7 addressed at some point in the future.

8 DR. GOODEN: Is it your
9 perception that that's a --

10 MR. BURNSIDE: There have been
11 situations to where a company from -- I'm
12 just throwing out, I don't know where
13 they've been from, but New Jersey comes
14 back, they had a HUD contract to inspect
15 departments, they brought in their own
16 unit. You know, there is cost saving, you
17 know, if they're -- I don't know if there
18 is a good mechanism to find the situations,
19 you know, to pay that fee so it would be on
20 an even basis, I guess you'd say with the
21 ones in-state.

22 MR. BRODERICK: The way that the
23 current rule works, it requires people
24 coming from out of state to get a permit
25 like that, which is called reciprocity and

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1 we -- the fee is the same as what we charge
2 for in-state or the current and I wouldn't

3 anticipate that changing.

4 DR. GOODEN: Let me address the
5 question that stands. Is there a precedent
6 for requiring registration of generally
7 licensed sources?

8 MR. BRODERICK: Yes, other states
9 have done with different types of devices
10 have required this. And also, if you
11 recall, we have for certain types of
12 generally licensed devices that have a very
13 large sourcing, and there is a requirement
14 that the NRC put in recently in which we
15 have passed, also, requiring registration
16 and a fee.

17 DR. GOODEN: Mr. Burnside, I
18 appreciate you coming, very much. I think
19 it gave certainly me and probably other
20 members of the Council a better
21 understanding of this. And I'm just
22 impressed that as we go forward, this is
23 one more way in which radiation and
24 radioactive materials serve the public by
25 protecting us in certain ways. So, thank

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1 you, very much, and we'll address this
2 issue with the staff.

3 Item No. 11, Mr. Broderick and Ms.
4 Bishop, Changes to the Radiation Management
5 Rules Associated with 10 CFR Part 35.

6 MR. BRODERICK: I'm Mike
7 Broderick of the Radiation Section. The
8 next big required rulemaking that we will
9 have basically is Part 35, which as the
10 title says there, is the Use of Radioactive
11 Material in Medicine.

12 We are required by the Nuclear
13 Regulatory Commission to pass rules to be
14 compatible with their rules and the way
15 we've chosen to do it up until now, anyway,
16 and we'll probably continue to do it, is
17 adopt the federal rules by reference. We
18 feel like that's, in general, the simplest
19 situation for everybody.

20 Basically, we're coming up on the
21 deadline, I believe it's in the summer of
22 2006 that we're -- we are required as an
23 agreement state by the NRC to have these
24 rules passed. So that means in fall of
25 2000 -- pardon me, summer of 2005, I

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1 believe it is, that we're required to have
2 it passed.

3 Anyway, in the fall of 2004, we'll
4 probably be approaching the Council with a
5 rulemaking for this, that makes several
6 changes to the rule. There are a lot of
7 them. I'm not going to go over all of
8 them. The main thing I'll mention is that
9 it takes a lot of stuff out of the
10 licensing of radioactive materials and
11 moves it to the inspection phase. I think
12 it will probably, at least for a lot of
13 cases, make the licensing somewhat similar
14 but it will make our inspections more
15 burdensome, frankly, that would be my main
16 comment on it.

17 There is one difference in what we
18 will be doing here versus the NRC, because
19 we do include the accelerator-produced --
20 at the December meeting, we basically
21 decided -- declared that accelerator-
22 produced material be treated the same as
23 the byproduct material in the federal
24 rules.

25 There is one type of accelerator-

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1 produced material that's becoming
2 particularly -- it's the new thing, I guess

3 you'd say in medicine right now, it's
4 Fluorine 18 and some other isotopes are
5 used for what's called PET imaging, which
6 stands for Positron Emission Tomography.
7 It has nothing to do with veterinary
8 medicine. PET imaging.

9 And it has some unusual traits.
10 It's very -- it's an extremely short-lived
11 isotope, fairly hot during that life. But
12 our rule will be covering PET, which the
13 NRC does not, that's the main difference.

14 So that's where we are. We'll be
15 coming to you in our next meeting probably
16 with a rulemaking to propose to adopt the
17 new Part 35.

18 DR. GOODEN: So, Mike, does that
19 mean that we're going to try to get the
20 accelerator-produced products under the
21 federal rules?

22 MR. BRODERICK: Well, they're
23 under them now or -- well, assuming that
24 the rules which you passed and the Board
25 passed go through, that will happen anyway.

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1 And this new rule will also -- will do
2 that. That's just something I'm drawing

3 attention to that's something that people
4 may not think of.

5 DR. GOODEN: Where I was going
6 with this is, is implementing this in the
7 state of Oklahoma among the users and we're
8 going to try to have that done by the end
9 of 2004. In other words --

10 MR. BRODERICK: We'll try to have
11 the rule, yes, in place by the end of 2004
12 and probably to go into effect -- I don't
13 remember the exact date, but I believe it's
14 in May or June of 2005.

15 DR. GOODEN: Okay. Any other
16 questions regarding this issue? Agenda
17 Item No. 12, X-ray and Accelerator Fees.

18 MR. BRODERICK: Okay. At the
19 last meeting in December, we passed -- you
20 passed or recommended, I should say,
21 several rules -- packages. And our goal
22 there was to sort of rationalize our
23 materials rules by bringing the radioactive
24 materials in the state into one -- one
25 system of regulation as opposed to -- we

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1 had sort of a combination of old pre-
2 agreement state stuff for accelerator and

3 different rules for agreement state
4 material.

5 We didn't address the x-rays,
6 machines and accelerators in that. We're
7 going to try to do that next. We have what
8 I would have to call a hodgepodge of x-ray
9 permits and rules. There are fees for many
10 of them. Many of our fees don't make
11 sense, frankly.

12 I can give you an example. I'm not
13 going to talk at length, which I know makes
14 many of us very happy. But, anyway,
15 there's what's called a sulfur analyzer,
16 which is a small box with a radiation
17 meter, holding a radiation meter up next to
18 it you can -- it's very sensitive, you
19 might be able to detect the needle
20 twitching. We require regulation, paying a
21 \$100 a year fee for those and we go out and
22 inspect them periodically.

23 And I cannot really in good
24 conscience say that that's a good thing. I
25 don't feel -- I think that's way too --

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1 that's making a mountain out of a mole
2 hill. But we put that on the same level as

3 an x-ray radiography machine, which is
4 quite powerful and has the potential to
5 burn somebody or in an extraordinary case,
6 to kill somebody. They are treated the
7 same under our rules.

8 I think we can come up with a more
9 rational system than that. It will involve
10 probably relaxing some rules on some things
11 and probably, possibly changing them --
12 we've already changed our x-ray radiography
13 rules, that is one thing we did in the last
14 rulemaking item.

15 We may end up changing our fees to
16 reduce them on the smaller things or
17 eliminate them and it may involve, for some
18 things, raising them. But we will present
19 a fee package to you on that.

20 The other thing I made reference to
21 is basically for PET imaging, which there -
22 - basically, the isotopes, they have to be
23 created near where they will be used,
24 unless you want to do extraordinary
25 measures, like fly them into the state,

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1 which has been done in the past, but they
2 need to be created pretty near where

3 they're used. There are two companies now
4 that are doing that.

5 And again, because of the way our
6 system is set up, the accelerator system,
7 our accelerator rules, the rules themselves
8 are not so bad, but our fee structure for
9 accelerators doesn't make sense, frankly.
10 It doesn't cover the costs that we have.
11 The permitting for these two was very
12 extensive, was as big as a nuclear medicine
13 license and they paid a fee, I believe, of
14 \$100, Pam; is that right? Yes, \$100, which
15 doesn't make sense.

16 We'll probably be addressing those.
17 There are two of those in the state. There
18 won't be a large number more. There might
19 be potentially room in the market for maybe
20 one or perhaps two more, but I don't expect
21 a large number of others in the state.
22 That is a new technology we need to change
23 the rules to keep up with and we'll try to
24 address. That's all I have on this.

25 MR. JOHNSON: May I? Now, the x-

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1 ray -- George Johnson, Capitol X-ray
2 Service, Tulsa.

3 The fee for industrial x-ray
4 machines at the present time is \$100 for
5 the first machine, \$90 per machine up to a
6 maximum of \$500. At the last meeting, and
7 I don't remember, would this increase the
8 25 percent, also?

9 MR. BRODERICK: No.

10 MR. JOHNSON: Okay. If you're
11 going to revisit the fee on the sulfur
12 analyzer, the sulfur units, are you going
13 to increase them? Are you looking at
14 increasing them on industrial x-ray
15 machines?

16 MR. BRODERICK: That's a distinct
17 possibility.

18 MR. JOHNSON: Well, being in
19 business for as long as I have, I'm very
20 used to double taxation, okay. I'm also,
21 like a lot of the other licensees,
22 industrial licensees in this state, I'm
23 also an x-ray machine permittee. So I'm
24 paying a double fee.

25 Not too long ago, a company all the

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1 way from Germany brought an x-ray machine
2 into the state of Oklahoma and it only cost

3 them \$100. And I think that is totally
4 ridiculous, because it took work out of one
5 of the permittees here in the state of
6 Oklahoma, for a German company to come in
7 and they only had to pay -- and I
8 understand the regulations, I know what the
9 regulations say, but I think that needs to
10 be looked at also. The reciprocity, just
11 because the fee that -- my fee is \$100.
12 The German company can come in and take my
13 work for \$100.

14 And I don't agree with raising the
15 industrial x-ray machine fees any further
16 than what they are right now. I'm even in
17 favor of, for those that are both isotope
18 licensees paying the annual fee and the
19 permit fee, adjoining that fee and only if
20 they want to. Thank you.

21 DR. GOODEN: Thank you, George.

22 MR. CLARK: Mr. Chairman.

23 DR. GOODEN: Any other questions
24 or comments regarding this issue?

25 MR. CLARK: I just have a

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1 question. Steve Clark. I have a question.

2 Relative -- whatever comes about with x-ray

3 equipment, the sulfur analyzer issue, I
4 understand very well, we have some.
5 Basically, they're analytical equipment.

6 We have other analytical equipment
7 with x-ray spectrometers, x-ray defraction
8 units, et cetera, which are not necessarily
9 real powerful units, certainly more
10 powerful probably than sulfur analyzers,
11 but whatever is done with the scale and
12 whether it'S to include it all as one
13 license fee or whether it's to have fees
14 for different levels of risk of equipment,
15 when you look at that, you need to look at
16 all these issues.

17 That's all I really want to have on
18 the record, hat there are more issues than
19 just between an analyzer source and perhaps
20 industrial radiographers or industrial x-
21 ray equipment. This is really referring to
22 x-ray, not radiography, but there is a
23 number of issues I just want to point out
24 that the staff and the Council need to
25 probably consider and look at that. Thank

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1 you.

2 DR. GOODEN: Thank you, Steve.

3 MS. BARTON: I have a question or
4 a statement. Mike, do we have any kind of
5 a survey as to comparable fees in the
6 surrounding states, what they've done, and
7 when we discuss this, maybe it might be
8 helpful to everybody to see who -- what
9 their fees are in that and how they've done
10 it.

11 MR. BRODERICK: Sure.

12 MS. BARTON: And maybe we might
13 get some positive exchange of ideas for fee
14 structure.

15 MR. BRODERICK: We've done that
16 to some extent. We haven't done it
17 formally. It's difficult in some states.
18 For instance, New Mexico and, I believe,
19 Kansas, they're all funded out of general
20 revenue. So they have no fees.

21 Now, something that -- and this fits
22 with what George was talking about,
23 something Texas does, which I am -- I think
24 may have -- I'm not saying this is the way
25 I'm going to suggest we go, but I think

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1 this is interesting. Texas, as I
2 understand it, George, and I suspect you

3 know this better than I do, but I believe
4 they have one fee that covers all forms of
5 radiography.

6 MR. JOHNSON: Yes, sir. But I
7 would like to say something to that, if you
8 don't mind. George Johnson again.

9 Texas treats x-ray only technicians
10 the same as they do isotope technicians.
11 In other words, Texas requires
12 certification of the x-ray technician the
13 same as they do certification of the
14 isotope.

15 Prior to agreement state status, and
16 you remember I was at the meetings at that
17 time, we were able to keep the
18 certification, the testing, third-party
19 certification testing of x-ray technicians
20 on a voluntary-only basis in the state of
21 Oklahoma at the present time.

22 Now, there are a lot of isotope,
23 both isotope technicians and x-ray
24 technicians who are double certified. They
25 have the card that they can either use x-

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1 ray machines or isotope.

2 But I would really hate to see any
3 time soon, it'll be five years and I'll be

4 out of this business, I would really hate
5 to see anytime soon where we lump everybody
6 in industrial radiography in one lump to
7 where the testing is required for x-ray the
8 same.

9 There is not that many companies
10 doing temporary job site x-ray machine work
11 in this state. And Mike mentioned about
12 you can get burned or hurt, yes, you can.
13 The maximum kv for a portable x-ray machine
14 in this state is 300 kv. There are a
15 couple of facilities that have a larger or
16 higher energy x-ray machines, but they are
17 behind concrete walls.

18 And I don't know, maybe you can tell
19 me here, Pam. I don't know of any, and
20 I've been in this business now since 1965,
21 my own business. Prior to that, 1956. And
22 I know of no incident in the state of
23 Oklahoma where anyone was -- received an
24 overexposure or an excessive exposure with
25 an industrial x-ray machine. I know of no

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1 one.

2 American Airlines deny it and they
3 have a crew out there that's unbelievable
4 of how much work they have to do, how much

5 x-ray work they have to do on some of those
6 factory aircraft. You all have any
7 problems?

8 MR. BARTOLETTI: No, sir.

9 MR. JOHNSON: So, I would rather
10 keep it like it is, permit over here, leave
11 the testing alone and the isotope over here
12 but still like to have one fee.

13 MR. BRODERICK: Let me mention
14 something I had intended to talk about.

15 Let me do -- if I may. One of my staff
16 said something to you recently, which I'm
17 basically -- there's nobody in the state,
18 to my knowledge, certainly nobody on the
19 staff, that is planning or proposing or
20 scheming to require -- to require
21 certification for industrial x-ray
22 radiography techs. That is not -- that has
23 never been on our agenda, just to comfort
24 you about that.

25 I'm willing to consider that if

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1 somebody can make a good case for it, but
2 it's not something that I have a burning
3 desire to do. And I thank you, Mr.
4 Bartoletti.

5 MR. BARTOLETTI: Actually, you
6 answered my question. My name is Eric
7 Bartoletti, American Airlines. I also hold
8 the position of radiation safety office for
9 our alliance in the Fort Worth, Texas
10 facility, which we do x-ray only, so that's
11 a good example there.

12 And part of my responsibilities
13 there is to see that they receive once a
14 year a radiation safety two hour refresher
15 course. And part of that curriculum
16 includes recent incidents. And I couldn't
17 find any. I couldn't find any for quite a
18 distance back. They were looking for
19 recent incidents.

20 And that brought to mind a question,
21 so I started doing some research by mostly
22 via telephone contacting other companies,
23 some companies that we outsource some x-ray
24 work to, other airlines, and they've had
25 the same situation. They don't have any

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1 recordable events of mishaps and this and
2 that with dropping badges and things like
3 that, you know, that are common in the
4 industry, but not anybody with any
5 overexposure to an x-ray tool. And the

6 equipment obviously is good out there, it
7 works as it should. But I wanted to make
8 that point because rumor had it in the
9 industry that we were going to certify --

10 MR. BRODERICK: No.

11 MR. BARTOLETTI: -- x-ray
12 radiography similar to align with Texas,
13 because a lot of reference is to aligning
14 with Texas. And the consensus that I've
15 had from an unofficial poll that I've taken
16 of people in the industry that I'm aware of
17 in Texas is that Texas' x-ray requirements
18 are an overkill considerably.

19 And they just really just cost
20 increase to the companies as far as
21 administrative costs and certain other
22 deals. There are some things that are good
23 but there are some things that are just
24 proven not to be needed and I wanted to
25 make that clear. I mean, just to

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1 standardize with them for that is --

2 MR. BRODERICK: I don't have that
3 -- we do not have that on our agenda as a
4 hidden agenda or anything. That's not
5 something we're planning.

6 MR. BARTOLETTI: Okay. While I'm
7 up here, there are a couple of things I
8 wanted to -- looking over the proposed
9 rules changes to Subchapter 15. When would
10 that be appropriate for me to comment or
11 ask questions about?

12 DR. GOODEN: I have no objection
13 if Council Members have no objection to you
14 going ahead and discussing that now.

15 MR. BARTOLETTI: Okay. Great. I
16 was reviewing, just in the terminology, I'm
17 somewhat a stickler for it because of the
18 extensive experience, you can call it, with
19 auditors and also being an auditor at times
20 in different states. Subchapter 15-8,
21 Utilization of the Proposed Rule Change,
22 and (A)(1), the term, well, I'll read it.

23 The description including the make,
24 model and the serial number of the
25 radiation machine or transport of storage

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1 container in which the tube is located. I
2 believe from a speculative term, transport
3 storage container was taken directly out of
4 some isotopes reference, because there is
5 no serialized transport or storage
6 container for x-ray tubes. Once it's

7 unplugged, it could be sitting in the back
8 of your car.

9 So if an auditor came in and they
10 wanted to see the serial number of a
11 storage container for x-ray tube, that
12 would put us in a position where we don't
13 have one. Well, it says right here, you
14 know. In this room, we have a lot of
15 experience and use common sense and logic,
16 but I've worked with a lot of auditors who
17 for whatever reason, they read the intent -
18 - or they read the black part of the paper,
19 I should say, not the intent. So I would
20 like to make a recommendation that that
21 part, or transport of storage container, be
22 deleted.

23 Also, in that same section 15-
24 9(C)(1) concerning film badges. Two
25 recommendations on that. One, I would like

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1 to see in the DEQ's glossary in the
2 beginning here, I would like to see a
3 glossary for individual monitoring device,
4 a definition for it. What we have is a
5 definition for personal -- personnel
6 monitoring -- let me get this straight --

7 personal monitoring equipment, but we don't
8 have --

9 MS. BARTON: What page are you
10 on, excuse me?

11 MR. BARTOLETTI: Page -- well, it
12 would be -- if there was a definition --
13 page 3 of this manual. If you go to page -
14 -

15 MR. BRODERICK: Eric, Pam may
16 have something here.

17 MS. BISHOP: What these are, are
18 current rules and then we just passed some
19 rules at the -- that are before the Board.
20 And I'm wondering if some of what you're
21 doing, talking about, is in those. The
22 utilization log is, because we don't have -
23 -

24 MR. BARTOLETTI: Right.

25 MS. BISHOP: -- utilization log

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1 in here.

2 MR. BARTOLETTI: Right. I want
3 to tie that into --

4 MS. BISHOP: Okay.

5 MR. BARTOLETTI: -- I'm talking
6 about --

7 MS. BISHOP: In case there is

8 confusion about it, what he's talking about
9 is in these.

10 MR. BARTOLETTI: In the existing
11 rules, I have not seen a definition for
12 individual monitoring device. What we
13 commonly call in the industry a film badge.
14 That is different than a personal
15 monitoring device, which could be a pocket
16 dosimeter, this is a personal device
17 assigned to a person, an individual.

18 And the difference is, on this
19 section, going back to 15-9(A)(1), it says
20 film badges shall be replaced at least
21 monthly -- here, I'm sorry. Let's go to --
22 I skipped one. Go down to (B). Lost or
23 damaged monitoring device. If a worker's
24 individual badge direct reading or
25 electronic dosimeter is lost or damaged,

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1 work should cease immediately.

2 And then coming down to the end of
3 that, 15-9(B) on the last page, number 5,
4 number 6 there at the top of the page,
5 records of lost or damaged personal
6 dosimeters is required to maintain for
7 permanent licensure. Personal dosimeters

8 are pocket dosimeters and industry knows
9 it. As it's referenced here, that would
10 include film badges. I mean, it would
11 include pocket dosimeters, we break and
12 lose them all the time, \$100 a piece. We
13 only keep a record of that for the entire
14 time.

15 MR. BRODERICK: We agree with you
16 there.

17 MR. BARTOLETTI: So just the
18 terminology I want to see clarified.
19 Because I know how it is to go through an
20 audit and have a guy that says, I know what
21 you're saying makes sense, but this is what
22 it says. So these are just strictly some
23 things I would like to see cleaned up.

24 MS. BISHOP: Eric, we did
25 extensively discuss this terminology when

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1 we were trying to write this part of the
2 rule and I -- there may be -- I think we
3 did decide on personal. I don't -- or
4 maybe we decided on individual, but if
5 there is a place where it's not consistent
6 --

7 MR. BARTOLETTI: Right.

8 MS. BISHOP: -- that's what

9 you're pointing out. If you -- do you like
10 individual monitoring devices?

11 MR. BARTOLETTI: I would just
12 like to see it consistently, individual and
13 also, if you're going to use the term, "to
14 install", to insert it in the glossary.

15 MS. BISHOP: And I thought we did
16 that.

17 MS. BISHOP: -- I think. We
18 weren't?

19 MR. BRODERICK: We beat it to
20 death. We had an in-house --

21 MS. BISHOP: We did beat it to
22 death.

23 MR. BRODERICK: -- discussion and
24 called George and had a lengthy discussion,
25 I remember.

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1 MR. JOHNSON: Yes, because I used
2 the word "individualized" because there is
3 a difference between individual and --
4 individualized is one goes to one person.

5 MR. BRODERICK: Sure.

6 MR. JOHNSON: Individual doesn't
7 really mean that.

8 MS. BISHOP: So we may need to

9 work this out of what we want to call it,
10 because we had a hard time with it.

11 MR. BARTOLETTI: Only because,
12 like I said, an auditor would review that -
13 - may I ask somebody else, how do you
14 interpret personal dosimeters, meaning
15 pocket dosimeters, that would be -- I would
16 like to align the regs to be more
17 consistent with what the industry commonly
18 uses so that -- the average radiographers
19 know the terms.

20 MS. BISHOP: So do we, I mean, we
21 want to do that, too.

22 MR. BRODERICK: We're with you.
23 We're totally -- we don't always agree with
24 what industry proposes. This is one, we're
25 with you on this one. We want our rules to

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1 be very clear.

2 MR. BARTOLETTI: And like I said,
3 this just makes life easier after these
4 rules go into effect for all of us as far
5 as having to deal with them. Back up to
6 where -9(C)(1) again, where it talks about
7 film badges shall be replaced at least
8 monthly. And then it says other individual
9 badges are to be replaced at periods not to

10 exceed three months.

11 I guess I was looking for something
12 here to reference back to -- I guess other
13 includes all the references in other areas
14 in the rules, TLD's/LSL's, including film
15 badges. That would -- some parts in the
16 regs you list them, in other parts here you
17 just say other individual badges be
18 replaced in periods not to exceed three
19 months.

20 Then below it, we label them if a
21 worker's individual badge direct reading or
22 electronic dosimeter is lost or damaged,
23 just consistency in the terminology is what
24 I was driving at here. But that's it on
25 that section.

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1 The storage containers, personal
2 versus personal or individual or
3 individualized, whatever you guys decide.
4 And if you do use the term
5 "individual/individualized" to include it
6 in the glossary so that the radiographer
7 can look it up and say, oh, they mean film
8 badge. Because forever they'll be calling
9 that, I don't know how many generations

10 before we get away from the term film
11 badge. But they're going to need some
12 point of reference to say this is what they
13 mean.

14 MR. BRODERICK: What I would
15 request for this, this is one where we're
16 totally -- we try -- we discussed it
17 extensively. We called George and said,
18 George, what do you guys call this stuff
19 and he tried to come up with it.

20 What I would ask you to do is for
21 you and George and anybody else in industry
22 gets together, if you guys would mark up --
23 we've tried to take notes here, but it's
24 hard, you know, when somebody's talking.
25 If you would like to mark up something or

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1 give us something written up, written on
2 this, then that would help us. You know,
3 we want to make our rules as clear for the
4 people in the industry as we can. So we're
5 certainly -- we're 100 percent with you on
6 this one.

7 MR. BARTOLETTI: I was just
8 trying to get the communication between the
9 three languages of the monitor, the
10 radiographer and the management, trying to

11 abide by them to get on the same page.

12 MR. BRODERICK: Let me ask a dumb
13 question, I think I know the answer to
14 this, but I'm going to ask it in case I
15 don't. Do I take it, then, as part of your
16 like ISO certifications and so forth, do
17 you have evaluators come in and they
18 evaluate you against our rules?

19 MR. BARTOLETTI: Yes.

20 MR. BRODERICK: And this is what
21 --

22 MR. BARTOLETTI: Recently, we've
23 separated our internal auditing department
24 from our quality assurance. And I'm in
25 quality assurance, I'm the quality

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1 assurance manager. And it is a large
2 internal department, it's called the
3 surveillance department. And they come in
4 and audit us to our own manuals, which we
5 write, and then -- how we adhere to those
6 regs. And then also to any reference
7 documents, which would be the Radiation
8 Management Rules, Regulations, NRC.

9 We have an entire internal division
10 that does nothing but audit us internally,

11 which is a good thing for us, even though
12 it seems to be a pain at times. I would
13 much rather they find something and we
14 clean it up and take care of it so when you
15 finally come in and take a look at us, we
16 will have done our homework and said, yes,
17 we've done a good job here.

18 And it helps out a lot. But I'm
19 constantly dealing with this type of
20 interpretation, so, yes, by all means, I'll
21 fax you whatever we come to an agreement
22 with and help out.

23 MR. BRODERICK: I'll make a
24 suggestion to you and this may be something
25 you may not want to take advantage of,

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1 because you may not want to bring something
2 to our attention, but I'll offer, if you
3 ever have one of your auditors that you
4 think is interpreting our rule in a way
5 that's stupid, and if you want to call them
6 and, you know, get us on the phone,
7 hopefully we won't interpret it in a way
8 that's stupid, either. We will attempt to
9 interpret it sensibly and, you know, unlike
10 the auditor, we have some -- we don't know
11 near what you know, but we have some

12 knowledge of your practices and what goes
13 on in the field and we'll try to reassure
14 the auditor if you think that would be
15 helpful, that's something we would be
16 willing to do.

17 MR. BARTOLETTI: Thank you. I
18 appreciate the offer. I'm going to utilize
19 it.

20 MR. BRODERICK: I realize you
21 also may not want to draw our attention to
22 something that they find, but that offer is
23 there if you want to take advantage of it.

24 MR. BARTOLETTI: Thank you.
25 That's it.

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1 DR. GOODEN: Thank you. May I
2 encourage the public, also, to make written
3 comments to staff and to the Council,
4 because that's certainly easier to get to
5 where we want to go rather than going back
6 through these transcripts and trying to
7 come up with what we need.

8 I think we're on Agenda Item No. 14
9 now, Report on Activities of the Radiation
10 Management --

11 MR. BRODERICK: I think we're on

12 13, Mr. Chairman.

13 DR. GOODEN: Excuse me.

14 Wonderful use of radioactive materials for
15 the public, General Information Regarding
16 Fusion Images. Ms. Bishop.

17 MS. BISHOP: Well, in February I
18 attended a symposium that was held in
19 Kansas City that was -- it was called the
20 National Symposium of Fusion Imaging and
21 Multi-Modalities. And it was sponsored by
22 the Conference of Radiation Control Program
23 Directors. And there was assistance,
24 financial assistance given by the American
25 Association of Physicists in Medicine,

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1 American College of Radiology, American
2 Society of Radiological Technologists, so
3 there was a lot of input from a lot of
4 different groups.

5 There were 123 attendees, though 72
6 of them were state representatives of state
7 government, there were 12 representatives
8 of academic institutions, there were 20
9 representatives of professional societies
10 and we had a couple doctors there, about
11 five like people from FDA. We had somebody
12 there from Canada who was part of the

13 federal like the FDA's counterpart there.

14 And what was discussed, they started
15 out with an overview of computed tomography
16 and PET imaging. And the meeting had to do
17 with the hybrid technologies that are
18 coming out now. The first one, of course,
19 was spec and CT and then now it's moved and
20 it's gotten really hot with the PET/CT
21 hybrid technology, which is -- Mike talked
22 about the PET imaging or the Positron
23 Emission Therapy Imaging.

24 And, of course, the CT is the CAT
25 scan that probably a lot of you have heard

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1 about where you get a very nice view of the
2 anatomy. And with the PET, you get a view
3 of what's going on with the metabolism, how
4 the body's functioning. And so when they
5 put those two images together, then you can
6 see what's happening where within the body.
7 And these -- this is becoming the
8 technology is developing and becoming very
9 sophisticated so that the doctors can get
10 really pretty pictures of what's happening
11 and they can get a lot of detail about
12 what's happening within the body.

13 But there are some problems with how
14 quickly it's developing. They -- because
15 of all these things, there are different
16 ways these things are being put together.
17 At first, the equipment was just hooked up
18 by computer, so to speak, but now they're
19 being built and designed together.

20 There has to be -- especially with
21 PET, you have to take into account
22 different shielding then you would normally
23 have to have if you were just doing a
24 regular image with a spec machine, type-
25 machine.

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1 Also, the radiopharmacy requirements
2 are different because of the fact that the
3 F-18 that's used for the PET imaging is so
4 much more energetic, it requires much
5 heavier shielding to protect people so they
6 don't get too much of a dose when they're
7 handling it.

8 The -- there were some manufacturers
9 there that explained about their equipment,
10 how it was designed and those types of
11 things.

12 Regulatory issues, of course, were
13 discussed. There were two types of

14 regulatory issues. One was from the
15 state's perspective, how do we license, how
16 do we inspect. And then from the
17 professional society's perspective is how
18 do we certify people to operate this
19 equipment. And, of course, that also ties
20 in with some of the state's perspective of
21 there are states that actually license
22 radiological technologists and nuclear
23 medicine technologists. And so there was a
24 lot of discussion about how do we keep up
25 with this technology.

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1 The line between sealed sources for
2 brachytherapy, mainly, what I was talking
3 about there was diagnostic, but there is
4 also a lot of technology developing in
5 therapy, cancer therapy and the line
6 between sealed source brachytherapy and
7 unsealed therapy with unsealed sources was
8 also breaking down. So you've got the same
9 thing happening on the therapy side with
10 the, like the gliocyte and the
11 theraspheres.

12 These types of things, like a
13 theraspheres in particular, they are little

14 tiny sources. The pharmaceutical or the
15 radioactive material is on the outside of
16 little tiny glass beads. They are so
17 little you can't see them, so they act like
18 a liquid. But they are considered a sealed
19 source. And it's how do you regulate this,
20 so they get injected into a patient like as
21 if it's a liquid, but you don't -- who's
22 supposed to do this? A doctor who's
23 trained in how to handle sealed sources or
24 a doctor who's trained in how to work with
25 unsealed therapy.

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1 Should it be -- so there's all kinds
2 of things going on, a lot of hospitals are
3 working with teams where they have
4 different types of people with different
5 expertise working together to do this. One
6 is intravascular brachytherapy that you're
7 involved with, I know, Dr. Gooden. One
8 thing that -- what's happening there is the
9 technology that has always been used to
10 treat cancer, pretty much, is now being
11 used to treat heart disease in a different
12 part of the body.

13 So things are just changing really
14 fast and new technologies are coming out.

15 One is -- another one for cancer is the
16 targeted nucleoradionuclide therapy, where
17 monoclonal antibodies are being labeled
18 with radionuclides where they'll go
19 directly to the tumor and eradicate it.
20 There are several of those and there are
21 probably more coming.

22 So the question -- actually probably
23 the conference raised more questions than
24 it answered, but it's how do we go about --
25 how do we keep up with this burst of

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1 technical development in the regulatory
2 arena. How do we make sure that there are
3 trained people to do these procedures.
4 Right now everybody is totally dependent on
5 the manufacturers to come out and train
6 people on how to work this equipment.

7 Now, I know New Jersey was one
8 example on how fast it's working. They
9 have a pretty well developed program where
10 they license technologists and they also
11 have a very good program where they license
12 accelerator-produced material. They are
13 not an agreement state with NRC, but they
14 have very well developed licensing program

15 for accelerator-produced material and also
16 it's all one thing, unlike here in
17 Oklahoma.

18 And they right now have 11 CT/PET
19 hybrid units registered. They are in --
20 five of them are in hospitals, five of them
21 are in medical offices and one is a mobile
22 source. The first unit was installed in
23 February of 2002, so that's how quickly
24 they have come online.

25 As far as the licensing of the

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1 technologists, they are one of 21 states
2 that do license them. They have 8,100
3 licensed diagnostic radiological
4 technologists, they have 1,100 licensed
5 nuclear medicine technologists, and they
6 have 79 people who are licensed to do both.

7 Most of the licensing regulations
8 require for the CT that they be a
9 diagnostic radiological tech and to do the
10 PET, that they be a nuclear medicine tech.
11 So you need two people there in a lot of
12 the states, one to push the CT switch, one
13 to push the PET switch.

14 And it's just -- there's a real
15 shortage of trained people, actually. So

16 they're trying to work out how to go about
17 developing the certifications of the tests
18 and getting people trained and making it so
19 it's all going to work.

20 It may be that this -- some of this
21 may be coming down the road here. Of
22 course, we know we have hybrid units, the
23 CTC/PET hybrid units already in Oklahoma.
24 MRI/PET is coming soon, I understand, and
25 that is something we will fully regulate.

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1 We don't really regulate MRI now, but it's
2 within our jurisdiction.

3 With the CT, the State Health
4 Department regulates the CT part of it and
5 we regulate the PET. So it's -- it's kind
6 of a mess that way. But there is a bill in
7 Congress that's being sponsored by at --
8 several of the organizations that's
9 sponsoring this symposium, it's called the
10 CARE Bill, and it is going to require, if
11 it ever gets through, they've been trying
12 to pass this for quite a while now. But
13 it's going to require that the states
14 require licensure for radiological
15 technologists and nuclear medicine

16 technologists and so on. And if that
17 happens, then we will have to get on the
18 bandwagon probably or somehow that will
19 have to be developed in the state, whether
20 we have to do it or not is -- I don't know.

21 But right now, from what I
22 understand from Dale and he checked with
23 Senator Nickles, these two bills, there's
24 one in the Senate and one in the House,
25 they're sitting in Committee. So, you

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1 know, I don't know whether they're dead or
2 if they're liable to be resurrected but
3 right now, of course, here in Oklahoma we
4 don't license anybody. If a doctor decides
5 that they want somebody to run one of these
6 pieces of equipment and that they're
7 trained adequately to do it, he can have
8 them do it. So --

9 MS. BARTON: You're going to have
10 to have a whole unit that just is -- in the
11 future that just addressed medical
12 technology with sources.

13 MS. BISHOP: Well, yes, that's a
14 big -- it's a big blooming field, I guess.

15 MS. BARTON: I guess you'll have
16 to fund through the fees, right? Sorry.

17 MR. MCHARD: The thing that Pam

18 didn't mention that I will mention that I
19 see is that these new developments will put
20 our staff on a very steep learning curve.
21 This is complicated and even just talking
22 about the radioisotope aspects of it is a
23 relatively steep learning curve for us.
24 And then to learn how they use it and the
25 research is going on. Dr. Gooden, perhaps,

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1 can say more about the absolutely brand-new
2 things that people in the medical science
3 field are doing all the time.

4 MS. BISHOP: Well, I might add,
5 too, one thing that we have -- we've been
6 kind of talking about is it used to be that
7 these new technologies were all used at
8 like the medical schools, the teaching
9 hospitals, research places, but now the
10 manufacturers are going -- and they were
11 tested there and if there were any problems
12 with them, they were identified. Papers
13 were written and published about them.

14 But what's happening now is the
15 manufacturers are going directly to the
16 physicians with them. Like it said here,
17 these 11 hybrid units that have gone in,

18 five of them are in medical offices, you
19 know. Five of them in hospitals, I don't
20 know how many of these are in academic
21 settings or anybody is going to study them
22 and see if they're any better than what we
23 already have in place. I mean, they give
24 you prettier pictures but do they actually
25 give you any more useful information.

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1 There was some discussion from the
2 doctors that were there that, oh, yeah,
3 they're good for research and things but
4 you can get just as -- you don't really
5 need all of the bells and whistles that are
6 on them for your medical diagnosis. And
7 so, it kind of gets like, do you want a BMW
8 or do you want a Chevy. You can still get
9 where you need to go with either one and --
10 go ahead.

11 MR. BRODERICK: I don't want the
12 staff to go on and on about this. I'm
13 going to attempt to summarize and try to do
14 it in one short paragraph. There is new
15 technology and we, as we're supposed to do
16 and I think you all expect us to do, we're
17 regulators. We -- obviously the first
18 thing we go out and look at is what can go

19 wrong here, how can somebody get hurt. We
20 certainly -- we take that responsibility
21 very seriously.

22 We also recognize, like any other
23 good thing, you can take that concern for
24 safety to the point where we could, at
25 least in theory, we could just stop, we

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1 could effectively prohibit, block
2 implementation of new technology in the
3 state. That would be wrong, particularly
4 for something medical. It's bad enough
5 when that happens in a commercial or
6 industrial setting, but with medical,
7 you're talking about people's lives. And
8 we take that very seriously, the need -- we
9 want to try and do our regulatory job.

10 I assure you the staff is very aware
11 that we can go too far with a good thing
12 and we can really hurt a lot of people by
13 blocking or slowing down the adoption of
14 new technology. We don't want to do that.
15 We try and do that balance and get it
16 right. Obviously, we're not going to get
17 it perfect every time. But we're going to
18 do our best, we're very conscious of that.

19 That's all the staff has to say about it.

20 DR. GOODEN: Thank you, Mike, and
21 thank you, Pam. Some exciting -- these
22 fusion images are very exciting. They have
23 proven valuable in certain places and may
24 continue to find other places in which they
25 prove they are valuable. Any questions

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1 from the public? From the Council? Well,
2 now we'll move to Agenda Item No. 14,
3 Report on Activities of the Radiation
4 Management Section. Mr. Broderick.

5 MR. BRODERICK: We have really
6 covered many of the things that we have
7 been doing lately. So the only thing I'm
8 going to say here is that we are paying a
9 lot of attention right now to emergency
10 management-type activities. That is being
11 addressed. Frankly, I don't want to talk
12 about it in detail, other than to say that
13 we are paying attention to that right now.
14 That's all I have.

15 DR. GOODEN: Any questions of Mr.
16 Broderick? Agenda Item No. 15, Report on
17 the State Legislation Regarding DEQ and
18 Radiation Management. Mr. Thompson.

19 MR. THOMPSON: Well, it's been a

20 relatively quiet session for us. The
21 Governor did sign our appropriation --
22 general appropriation bill earlier in
23 March. And our -- we were funded at
24 basically the same level we were last year
25 in that bill. That doesn't mean that we

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1 may not get a little more in some places
2 and get some taken away in other places
3 before the session is over.

4 And the -- we've had some other
5 bills passed. There was -- it doesn't
6 really relate to this Council exactly, but
7 we had some Air Quality permitting
8 exemptions passed and we repealed the
9 certificate of need for the biomedical
10 waste stuff. That was the only thing the
11 Board voted on as -- acted in other than a
12 rulemaking capacity on.

13 But I think there is some other area
14 where there is an equivalent-type of
15 activity in the same bill that may make it,
16 so we don't know what that's going to do.

17 The -- I'm not sure that the
18 certificate of need is totally repealed, it
19 may have shifted to -- I'll have to look at

20 the language exactly, but it may have
21 shifted to the Department rather than the
22 Board.

23 MS. BARTON: Okay. Yes, that was
24 a big issue.

25 MR. THOMPSON: The -- let's see.

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1 We interestingly have two almost identical
2 bills, one the Governor has signed, and
3 these are really for our Superfund and
4 Brownfields program, relating to site
5 access and some clean-up of some of our
6 authority there, and somehow the two
7 identical bills have gone all the way
8 through.

9 One is signed and one is on the
10 Governor's desk now and then that's just an
11 example of the kinds of things that can
12 happen. So whatever seems to be signed off
13 on and passed now, in the past we've had
14 later Bills come through and change before
15 the end of session. So we don't really act
16 on any of this stuff until the dust has
17 settled and we're sure exactly what we have
18 to deal with, and exactly the language that
19 passed and how it was amended.

20 Also, the other things that are out

21 there, there is some -- been some NPDES
22 issues passed for Department of Agriculture
23 that we were keeping an eye on, to kind of
24 ensure that it didn't encroach on our
25 jurisdiction. But I think we were okay

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1 with the way they passed. The -- and we're
2 not quite sure how we're going to wind up
3 financially. I think there is a chance
4 we're going to get some additional fee
5 increases in some programs that will help
6 our division out financially, but there is
7 also a chance that the Legislature may
8 appropriate some of our fee money some
9 other places when it's all said and done,
10 and we'll just have to see what happens.
11 I'll report back to you guys next Council
12 meeting on that.

13 MS. BARTON: Are you still
14 haggling over solid waste and trying to do
15 particular stuff with fee money?

16 MR. THOMPSON: I'm not sure
17 what's going on there. We'll just have to
18 see, it's not clear at this point what
19 they're considering. And as always, there
20 are tire bills out there for the tire

21 program that are complicated and hard to
22 follow, it's not clear which one is going
23 to move forward.

24 MR. CLARK: Can you give us a
25 short tutorial on appropriations? For

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1 example, is there a block of money that is
2 assigned to the land management or how does
3 that go?

4 MR. THOMPSON: Let me try to
5 recall. Primarily, appropriated funds
6 support our laboratory and our county
7 offices, possibly some general
8 administrative functions. The Land
9 Division runs predominantly on fees and
10 federal grant dollars, in essence. And I
11 think Air Quality and Water Quality are
12 likewise, run predominantly on fees and
13 federal monies.

14 MR. CLARK: If there's a
15 shortfall within, say, Land Management,
16 what is done? Do you operate at a deficit
17 or?

18 MR. THOMPSON: Well, usually, for
19 example, the truth is the Agency has two
20 accounts. We have a federal money account
21 and a state money account, but we try to

22 track and make sure we're getting our costs
23 covered adequately for different programs
24 and seeing how those -- how much those
25 programs cost us, we track all the dollars

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1 from different fees by program. And in
2 some cases, by site activity and stuff. So
3 we do the accounting as though we have a
4 separate account for each program.

5 And in this case, right now the
6 Radiation Program, if they were running
7 solely on fee money, we would be in the red
8 \$100,000 a year, at least. What happens
9 is, that's absorbed by other parts of the
10 Division, predominantly fee money. We
11 can't, but we have a lot more limitations
12 what we do with federal dollars, in terms
13 of they have to go to specific tasks that
14 are reportable to the federal agencies, et
15 cetera.

16 In the last two years, we've lost a
17 substantial number of dollars from our
18 solid waste fees, which predominantly carry
19 the rest of the division, as well as other
20 parts of the agency, as well as we're
21 trying to use those for the things they

22 were intended for to do projects out in
23 different parts of Oklahoma and we fund a
24 number of things like, we fund a lot of
25 county commissioners to do work in solid

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1 waste planning and clean-up and stuff in
2 each county.

3 But also, our -- one of our other
4 major fees has been decreasing by 10 to 15
5 percent a year and that's our hazardous
6 waste fees, because -- it's a good thing in
7 a way, at one time they brought in about
8 300 (inaudible) a year, but now they're
9 bringing in less than half a million a year
10 and decreasing substantially. The -- it's
11 due to the fact there's less waste,
12 commercial waste being disposed of in
13 Oklahoma. That's good. So people are
14 reducing the amount of waste they generate
15 and dispose of and -- but the state of
16 Oklahoma is less of a net importer than we
17 used to be for some of that stuff.

18 DR. GOODEN: Is it a matter of
19 public record the dollars that come in to,
20 say, the Radiation Management Division per
21 quarter or in the year 2003?

22 MR. THOMPSON: I'm sure it

23 probably is. I'm not sure that I can tell
24 you what it is. We would have to do some
25 asking of our financial folks to put

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1 something together.

2 MR. BRODERICK: I don't have it
3 here. I know it's approximately, I believe
4 the last full fiscal year we brought in in
5 agreement state fees about \$550,000, that's
6 quoting from memory. But I believe that's
7 correct.

8 DR. GOODEN: And did the \$100,000
9 in the red that you spoke about, does that
10 include -- I forget the term that
11 accountants use, but dollars for chairs and
12 tables --

13 MR. THOMPSON: Like indirect
14 costs and stuff. I would say roughly it
15 does.

16 DR. GOODEN: Okay.

17 MR. THOMPSON: Mostly what we're
18 doing is looking at how many people we
19 can't fund and equate into what our average
20 cost of a person is.

21 DR. GOODEN: Any other questions
22 for Mr. Thompson?

23 MS. BARTON: Everybody is upset
24 about, you know, your fees and that you
25 need to go to the Legislature and we need

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1 to change the funding of the DEQ so that it
2 isn't a fee based operation, that there has
3 to be some other way to fund this
4 department. Because, you know, if you've
5 been to other meetings, you know that I
6 have been a crusader for our personnel,
7 because, you know, they're the last to get
8 raises and they're working understaffed and
9 you can see just by what they're talking
10 about that we cannot continue on this
11 basis.

12 And it is a good thing, because we
13 have a lot of hazardous waste and all that,
14 and that's going away. And if you go to
15 the solid waste committees and you listen
16 to them whine because, you know, other
17 departments have been sucking out of their
18 pot to fund the operations of other
19 departments other than solid waste. So we
20 need to find some other way so that our
21 people can get a decent salary, because
22 what they are and I will say it again, is
23 that they are the training ground for

24 industry. Because they'll get all of their
25 education in that and I don't find fault in

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1 that. If you can advance yourself, and
2 then industry will pirate them away because
3 they can pay them so much more.
4 So somewhere down the line in the
5 future, this way of funding has got to
6 evolve into something that's more equitable
7 for everyone, industry, the public, and the
8 state as a whole. But it is -- when you're
9 talking about medical technology and you're
10 going to have to have specialized people,
11 if we have the type of regulations that we
12 need for inspections and for education, do
13 you think that they're going to go, people
14 that have that specialized knowledge,
15 hello, do you think they're going to come
16 to DEQ and work? I don't think so. I'm
17 sorry, but I'm crusading for, you know, the
18 DEQ, ever since its inception it's a bad
19 deal that, you know, okay, we're going to
20 fine you so we can pay so-and-so's salary.
21 That's what it equates to and it's not
22 good. Thank you.

23 DR. GOODEN: Nadine, thank you

24 for those comments. We don't ever want to
25 be in a position of fining someone to pay

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1 someone's salary.

2 MR. THOMPSON: We try to avoid,
3 if at all possible, using fine money that's
4 collected for any ongoing costs. We use it
5 for events.

6 DR. GOODEN: And fine money,
7 certainly it's appropriate in certain
8 cases, but hopefully as Nadine points out,
9 never to use it --

10 MR. THOMPSON: We don't want to
11 be dependant on fine money.

12 DR. GOODEN: Okay.

13 MR. THOMPSON: I can cover the
14 next item while I'm up here. Ms. Sharp is
15 unavailable today.

16 DR. GOODEN: Yes. I'm sorry. I
17 have No. 16, Central Interstate Low Level
18 Waste Compact.

19 MR. THOMPSON: Yes. There's not
20 a whole lot to report there, either. The -
21 - we're in the midst of the lawsuit, I
22 think everybody knows we kind of won round
23 one or two or whatever. We're waiting to
24 see if Nebraska is going to follow through

25 with an appeal that they talked about

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1 whether they're going to offer a
2 settlement.

3 DR. GOODEN: Are we suing
4 Nebraska or is Nebraska suing us?

5 MR. THOMPSON: The Compact of all
6 the states and some other folks are suing
7 Nebraska. And we won the lawsuit,
8 basically, but they may appeal. And --

9 MR. BRODERICK: If I could
10 clarify, we've won the appeal. We won in
11 the U.S. Court of Appeals, which the only
12 court above that is the Supreme Court,
13 that's the only place Nebraska has left to
14 go.

15 DR. GOODEN: Are we suing for the
16 ability to put the low level waste facility
17 in Nebraska, like was originally decided?

18 MR. THOMPSON: I think that's an
19 option that they run the risk of if they
20 don't settle with us. It could be court-
21 ordered that they have to put a facility
22 there. So we anticipate there is a
23 likelihood of a settlement, but --

24 DR. GOODEN: Does anyone know

25 what has happened to the other compacts

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1 within the country? Are we the only ones
2 that have had this --

3 MR. THOMPSON: I think we're the
4 only ones still around.

5 MR. BRODERICK: Practically.

6 MR. MCHARD: In a practical
7 sense, the central state is the only one
8 that's still operating at the level that
9 the central states operates.

10 MR. WOODS: Just a question on
11 that lawsuit. If we do, in fact, win and
12 Nebraska actually pays the monies that were
13 spent on that project, will we then proceed
14 in trying to acquire another site or will
15 those monies be refunded back to the
16 original sources or what's the anticipated
17 outcome of all that?

18 MR. THOMPSON: I wouldn't say
19 that's clear at all at this point. I think
20 we just have to visit that, see how much
21 money we actually wound up with and how
22 much of it goes to who if there is a
23 settlement of some sort or the Supreme
24 Court rules in our favor in the end. The -
25 - it's not real clear what would happen

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1 there.

2 MR. MACDURMON: Mr. Chairman, if
3 I'm taking us off on a tangent too much,
4 you will let me know.

5 DR. GOODEN: Yes, sir.

6 MR. MACDURMON: But my question
7 has to do with where we're going in the
8 future with respect to this compact. As a
9 generator, the fees associated with the
10 Compact to me seem to far outweigh any
11 benefit. Export fees, the DEQ pays a fee
12 every year that they then backcharge anyone
13 that exports but if no one exports, you eat
14 the whole thing.

15 MR. THOMPSON: Right.

16 MR. BRODERICK: Yes.

17 MR. MACDURMON: We all know how
18 that game works, you know. You don't want
19 to be the only exporter for the year. We
20 don't have any nuclear power plants here
21 that are generating large volumes of waste
22 that we can piggy back on and so you can
23 ship one drum of waste and get hit with the
24 whole thing. So the current methods and
25 procedures that are set up associated with

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1 this thing are they motivate generators to
2 not ship.

3 MR. THOMPSON: I understand.

4 MR. MACDURMON: And the cost
5 associated with that to the state are
6 significant, as well. And so why I asked,
7 and this may be a topic for another
8 meeting, but philosophically, it would seem
9 to me that this is not getting us where we
10 want to go.

11 MR. THOMPSON: I think if
12 Nebraska isn't ordered to build a site,
13 then the Commission would have to consider
14 it's own existence to decide whether it was
15 going to continue, especially in light of
16 the fact that none of the other ones are
17 viable anymore.

18 MR. MACDURMON: That's right.

19 MR. THOMPSON: So, yes, I would
20 anticipate that being part of what happens,
21 whether there is a settlement or -- if
22 there is a facility in place, then the
23 Compact might actually function. But
24 whether that will occur is pretty --

25 MR. MACDURMON: Well, even the

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1 projections, though, way back on these
2 Compacts where there wasn't enough volume
3 of waste to justify the existence of all
4 these compact sites anyway. I mean, one of
5 my fears would be that Nebraska would put a
6 facility in, resulting in that being the
7 mandated facility and the volume of waste
8 being so low that the cost would just be
9 exorbitant.

10 MR. THOMPSON: Sure.

11 MR. MACDURMON: So, this issue is
12 significant and I was just wondering if the
13 state of Oklahoma ever planned to address
14 the situation.

15 MR. THOMPSON: I think once the
16 lawsuits are all resolved, we can probably
17 comment more about that.

18 MR. MACDURMON: Thank you.

19 MR. BRODERICK: Historically,
20 looking back, there are too many compacts.
21 We needed to have maybe three compacts or
22 so, there were too many. There actually is
23 one compact that's going great, by the way,
24 the Northwest Compact, they have a site in
25 Richmond, Washington. They have got eight

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1 states, life is good as far as they're
2 concerned. But other than that, they have
3 -- the ones that were supposed to build a
4 site, basically we're the only one that's
5 still operating at all.

6 DR. GOODEN: Thank you, Mr.
7 Thompson. Are there any procedural reasons
8 that I cannot switch Item 17 and Item 18?

9 MR. MCHARD: Well, you're the
10 Chairman.

11 DR. GOODEN: If there are no
12 objections, then I'd like to recognize Mr.
13 George Johnson in a matter that we really
14 couldn't anticipate before this meeting,
15 mainly to bring the Council Members a
16 little bit of information regarding the
17 nature of industrial radiography.

18 MR. JOHNSON: Thank you, Mr.
19 Chairman. I really believe that every
20 type of licensee, and I'm not saying they
21 ought to have a spokesman and I'm not
22 trying to be the only spokesman for
23 industrial radiography, but I believe that
24 this Council and any visitors should know
25 what we're dealing with, with the different

1 type of licensees and some of the issues
2 that face them.

3 Some of these Council Members are --
4 well, I know two of them very, very well
5 and the Chair, are very familiar with
6 industrial radiography but there are some
7 of you here that are not.

8 At the present time in the state of
9 Oklahoma, we have seventeen licensees that
10 are licensed to possess and use radioactive
11 material for the purposes of industrial
12 radiography. Three of those are in-house
13 operations only. American Airlines is in-
14 house operation, there is another one here
15 in Tulsa that's strictly in-house and one
16 in Pryor that's in-house. Several of these
17 licensees are also x-ray machine
18 permittees.

19 Total number of employees, and I
20 cannot speak about American because I don't
21 know how many x-ray technicians or isotope
22 technicians they have, but the other 16 of
23 these companies are presently employing
24 approximately 350 full-time employees. And
25 on an annual basis, seasonal pipeline

1 construction, maybe not here in Oklahoma
2 but in other states, there are another up
3 to 1,000 radiographers that go out of state
4 to either Texas or Kansas or what have you.
5 They live here in Oklahoma, but they go out
6 of state, they work for some of the
7 companies in Oklahoma but they go out of
8 state to do the work.

9 The industry used to be, up until
10 1999, about a \$45,000,000 a year industry.
11 I wanted a BMW at that time, but right now
12 I'm one of those that's got to be in a
13 Chevrolet.

14 Canada decided several years ago
15 that they're going to reduce the amount of
16 time, not radiation problems but the amount
17 of time that it took to do radiography on
18 cross-country pipelines and Canada Gas went
19 into a program on ultrasonic examination of
20 welding on cross-country pipelines. And
21 they have reduced -- Canada has reduced
22 their dependence on industrial radiography
23 using film by over 75 percent.

24 We have three companies in the
25 United States, one of them is right here in

1 Oklahoma, in Tulsa, that is owned by
2 Canadians. They came down here basically
3 because they weren't doing any radiography
4 up there, simple as that. So they come
5 down to the 48 or down here to do their
6 work.

7 In 1996, every licensee doing
8 industrial radiography, of course, this is
9 before agreement state status, had to buy
10 brand-new equipment because the NRC in
11 their infinite wisdom made themselves
12 believe that 40 percent of all overexposure
13 incidents in the United States was
14 attributed to equipment.

15 So they went into a program
16 requiring the three manufacturers and there
17 is only three manufacturers in the United
18 States that manufacture and people call
19 them cameras there, they are not cameras,
20 they're devices. They're devices that
21 weigh as little as 53 pounds and as much as
22 500 pounds, according to the type of
23 isotope that's installed in them.

24 And you have a set of controls, much
25 like the old french window controls, that's

1 about 25 feet long and then you have a tube
2 that you hook on, you put the tube where
3 you're going to make the radiographic
4 exposure and you crank that source out for
5 a period of time that you've calculated and
6 back. Okay, the two isotopes that are
7 primarily used is iridium 192 which is
8 about a 475 kv average, because it emits 11
9 different gamma rays. You use it up to
10 steel thicknesses about 2 and three-
11 quarters, as long as you've got time to
12 read a book on that thick of material and
13 cobalt 60. Cobalt 60 has an energy level
14 of about 1,000,000 lmb.

15 There are three other isotopes.
16 I've used all the other three. They're not
17 in widespread use because they're extremely
18 expensive. One of them has a 32 day half-
19 life and it's very expensive. At the
20 present time, the disposal cost for these
21 isotopes are primarily built into the
22 purchase price. Where do these isotopes
23 come from? Very few from the United
24 States.

25 At the present time, most iridium

1 192 is coming from Sweden. We were
2 getting, because of a transfer of
3 technology, we were getting some isotopes,
4 some manufacturer's work from Russia and it
5 was very good material at that time, but
6 we're not getting it anymore. The DOE is
7 so busy making fuel rods for submarines and
8 this and that and so on and so forth that
9 we're not getting any isotopes there. And
10 the cost of iridium is fixing to skyrocket.

11 Cobalt 60, on the other hand, just
12 recently, because of this disposal problem
13 with it, the price of the cobalt did not
14 increase but they added an additional
15 \$6,000 to \$10,000 per isotope for disposal.

16 We use iridium for maybe 125 days,
17 ship it back, there is no disposal in the
18 state of Oklahoma, same with cobalt, you
19 use it for about maybe three years and send
20 it back. There is about 4,000, I think you
21 would agree with that, Mr. Buettel, about
22 4,000 devices for industrial radiography in
23 the United States. In the state of
24 Oklahoma right now there is probably 200,
25 250 of that 4,000. Where's the rest of

1 them? Texas. Texas has a much larger
2 number of NDT or radiography companies than
3 we have in Oklahoma. Louisiana. The
4 producing states are the ones, and I'm
5 talking about oil producing states, the
6 ones where most of the NDT or radiography
7 companies are located. Military uses it,
8 the Navy Air Force doesn't anymore because
9 they couldn't keep their act clean enough
10 for the NRC and the Air Force finally
11 decided to get rid of their isotope
12 radiography programs. US Navy uses it,
13 they even do radiography with isotopes on
14 board nuclear submarines at sea.

15 We lost a lot of money when Enron
16 collapsed. When I say lost a lot of money,
17 I mean the total sales in industrial
18 radiography in Oklahoma went down about 50
19 percent, after Enron collapsed, and it
20 hadn't come up. Why hasn't it come up?

21 Our present administration has
22 relaxed the Clean Air Rules for the 150
23 operating refineries in the United States
24 and they're not spending any money.
25 They're not spending any money. Neither

1 are the power plants, neither are the
2 chemical plants, no one is buying any new
3 equipment today. On top of that, because
4 of NAFTA, this was another reason that
5 industrial radiography really went to pot,
6 NAFTA has decided that you can get
7 something built in Korea because of the
8 cost of steel in Korea and ship it to
9 Houston, Texas, cheaper than you can get it
10 built in Tulsa, Oklahoma.

11 The three devices these people --
12 this is what we were talking about a while
13 ago. This is a personalized or
14 individualized dosimetry device. It is not
15 a film, it is an aluminum oxide strip, the
16 way they obtain the readings, the millirem
17 readings in this is in lasers. This is a
18 direct reading dosimeter that the
19 radiographers and their assistants carry
20 and they can look through it at the light
21 and tell on job sites how much radiation
22 they pick up. But if he drops this thing,
23 and it goes off scale, his night is over.
24 He hasn't lost this, all the he did was
25 drop this.

1 Or he banged it against something
2 and he is off work for that night. Now,
3 the RSO at this time has got to make a
4 decision as to whether it was a true
5 exposure or not. And if the RSO decides
6 it's a true exposure, not only can he not
7 give the man another one of these, he has
8 to send this one in to the laboratory for
9 immediate processing. And the man cannot
10 go back to work until this dose is
11 determined.

12 This is the poorest excuse for a
13 man's job that I have ever seen and I have
14 been in this industry for almost 50 years.
15 One manufacturer today in the United
16 States, one. And there are no foreign
17 manufactured dosimeters sold in the United
18 States at the present time. One
19 manufacturer and they're not having to meet
20 any ANSI regulations, any NRC regulations
21 about the manufacturer or the accuracy of
22 these. However, we have to test these once
23 a year to assure that they are accurate
24 within plus or minus 20 percent of the
25 dose. And yet, that is the man's job right

1 here. It's his job.

2 Something needs to be done
3 federally, but the feds anymore have pulled
4 their heads in and they want all states to
5 become agreement states where they don't
6 have any problems anymore. They're not
7 going to reduce the number of people they
8 have and I'm one of the licensees that kept
9 my NRC license. There are a number of us
10 within this 16 that do have multiple
11 licenses. Why did I keep my NRC license?
12 I kept it so I would know what the hell was
13 going on in Rockville, Maryland. And
14 that's the only way to do it. Yes, ma'am.

15 MS. BARTON: I just wanted to ask
16 you. Do the electronic dosimeters solve
17 the problem with --

18 MR. JOHNSON: No, ma'am. The
19 electronic dosimeters do not solve --

20 MS. BARTON: -- yes, I would like
21 to hear about them.

22 MR. JOHNSON: -- the problem
23 because all the electronic dosimeters are
24 also an alarming rate meter. That's the
25 third thing that a radiographer must carry

1 is an alarming rate meter that is preset to
2 give an alarming signal at 500 millirems
3 per hour where he can hear it, unless he's
4 at American Airlines and they've got all
5 that noise out there and you can't hear
6 them or unless you're in a place where it
7 is raining like it was last night and you
8 couldn't hear the thing, either. But the
9 personal -- the ones you're talking about,
10 the electronic ones, also an alarm rate
11 meter, the Feds do not allow the use of it
12 as an alarm rate meter, only the dosimeter.
13 So we're talking about \$175 here and an
14 electronic one is about \$375.

15 We operate from the State
16 Regulations, USNRC, 10 CFR Parts 19, 20,
17 21, 30, 34, 35, 71, USDOT regulations 10
18 CFR Parts 49, CFR Parts 171 through 173.
19 If we ship anything by air, I add the
20 regulations and I'll be honest with you, I
21 know my experiences with RSO and I don't
22 see how some of these people keep up with
23 it. One of them decided not to, you lost
24 the licensee, you lost central inspection,
25 decided that he had had enough of the

1 paperwork and all the regulations, and he
2 couldn't charge enough to make ends meet,
3 so he dropped his license, didn't he? Mr.
4 --

5 MS. BISHOP: No, not as far as I
6 know.

7 MR. JOHNSON: He's going to. He
8 sold his equipment.

9 MS. BISHOP: Oh, he did? He
10 hasn't told us, yet.

11 MR. JOHNSON: Because of Enron
12 because no one is spending any money,
13 companies are going out of business right
14 now bankruptcy wise, you two guys are
15 laughing at me and I don't know why.
16 You're Council Members, you don't get to
17 laugh. (Inaudible).

18 American has their own problems.
19 They have more x-ray technicians than they
20 do isotope card-carrying technicians. And
21 that's another thing, a man has got all
22 these three things on and he also can't
23 work unless he's got one of these cards.
24 Texas started a program. Texas was having
25 more problems in the 1970's and 1980's with

1 overexposure incidents, et cetera, with
2 industrial radiographers. There were more
3 one-man and two-man companies down there
4 than you could shake a stick at. Texas
5 finally got a grant of about \$56,000 from
6 the USNRC in 1986 and started a testing
7 program where you have to have so many
8 hours of radiation safety, which is 40, you
9 have to have so many hours of actual
10 experience on the job, which is, I think,
11 200 hours, and then you go take this test.
12 And if you get this card then, this is the
13 only way you can work. It's good for five
14 years.

15 MR. BRODERICK: Surely that one
16 says Oklahoma on it.

17 MS. BISHOP: No, it's a Texas
18 card.

19 MR. JOHNSON: No, sir. I still
20 have a Texas card. Okay. Oklahoma is now
21 giving this test because the feds decided
22 that in 1997 we had until June, I think,
23 the 26th of 1997 that everybody had to
24 comply with this, that all radiographers
25 who could meet those standards as far as

1 the training, what have you, so on and so
2 forth, has to sit for one of these exams.
3 How many tests have you all given so far?

4 MS. BISHOP: Wow. How many?
5 We've been giving them since -- you mean
6 where we gave cards out? You mean, how
7 many cards have we given?

8 MR. JOHNSON: Yes.

9 MS. BISHOP: Issued -- we've
10 issued about 500.

11 MR. BRODERICK: That's just
12 Oklahoma cards.

13 MS. BISHOP: Oklahoma cards.

14 MR. JOHNSON: And you've still
15 got a number of people that have the Texas
16 cards.

17 MS. BISHOP: Right.

18 MR. JOHNSON: And I don't want
19 one of the green cards.

20 MS. BISHOP: George.

21 MR. JOHNSON: You know what I
22 feel about the color on those cards,
23 anyway.

24 MR. BRODERICK: What George is
25 referring to is the color that we picked

1 for our cards, it's a green color so it's a
2 big joke in the radiography industry about
3 if they've got their green card or not.

4 MR. JOHNSON: We have new
5 technology in this industry, also. The CR
6 Units that the medical people are using,
7 we're seeing some of those units now. The
8 only problem with it is, is that the bodies
9 that we work for -- the governing bodies,
10 which is the American Society of Mechanical
11 Engineers and so on and so forth, do not at
12 this time approve of the CR units, which is
13 much less radiation, much less time, it's
14 not actual film. They don't approve of
15 them because you can erase images off of
16 them. So we've got a well here that's got
17 a problem, that guy sitting in front of
18 that reader can erase that problem in that
19 well. That's why the ASME has not accepted
20 that as of yet. So we're a long way away
21 from it. I -- do radiography licensees
22 cause you more problems or less problems
23 than any other group of licensees that
24 size?

25 MR. BRODERICK: I'd say, based on

1 their numbers, I'd say more.

2 MR. JOHNSON: More?

3 MR. BRODERICK: Yes. Pam is
4 shrugging her shoulders. It's apparently
5 not a lot more. I'm saying probably more,
6 Pam says they're about the same, so they're
7 probably not too much more.

8 MR. JOHNSON: I'll tell you what
9 the Feds did in Oklahoma courses. We
10 became an agreement state by reference --

11 (The tape was changed)

12 -- we're in the same situation. When this
13 tech requirement for testing came in in
14 1997 and the USNRC at that time decided
15 that licensees no longer had to have
16 training programs. We do have to have a
17 training program for new assistants that we
18 bring in, that's required. We also have to
19 give an annual program at the end of --
20 sometime during the year. That's required.

21 But what I'm talking about is the
22 40-hour initial radiation safety program
23 the USNRC and, of course, now Oklahoma, we
24 don't have to have that on our license
25 anymore. We do not have to send the state

1 this training program outline, how many
2 hours, and a sample examination.

3 Well, I'll tell you something about
4 these tests. I can take a 21 year old man
5 off the street and spend four hours with
6 him and he can go pass that test. I have a
7 real problem with the validity of the
8 examination. There's what, eight entities
9 now doing the examinations for the entire
10 country, I believe.

11 It's industrial radiography fields
12 and to some degree I totally agree that we
13 are over, over, over, over regulated. We
14 have not had an overexposure incident.
15 Now, we have had, I believe, two over five
16 REM annually, but no immediate overexposure
17 incident that I'm aware of since agreement
18 state status. There was one right prior to
19 agreement state status, but not since then.

20

21 Hey, I go back, folks. I want to
22 tell you something about the radiation
23 dumps. I go back to prior to 1961 when the
24 allowable dose limit was 3.75 REM per
25 quarter. That's 15 REM annually. In 1961

1 -- between 1961 and 1990, it changed to
2 1.250 REM per quarter. However, if they
3 had a formula, what they call the banking
4 concept, that was the name of it, the
5 banking concept. And that was basically 5
6 times N, man's age, minus 18, and if he had
7 something left after you took that -- did
8 that formula, then he could receive 3 REM
9 per quarter or 12 REM. So we dropped from
10 15 to 12. And then in 1990, of course, we
11 come down to the 5, 15 and 50.
12 (Inaudible). Yes.

13 MS. BISHOP: I just wanted to say
14 something about the industrial radiography
15 companies that we deal with here in
16 Oklahoma. And, you know, you asked if
17 there are a lot of problems with them.

18 And I don't think we have a lot of
19 problems with them, because I think we have
20 good RSO's in most of the companies that we
21 deal with. And I think they take their job
22 seriously and they do a very good job of
23 it.

24 MR. JOHNSON: We've got to eat,
25 we have to take it seriously.

1 MS. BISHOP: Well, I just wanted
2 to say that. I think that's where the
3 critic goes for the lack of accidents and
4 the fact that the radiation safety officers
5 are doing what they need to be doing and
6 keeping everybody working safe.

7 MR. JOHNSON: Right now we're all
8 frightened to some degree about security.
9 The feds are fixing to come down with some
10 very tough security regulations, most of
11 the material we have, I've talked to
12 explosive experts that say that these
13 sources that we use, if you put Simtex (ps)
14 or Sefore (ps) or anything and wrap it
15 around it, it will not rupture the capsule.
16 But the devices we use have a casting and
17 that casting is depleted uranium. How many
18 years, sixteen hundred, half-life?

19 MR. BRODERICK: No, it's
20 billions. It's billions of years -- it's
21 billions of years, it lasts forever.

22 MR. JOHNSON: American is one of
23 these three entities in the state that pays
24 the major fee structure for radiography,
25 except they take less pictures than anybody

1 else in the state except Tulsa. There is
2 some unfairness.

3 DR. GOODEN: George, before you
4 leave, I just want to let everyone know
5 that when I go to bed at night and I say my
6 prayers, I ask for George's passion,
7 Steve's diplomacy and Nadine's courage.

8 MR. JOHNSON: It's still
9 surprising to me that in Rockville,
10 Maryland, there's people that's been with
11 NRC for years and they have no idea what
12 industrial radiography is.

13 DR. GOODEN: Well, let me ask you
14 a couple of questions, because I'm sitting
15 here and I just want to make sure I heard
16 you. Are these good times for --

17 MR. JOHNSON: No.

18 DR. GOODEN: They're bad times
19 for --

20 MR. JOHNSON: Very bad times.

21 DR. GOODEN: Okay.

22 MR. JOHNSON: We're probably
23 going to see -- I'll make the statement
24 right now. The only reason I've been in
25 business for the last two years is because

1 I got back into aircraft work.

2 DR. GOODEN: Has this been a
3 major industry for Oklahoma over the years?

4 MR. JOHNSON: What, aircraft
5 work?

6 DR. GOODEN: No, no. Industrial
7 radiography.

8 MR. JOHNSON: Forty million
9 bucks.

10 DR. GOODEN: Let me ask you
11 another question. Do you guys do anything
12 important, do you protect people or why
13 would anyone want your services?

14 MR. JOHNSON: Because the Clean
15 Air Act has been really pushed back. The
16 Administration is not really hammering on
17 it. We had 350 operating refineries in the
18 United States in 1990 and now there are
19 150.

20 Because there's still a lot of
21 asbestos out there, so anything that a
22 chemical plant or a refinery, what have
23 you, and you'll probably agree with this to
24 a certain degree, they're not going to tear
25 anything up and have to go through asbestos

1 abatement, so they're not spending any
2 money on new processing.

3 DR. GOODEN: That's true,
4 exactly.

5 MR. JOHNSON: Tulsa, Oklahoma,
6 was known for 40 years as the heat
7 manufacturer capital of the world. There
8 was over 200 firms here in Tulsa that
9 manufactured heat exchangers, sulfur plant
10 systems, et cetera, so on and so forth, for
11 the entire petroleum petrochemical and
12 power industry.

13 Right now, they are struggling to
14 the point, several of them have closed in
15 the past two years. They are struggling to
16 the point to stay in business, also. I
17 don't know how many is going to be left in
18 a couple of years, I have no idea.

19 DR. GOODEN: I want to get to
20 Mike in a minute. But where I'm going with
21 this, it's always been my understanding
22 that industrial radiography, when you go
23 out and operate on a radiographic pipe
24 that's being used for a pipeline or we do
25 something with a big piece of equipment

1 that's been built and worked at some place,
2 what you're trying to do is protect the
3 integrity of that, so that it doesn't blow
4 up and injure hundreds of people, thousands
5 of people, or damage the environment in a
6 very significant way.

7 MR. JOHNSON: Pressure,
8 temperature and age. That's basically the
9 three reasons we do it.

10 DR. GOODEN: That's what you do,
11 though? The use of radiation and
12 radioactive material in that regard to do
13 something good. Okay. Mike.

14 MR. BRODERICK: I would ask a
15 question of George and actually one of you,
16 Dr. Gooden. Several years ago, there was
17 talk -- there was a -- I know Dr. Gooden
18 remembers this, for technetium 99m, which
19 is one of your main bread and butter items.

20 Basically, the one place in the
21 world it was produced was going to shut
22 down for a while. There was talk at that
23 time in the medical field of getting DOE to
24 take one of their reactors and start
25 producing technetium 99 -- or actually,

1 well, producing (inaudible) -- actually,
2 the technetium 99 comes from. Actually, I
3 skipped a step. But anyway, produced
4 (inaudible). Do you know if anything came
5 of that?

6 DR. GOODEN: I don't know.
7 Nothing came from it or I don't know.

8 MR. BRODERICK: Do you know if
9 radiographers have looked at trying to get
10 -- I know for sure that they could produce
11 (inaudible) with their reactors, they even
12 have one in New Mexico they were going to
13 use. But do you --

14 MR. JOHNSON: I don't know. Mr.
15 Buettel, can you answer that. Is the DOE
16 reactor in Utah?

17 MR. BEUTTEL: In Idaho Falls.

18 MR. JOHNSON: In Idaho Falls. Is
19 this the only one at the present time
20 producing any?

21 MR. BEUTTEL: They are producing
22 industrial isotopes.

23 MR. JOHNSON: But most of it's
24 coming in from Sweden, that's where it
25 comes from.

1 MR. BRODERICK: Has there been
2 any effort by the industry -- I hadn't
3 thought -- I'm not used to having you
4 around, Rod, so I didn't think you --
5 you're a good source on this. Has there
6 been any effort by the industry or by the
7 ASNT to try to encourage DOE to increase
8 their production of iridium?

9 MR. BARTOLETTI: No, not from
10 ASNT. It has been from the manufacturer's
11 standpoint. There is some reactors in
12 Canada Nordion (ps), Chock River (ps), or
13 Miac (ps) and my company doesn't buy from
14 them, obviously. Most of the non-
15 radiographic sources comes from a reactor
16 in St. Petersburg called Miac, and they
17 produce --

18 MR. BRODERICK: That's St.
19 Petersburg in Russia, right?

20 MR. BARTOLETTI: Yes. And
21 they're a great reactor. They make top-
22 notch americium sources, the best in the
23 world. This technology is head and
24 shoulders above everyone. The only problem
25 is, when you get outside the gates, the

1 infrastructure breaks down and all they
2 have is horse and carts to pull it. You
3 know, to deliver the isotope, it goes from
4 high tech to the stone age, literally, when
5 it comes to transportation. So we've been
6 chartering airplanes to get the materials
7 out that we need.

8 MR. JOHNSON: See, we're lucky in
9 industrial radiography, we're not looking
10 at diagnostic like medical. We're looking
11 for detail as small as 5,000ths (sic) in
12 diameter. The current x-ray film, and
13 there is none manufactured in the United
14 States anymore, the current x-ray film
15 capable of showing this (inaudible) or
16 images, smaller than the human eye can see.

17

18 And the problem with these isotopes,
19 the iridium 192 has got to remain in that
20 neutron pool for 58 days. That's bare
21 minimum time, is 58 days. And at that
22 point, when they chop this stuff up or
23 they've already made it into wafers before
24 that, it's -- you know, you get a large
25 focal point and a large source. This size

1 -- not this size, but I'm saying much
2 larger than what you would if an isotope --
3 if it stays in that reactor for 74 or 75
4 days becomes this small.

5 You know there is no iridium in the
6 United States? Does anybody know where
7 iridium comes from? It comes from the Euro
8 (ps) mountains in Russia. We have a real
9 problem even buying it because the United
10 States decided we didn't like South Africa,
11 some of their stuff and maybe well so,
12 several years ago, and that's where the
13 biggest processing plant for iridium 192
14 was to make it into sheet form or wire
15 form, when we get these sources. It's just
16 difficult out there today.

17 DR. GOODEN: George, when you
18 asked me to say something, you said that
19 there were some issues in industrial
20 radiography that you thought might have to
21 be addressed. I don't want to go into them
22 today.

23 MR. JOHNSON: No.

24 DR. GOODEN: But I mentioned that
25 to staff and we want to let -- this Council

1 and staff, we want to let you know that
2 both are willing to visit with you and see
3 if we can address some of these issues in
4 industrial radiography.

5 MR. JOHNSON: The one on the
6 certification examinations committee is the
7 most serious to look at.

8 DR. GOODEN: What we'll try to do
9 is maybe get a few from your industry,
10 again, we can't have the entire Council
11 there, but if you choose to have a couple
12 of Council Members there, we would be
13 pleased to see that we make that happen and
14 staff has expressed their willingness to
15 visit. So we'll try to go forward with
16 this.

17 MR. JOHNSON: I might mention
18 this. I'm not sure about Mr. Bartoletti.
19 There is not a degreed radiation safety
20 officer in any of the companies in the
21 state of Oklahoma.

22 DR. GOODEN: That's probably a
23 plus.

24 MR. JOHNSON: And the same thing
25 pretty well -- what's the educational

1 background of your average radiographer is
2 very close to a high school education, and
3 some of them are not even high school.

4 It's just filthy, nasty, stinking,
5 dirty work that it's difficult for young
6 men, because we do so much work at night
7 after these plants or places are closed, to
8 get young men into this work to work at
9 night, it's very difficult.

10 DR. GOODEN: Thank you.

11 MR. JOHNSON: Thank you.

12 DR. GOODEN: Thank you. And

13 Agenda Item 18 or 17, actually, was a
14 report by the Chair and I would just like
15 to say that I'm always impressed with the
16 service to the community with radiation
17 radioactive materials. I'm always
18 impressed that we appear to have a
19 significant interest on the part of the
20 Council and on the part of the staff of
21 making sure that these services are
22 provided to the people in the state of
23 Oklahoma in a safe way.

24 I'm pleased that you re-elected me
25 as Chairman, because I would like to work

1 with all the groups because I think we have
2 a number of challenges to address during
3 the year. We've got new things happening
4 in the medical area, we've got a lot of
5 issues. And I look forward to working with
6 you in addressing some of these.

7 I'm thinking about maybe making a
8 couple of proposals for consideration. I
9 wouldn't mind having someone come in here,
10 if everyone agrees with this, someone from
11 some of our contiguous states who also face
12 the same kind of issues that we do and
13 visit with us about how they are addressing
14 those within their state and certainly us,
15 assuring our people with those states and
16 letting them know how Oklahoma is
17 addressing some of these.

18 Maybe we could even look into
19 sharing members of Councils, such as ours,
20 with various states, having them come in
21 and visit with us regarding certain issues
22 and possibly some of us going to visit with
23 them on the way things are done in
24 Oklahoma.

25 We've got challenges with the

1 amounts of money that are available to do
2 the services that the DEQ needs to provide.
3 We certainly have the people that we serve
4 in Oklahoma would be sensitive to. Those
5 people are those in business and those not
6 in business. But we've got a lot of things
7 we need to pay attention to and I look
8 forward to working with you this year to
9 move forward on some of those matters.

10 Item No. 19, Announcements of
11 General Interest. Are there any?

12 MR. MCHARD: I have two, Mr.
13 Chairman.

14 MR. BRODERICK: I spoke to you
15 about one just before the meeting.

16 DR. GOODEN: Yes, you did. I'm
17 very sorry that I passed over it. Mr.
18 Brewer.

19 MR. BREWER: Yes.

20 DR. GOODEN: We certainly
21 appreciate your service to the Council.
22 And I understand that you're going to go
23 fishing or something.

24 MR. BREWER: Something like that.

25

1 DR. GOODEN: Okay.

2 MR. BREWER: I'm going to come to
3 the meetings though.

4 DR. GOODEN: Please, please.
5 Thank you, so very much.

6 MR. MCHARD: Two things, Dr.
7 Gooden. I'll remind the Council Members
8 and the public that our next meeting is
9 scheduled for September 9th, a Thursday.
10 I'm presuming it will be in Oklahoma City.
11 I do not have a location really nailed
12 down, but I presume it will be at DEQ
13 Headquarters.

14 I will remind you also in that
15 regard that the Council does have the
16 option of selecting other dates or calling
17 a special meeting between now and that
18 date, if that becomes necessary.

19 And the other announcement I would
20 like to make is to again welcome Mr.
21 Buettel to the Council. He'll certainly be
22 a welcome addition to our Council and
23 mention for the official record that he had
24 a long way to come this morning and a
25 rather rough ride, at that. So, we're glad

1 you're here.

2 That's all I have, Mr. Chairman.

3 DR. GOODEN: Thank you. If there
4 is no other comments --

5 MR. CHAPIN: Mr. Chairman.

6 DR. GOODEN: Yes.

7 MR. CHAPIN: Can I ask one quick
8 question.

9 DR. GOODEN: Yes.

10 MR. CHAPIN: Robbie Chapin with
11 American Airlines. Is there any
12 possibility that they may increase the
13 frequency of giving tests? I know we're
14 giving right now about four tests a year,
15 five tests a year?

16 MR. BRODERICK: We've usually
17 given five or six. There is a constant
18 struggle between me and Pam Bishop over
19 that. What I would like to do is give one
20 or two tests to 300 people each year
21 because that's the most efficient way for
22 us to do it and lets us hold our costs
23 down. Pam is always very receptive to you,
24 she would like us to give a test every
25 week, I sometimes joke about. She usually

1 gives five or six a year.

2 If that is just grossly inadequate,
3 then we need feedback on that and we need
4 to know about it. But I will caution you,
5 the more tests we give, particularly if
6 they are for small numbers, the more that's
7 going to drive our costs up. And
8 eventually that means we'll be here saying,
9 we need to raise the radiography
10 certification fee, which --

11 MR. CHAPIN: My second question
12 was, the notification time you guys need, I
13 think 33 days, why such a long period of
14 time? Is there any way we can shorten
15 that? Sometimes we have, you know, people
16 that know they're going to prepare for the
17 test in a short amount of time. I think in
18 Texas it's 13 days. Is there any way we
19 can shorten that time or is there a reason
20 why that time is --

21 MR. BRODERICK: There is a
22 reason. You just mentioned part of the
23 reason. As George said earlier, there are
24 about eight organizations giving
25 radiography certification in the U.S. One

1 of them is a private organization, the ASNT
2 professional organization. The other seven
3 are in other states.

4 But in practice, the only two that
5 give -- basically develop tests that have
6 their own tests are Texas and the ASNT.
7 Texas -- all the states that have been
8 working with Texas, basically Texas takes -
9 - they have a bank of questions which they
10 try to validate and so forth as George
11 referred to, and they take those and tweak
12 them for each state.

13 But we get our tests from Texas and
14 they're very conscientious about making
15 sure that basically you can't -- you don't
16 take the same test, say Joe-radiographer
17 doesn't go in and take the test one month,
18 take it -- and fail it and take it again
19 the following month but he has the same
20 test and now he's memorized all the
21 answers.

22 Anyway, but Texas, when we tell them
23 when we want to give the test, they make up
24 a test for us that refers to our rules. It
25 talks about Oklahoma Administrative Code

1 such and such and so forth. They have a
2 certain lead time to prepare that and get
3 the tests printed and we do everything by
4 federal express back and forth between us
5 and Texas. And it's -- I didn't know
6 exactly, but it's, what, 33 days, did you
7 say?

8 MS. BISHOP: Well, we have to
9 give them a list of participants or people
10 that want to take the test 30 days ahead of
11 the test. And it's in the contract we've
12 signed to get the tests.

13 MR. BRODERICK: We have a
14 contract with Texas that we signed.

15 MR. CHAPIN: Okay.

16 MR. BRODERICK: So I don't,
17 frankly, see much prospect of that
18 improving much.

19 MR. CHAPIN: Thank you.

20 MS. BARTON: I have a comment. I
21 cannot go by without telling you, of
22 course, tomorrow is Earth Day, regardless
23 of your political affiliation. And the
24 only advice that I can give you, whether
25 it's a marriage, a birth, a birthday, a

1 funeral or an anniversary, is to plant a
2 tree for that person because they're going
3 to need the air and please do not put it
4 under your power lines because they will
5 take it out.

6 DR. GOODEN: Thank you, Nadine.

7 Meeting adjourned.

8

9 (END OF PROCEEDINGS)

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