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U.S. NUCLEAR REGULATORY COMMISSION
FIRST ENERGY NUCLEAR OPERATING COMPANY
PUBLIC MEETING

Meeting held on Tuesday, December 10, 2002, at
7:00 p.m. at the Camp Perry, Clubhouse #600, Port
Clinton, Ohio, taken by me, Marlene S. Rogers-Lewis,
Stenotype Reporter and Notary Public in and for the
State of Ohio.

PANEL MEMBERS PRESENT:

- U. S. NUCLEAR REGULATORY COMMISSION
- John (Jack) ~~Grove~~ Grobe, Chairman, 0350 Panel
- William Dean, Vice Chairman, MC 0350 Panel
- Christine Lipa, Branch Chief, Region III
- Christopher (Scott) Thomas,
Senior Resident Inspector - Davis-Besse
- Jon Hopkins, Project Manager

1 MS. LIPA: We're just about ready
2 to begin. Well, good evening and welcome. This is
3 the U.S. NRC, the Nuclear Regulatory Commission's
4 public meeting today with members of the public. We
5 held a meeting earlier today, and we'll give you a
6 summary of what we discussed earlier, but the main
7 purpose of this meeting is just to inform anybody --
8 interested stakeholders of the NRC's Oversight Panel
9 activities, and up here, the five of us are members
10 of the NRC, and also there is other NRC in the
11 audience, so I'll just go through briefly.

12 Scott Thomas is the Senior Resident for the
13 NRC at the Davis-Besse facility.

14 I'm Christine Lipa, and I'm the Branch Chief,
15 and I'm stationed out of Region III, which is near
16 Chicago, Illinois.

17 Bill Dean is the Vice Chairman of the
18 Oversight Panel, and he's stationed in Rockville,
19 Maryland.

20 Jack Grobe is the Chairman of the Oversight
21 Panel, and he's stationed in Region III.

22 And then Jon Hopkins is the Project Manager,
23 and he's stationed in Maryland also.

24 Next slide shows that one of the goals of
25 this meeting is to receive comments and questions

1 from members of the public, and to ensure that we can
2 hear everybody's comments today, we ask that you
3 limit your comments or questions to five minutes.
4 Now, we have a lot of people tonight, so that will be
5 important as we go through, and then we'll follow the
6 format we've used in previous meetings where we'll
7 start with local members of the public first before
8 we go onto other members of the public that are
9 interested and want to provide comments or questions
10 to us.

11 I want to mention a few handouts that were in
12 the foyer on the way in. One of those is the NRC's
13 newsletter for the month of December, and it provides
14 a summary of the vessel head degradation issue, as
15 well as some recent NRC Oversight Panel activities.
16 There is also a feedback form that you can use to
17 provide feedback to us on the format of this meeting,
18 how the sound system works, if you can see the slide,
19 which I'm thinking already we're partially blocking
20 it, but any kind of feedback, we would really
21 appreciate it. This is the first time we have used
22 this facility, it's a very nice facility, but we need
23 to work out the bugs and make sure it works for us
24 going forward.

25 Also in the foyer there was a copy of the

1 utility slides from the earlier meeting today. There
2 were some of those left if you wanted to grab one of
3 those, and, you know, get a sense for what we
4 discussed earlier. Also there's a summary of the
5 Lessons Learned Task Force report out there that you
6 can review.

7 The next thing I would like to go through on
8 the agenda is a summary of the vessel head
9 degradation issue, and we have some pictures that we
10 can show you. Scott Thomas will walk through parts
11 of that.

12 MR. GROBE: Everybody that's got
13 an empty chair next to them, raise your hand.
14 There's a lot of folks in the back here, why don't we
15 just take a minute, and you folks can come up and
16 find a seat. I don't want to -- and there's some
17 seats up here in the front if you want to get that
18 close to us. There is no splash zone here so you
19 don't have to worry about that. Let's try again,
20 there is about 10 more people in the back. Raise
21 your hand if you got a chair next to you. Come on
22 up, guys. There's seats up here. You just want to
23 leave early, huh? Okay. Okay, good enough.

24 MS. LIPA: Okay. Thank you,
25 Jack.

1 MR. THOMAS: How many are here for
2 the first time, this is your first public meeting?

3 THEREUPON, several audience members raised
4 their hands.

5 MR. THOMAS: What I'm going to do
6 for the people that aren't familiar with the issue
7 and with nuclear power process in general, we have
8 five or six slides that we're going to talk -- go
9 through very briefly and just give you a general idea
10 of the issue that happened at Davis-Besse.

11 What we have here is a very simple depiction
12 of what the power plant -- what makes up the power
13 plant. This area here is the containment building,
14 which is comprised of an inner containment, which is
15 an inch and a half steel liner, kind of like if you
16 picture a Thermos, the glass portion of the Thermos
17 would be the containment, and then the outer building
18 is what you see -- is the shield building, that's
19 what you see from the road as you drive by. It's
20 approximately two and a half feet thick, rebar
21 reinforced structure. Inside containment you have
22 the primary systems which consists of the reactor
23 where fission occurs and generates heat. It's
24 transferred to the steam generators where water is
25 boiled which makes steam which drives the turbine

1 which drives the generator which makes electricity.
2 One thing to note is that this cycle is a closed
3 cycle, and this cycle is a -- is a cycle, and these
4 two don't mix. This is hot, high pressure
5 radioactive water, and this is non-radioactive water
6 and steam cycle, so I think that's it for this one.

7 Next slide, please. This is a picture of
8 the top of the head. It's comprised of -- this is
9 the reactor vessel head. These are the control rod
10 drives, and these are the nozzles that penetrate the
11 reactor head. Where you have this circled area is
12 where the degradation occurred. We have a better
13 picture of that, I think.

14 MS. LIPA: Yeah.

15 MR. THOMAS: One area -- prior to
16 one of the things that lead to the inability to
17 observe and clean the reactor head is this is a very
18 tight clearance. This is an insulation piece.
19 This is a steel assembly, and the only way into this
20 area is through rectangular -- they are called weep
21 holes, mouse holes -- they have a number of names
22 which are positioned right about here. Since then
23 there has been inspection ports cut here around the
24 periphery, but one thing that lead up to the issue
25 was difficulty to be able to inspect this area here.

1 Next picture. This is a depiction of a
2 nozzle. My pointer gave out. This is a nozzle
3 itself. This is the head area. The way this is
4 put into the reactor head is, it's a compression fit,
5 the nozzle is a compression fit in the head with the
6 J-weld here, and that's how it's held in place, and
7 that's about all we get out of this picture.

8 Next slide. This is a picture of the reactor
9 vessel head post 2000 outage. What you're seeing
10 here is these are the studs and the bolts that hold
11 the reactor head on. This is the transition between
12 the head to the service structure, and remember when
13 I just -- the last slide I talked about the weep
14 holes, these are the weep holes. They're about five
15 by seven, about this size, (indicating). What you
16 see here is a -- boric acid combined with iron oxide
17 that has come from the cavity area that was on top of
18 the head, flowed down the top of the reactor head,
19 down the side of the head and collected on the
20 reactor flange area.

21 Next slide, please.

22 MR. COLLINS: Oh, sorry.

23 MR. THOMAS: This is a -- excuse
24 me, a drawing of the cavity itself. This is the
25 reactor head. This is the nozzle penetration. This

1 is another -- this is nozzle 11. This is nozzle No.
2 3. As you can see, it doesn't have -- the nozzle's
3 been removed here, but this area is a -- a depiction
4 of the cavity itself, so that was the shape of the
5 cavity. All that was left was the cladding on top
6 of the reactor vessel right here.

7 Next slide. And, excuse me, this is an
8 actual picture of the cavity itself. Go back to
9 that one real quick. This where nozzle 3 would have
10 gone in, and the cavity itself goes back this way
11 toward nozzle 11, and there's been a number of
12 descriptions of the cavity, anything from football
13 size to milk bottle size to -- a number of
14 descriptions. A football size would be an accurate
15 description.

16 Next. This is just another picture of the
17 cavity. I don't have anything to add for this one.

18 Any specific questions on this what I have
19 shown here? This is just a brief overview of the
20 issue itself.

21 MS. RYDER: I had a question about
22 one of the photos.

23 MR. THOMAS: Yeah.

24 MS. RYDER: The one with the red
25 rust down the side.

1 MR. THOMAS: Yes.

2 MS. RYDER: How is it that your
3 inspectors didn't know that that photo existed?

4 MR. GROBE: That's a good
5 question, Amy. The -- why don't you introduce
6 yourself?

7 MS. RYDER: My name is Amy Ryder,
8 I'm with Ohio Citizen Action group.

9 MR. GROBE: There's really, I
10 think, two answers to that question. As I'm sure
11 you can imagine there is roughly a thousand people
12 that work at an industrial facility this size, and
13 there's a lot of activities that go on, and we sample
14 different activities, and we didn't choose during the
15 course of our day-to-day work to look at this
16 specific inspection photograph that was taken in
17 April of 2000, I guess.

18 Second answer is, back last fall in the, I
19 think it was September through late November into
20 December time frame, we had quite a long dialogue
21 with FirstEnergy employees regarding the condition of
22 the reactor head. It was following up the issuance
23 of a bulletin. A bulletin is a document that we use
24 to communicate with a number of reactor licensees.
25 In this case it was all pressurized water reactors,

1 Davis-Besse is a pressurized water reactor. We
2 asked for information that would assist the NRC in
3 understanding the condition of the head, and that
4 photograph was not provided. Quite a bit of
5 information was provided, but that specific
6 photograph was not provided by the company.

7 MS. RYDER: Do you find that
8 acceptable? Doesn't it seem like they were
9 intentionally hiding the problem?

10 MR. GROBE: That's kind of a
11 loaded question. The folks that do inspections are
12 engineers. They're not investigators. Whenever we
13 come across a situation that doesn't seem quite right
14 to us, we have an office called the Office of
15 Investigations, and these are all former criminal
16 investigators, and in this situation it didn't seem
17 quite right to us that some of the information didn't
18 come to our attention, and we initiated an
19 investigation. That investigation is ongoing, and
20 when it's completed we'll know the results.

21 MS. RYDER: I'm not an engineer or
22 investigator and looking at that photo, you'd think
23 the photographer would have said, look, guys, I think
24 we've got a problem here.

25 MR. GROBE: It's, like I said,

1 when things don't appear quite right, we ask our
2 investigators to take a look at it, and they're in
3 the process of doing that. When they complete their
4 investigation, that will be public knowledge.

5 MS. RYDER: What do you think of
6 it?

7 MR. GROBE: I'll have to wait for
8 the investigation results, Amy. Thanks.

9 MR. THOMAS: Anything else about
10 the basic description? We'll have a question and
11 answer session later on, but I can answer any basic
12 questions about what I have talked about here. Sir?

13 MR. DUSSEL: Yes, I was
14 wondering --

15 MR. GROBE: Could you approach the
16 microphone, please?

17 MR. THOMAS: And please state your
18 name, too, for the stenographer.

19 MR. DUSSEL: My name is Tim Dussel,
20 and I was wondering -- I've read articles where I
21 believe some 20 years ago Davis-Besse was told to
22 open up those inspection holes so inspections could
23 be done and a lot of things I've read about
24 inspections, they keep saying that the lid was clean
25 as far as people could see. I think that's kind of

1 a loaded question there.

2 Is there any reason why they went 20 --
3 almost 20 years when they knew that those inspection
4 holes should have been opened up so you could get in
5 to see or inspect the rod ends?

6 MR. THOMAS: Well, it wasn't a
7 requirement for them to install this modification,
8 so -- plants have operated successfully without it,
9 so --

10 MR. GROBE: Because of the
11 difficulty in inspecting the head, as I think some of
12 you -- Jay, could you put up that drawing of the
13 head? Yeah, that one.

14 MR. COLLINS: Yes.

15 MR. GROBE: As you can appreciate,
16 because of the curvature of the reactor head, it
17 would be difficult to inspect, and the way that was
18 done was with a camera that was remotely controlled
19 on a pole, and the -- Davis-Besse internally
20 initiated a modification to install inspection ports.
21 They're about one foot diameter ports that are much
22 higher than service structure. As Scott indicated
23 earlier, they are up here. There is seven reactors
24 that are very similar to Davis-Besse, and they're
25 manufactured by Babcock & Wilcox Corporation. Five

1 off those seven had installed the inspection ports,
2 two had not, and Davis-Besse was one of them. The
3 decision was based on their belief that they had the
4 ability to inspect reactor heads sufficiently from
5 the weep holes, so it's not like they were directed
6 to do this. It was an enhancement, and they chose
7 not to do it at that time.

8 MR. DUSSEL: I just don't
9 understand how an inspection can be done if you can't
10 see. You know, that strikes me very peculiar. I
11 just don't understand how all these inspections have
12 been done and I keep reading and reading where the
13 lid was clean, and how could anyone say it was clean
14 if you can't see if it was clean and 900 pounds of
15 boric acid taken off? 900 pounds of boric acid, how
16 many burlap sackfuls would that be?

17 MR. GROBE: It's -- maybe we
18 should give a little bit more background because it's
19 clear that some of you don't have the depth of
20 knowledge that others may have.

21 There's requirements both through the
22 American Society of Mechanical Engineers as well as
23 through internal procedures at the site that require
24 certain types of inspections. Boric acid is a
25 constituent of the reactor coolant and pressurized

1 water reactors -- there are roughly 70 pressurized
2 water reactors in the United States. Every one of
3 them has boric acid in the reactor coolant. It's an
4 additive that is used to help control nuclear
5 reaction. Because boric acid -- the solution of
6 boric acid that is actually in the coolant is very,
7 very mild. It's not corrosive. The concern is
8 the -- if there is a leak in the reactor coolant
9 system, wherever the leak exists, the water which has
10 boric acid in it -- a very mild solution can exit
11 through the leak and the water immediately vaporizes,
12 and leaves a higher concentration of boric acid on
13 the surface, so the -- back in the late '80s, the NRC
14 required licensees not only to have the American
15 Society of Mechanical Engineering standards that deal
16 with potential corrosiveness of boric acid, we
17 required licensees to explain to us how they were
18 going to control boric acid corrosion because it's
19 a -- an artifact of this type of reactor, but you
20 need to be able to do that, so each licensee put into
21 position a procedure that whenever there was a
22 discovery of boric acid, it appears to be a white
23 powder when it is left, a white residue. Whenever
24 you see that you have to clean it off, and it's a
25 requirement through a number of different

1 regulations, you have to clean it, you have to clean
2 it down to bare metal. You have to clearly inspect
3 the metal to make sure there isn't any corrosion. If
4 there is corrosion, you have to repair it or in some
5 cases you can justify why -- if it's a very mild
6 pitting or something like that, you can justify that
7 that's an acceptable leave as is. Davis-Besse did
8 not follow those requirements, and through the course
9 of the '90s -- from the mid '90s to the late '90s
10 they left boric acid residue on the reactor head, and
11 I think your number is one that I've heard before,
12 and I don't know that anybody knows the quantity of
13 boric acid that was on the head with precision, but
14 it was in the hundreds of pounds of boric acid.
15 That obstructed the view of the individuals that were
16 trying to inspect the head. Those individuals
17 didn't follow station procedures and the American
18 Society of Mechanical Engineering requirements that
19 required them to clean that boric acid, and internal
20 documents documented that it had been cleaned and
21 that the head was inspected, and there was no damage,
22 and, in fact, that had not occurred. All of these
23 issues are being looked into, but the fact of the
24 matter is, this was a completely preventable
25 situation, and that photograph -- Jay, put up the

1 picture that shows the red rust. This is a clear
2 indication that there is corrosion going on. It's
3 rust. It's iron oxide, and that was not adequately
4 responded to by the staff at Davis-Besse. These are
5 things that happened in the past, and they were not
6 corrected, and these are cited as violations in our
7 inspections. There's an investigation ongoing into
8 why it happened, and once we find out why it
9 happened, we will take appropriate actions.

10 MR. DUSSEL: What do you think
11 appropriate actions would be for falsifying records?
12 Evidently, there was --

13 MR. GROBE: We need to have the
14 results of the investigation before we can make that
15 determination.

16 MR. DUSSEL: Is Davis-Besse going
17 to be allowed to operate and start running before the
18 investigation is done?

19 MR. GROBE: We need to get our
20 arms around what those issues are and make sure that
21 NRC adequately dealt with before we restart.

22 MR. DUSSEL: Thank you.

23 MR. GROBE: Uh huh.

24 MS. LIPA: Okay, thanks, and
25 those are good questions, but what I want to do

1 before we get into the question and answer period,
2 we're actually going to provide for everyone's
3 benefit who was not here earlier today a summary of
4 the afternoon meeting with FirstEnergy, and then the
5 next item on the agenda following that summary is
6 questions and answers, so everybody will get a chance
7 to ask their questions, it's just let us give a
8 summary of the afternoon meeting and Bill will do
9 that and following that, we'll get into more
10 questions and answers. Thank you.

11 MR. DEAN: Thanks, Christine.
12 Hopefully I'll make this short, so we can get to the
13 answers and questions. We do have a fairly large
14 audience tonight, but it is important, one of the
15 purposes of this meeting that we have it in the
16 evening with the public is to give you the
17 opportunity to be informed as to the types of things
18 that are transpiring, the types of things that the
19 NRC and this Oversight Panel is doing relative to
20 monitoring the activities at Davis-Besse, and so it's
21 important to do a recap of today's meeting.

22 We discussed, first off, some of the
23 activities that have been ongoing in the last month
24 or so from the NRC's perspective. There are two
25 inspections that have been completed and inspection

1 reports issued which are available -- publicly
2 available. One of those is the containment extent
3 of condition. That report generally found that the
4 licensee has done a good job of evaluating their
5 containment in terms of the spread of boric acid and
6 its impact on containment components. There are
7 some unresolved issues that we're still looking at.
8 There is some work that is still ongoing that we will
9 continue to follow, but that inspection report
10 basically documents what the licensee has done to
11 date.

12 The other one is the reactor pressure vessel
13 head replacement activities. Basically the effort
14 to cut the hole in the shield building and
15 containment and to move in and out the replacement
16 reactor vessel head and move out the old one and get
17 that in place, ready for installation, and basically
18 that inspection report determined that the licensee
19 did a pretty good job on all of those activities,
20 maintained good positive control of what was going
21 on. Some of the things that are ongoing, there are
22 inspections ongoing that are not yet completed, will
23 not be completed because completion of them is
24 contingent upon activities that the licensee still
25 has ongoing relative to things like program reviews.

1 There is a number of programs that the licensee has
2 endeavored to evaluate and assess those programs, for
3 example, boric acid corrosion control program, the
4 corrective action program, and so on, that were
5 instrumental in this event occurring, and so they've
6 gone back and done an in-depth review of those
7 programs. We are inspecting their efforts in that
8 area and they still have some additional work to do
9 so we will not complete our inspection until they are
10 done. Another area is system health. Obviously,
11 we felt it was important, as did the licensee, that
12 they had to assess the health of other safety systems
13 in the other plant not just the reactor vessel head
14 to assure themselves, assure us and assure the public
15 that they don't have other issues of safety
16 significance, and so those activities are ongoing.
17 We have not completed our inspection efforts in that
18 regard because the licensee still has a certain
19 amount of work to do in terms of their system health
20 assurance efforts. The other issue and one of the
21 things really that Scott didn't address in terms of
22 the event, but really is kind of at the core of the
23 issue that occurred here and this is failure in terms
24 of managerial organizational behavior at Davis-Besse.
25 Some of you may hear this referred to as safety

1 culture issues. We have a substantial part of our
2 assessment process to look at what is the licensee
3 doing relative to organizational effectiveness and
4 human performance and then, of course, we have the
5 Resident Inspector and the Senior Resident Inspector
6 on site that do daily observations of ongoing
7 activities of the licensee, and so those are all
8 ongoing, continuing NRC activities that have yet to
9 be completed.

10 One meeting of note to discuss or that
11 occurred over the past month; on November 26th, we
12 had a meeting in the headquarter's office in
13 Rockville, Maryland to discuss with the licensee
14 their activities regarding the bottom of the reactor
15 vessel, the picture that you saw, the oxide and the
16 boron that collect at the top of the reactor vessel.
17 Over the course of time some of those materials found
18 their way down the side of the reactor vessel and you
19 could actually see, some of you that might have gone
20 to our web site -- unfortunately, we don't have any
21 pictures to show you --

22 MS. LIPA: Yeah, we do.

23 MR. DEAN: Do we?

24 MR. COLLINS: Give me a minute.

25 MR. DEAN: Okay, Jay is going to

1 pull up a picture what the bottom of the reactor
2 vessel looks like. Basically, they had some distinct
3 trails of both iron oxide, rust, as well as boric
4 acid trailing down and collecting to the bottom of
5 the reactor vessel, and when the licensee pulled off
6 the insulation to see where those trails led, the
7 bottom of the reactor vessel head had notable trails
8 of boric acid deposit and rust, and so that raises
9 the question is -- are those items at the bottom of
10 the vessel a result of just wash down, things that
11 have collected from the top of the reactor vessel, or
12 are they indeed -- and there you see an example of
13 the bottom of the reactor vessel. This is after it
14 was cleaned. Go back to that previous one, Jay.
15 This is an example of what the collection looked like
16 at the bottom around one of the penetrations, and
17 there is another example, you see how it was
18 collected, so that raises questions. Is that
19 leakages perhaps from these penetrations, or is it,
20 indeed, just wash down and trails from all of the
21 materials, the 900 pounds of boric acid, and so on,
22 that were at the top of the reactor vessel, and so
23 the licensee has yet been unable to definitively
24 determine that, and so they came to the headquarter's
25 office to meet with a number of our engineering

1 specialists there to describe their plans to try and
2 assure that these penetrations at the bottom of the
3 reactor vessel -- which are not the same at the top,
4 they operate at a lower temperature, they're much
5 smaller. There is not a history of leakage or
6 cracking from those penetrations both internationally
7 and domestically, but it still a question that has to
8 be answered, and so they described their plans to do
9 testing. Basically, what they intend to do is at
10 some point next year bring the plant up to normal
11 operating pressure, normal operating temperature and
12 have it sit there for seven days, and then go in and
13 do a close visual inspection of all those
14 penetrations. That is why it's important if you go
15 back to the one that was clean, shows a clean head,
16 they would be able to go in there and do a visual
17 inspection, and see if there was any of these little
18 boric acid crystals that Jack was talking about,
19 these white crystals. That would an indication that
20 perhaps there might be a small leak, and so we had
21 that meeting on November 26th, and I don't think that
22 meeting summary is yet available, but I think -- are
23 the meeting slides?
24 MR. HOPKINS: The slides are up on
25 the web site.

1 MR. DEAN: Okay. The meeting
2 slides are up on the web site, so if you were to
3 access our web site, you could see the licensee's
4 presentation. That was a pretty important meeting.

5 The other thing that came out of that meeting
6 is that the licensee described their plans to install
7 a sensitive leak detection system. It's called a
8 flus, F-L-U-S, which is a system of German design,
9 and that's been used at some European facilities. It
10 hasn't been used here in the United States which is
11 basically a very sensitive moisture detection system
12 which they would install at the bottom of the reactor
13 vessel. They hope to be able to do that before this
14 extended outage period is completed, so they
15 described their plans to do that.

16 Okay, to talk about what the licensee
17 described in terms of their restart readiness plan,
18 the other major purpose of our meetings -- we come
19 here every month and meet with the licensee is to get
20 an update from them on where they are in terms of all
21 of their activities related to their Return to
22 Service Plan. In the area of Management and Human
23 Performance, which I said was a very important area,
24 they talked about some of the things that they're
25 doing in terms of enhancing communications and

1 training. In particular, they have accomplished some
2 things over the past month relative to specific
3 training for supervisors and managers relative to
4 assuring a safety conscience work environment. They
5 also described -- they have a fairly active -- what
6 they call their management observation program and
7 the purpose of that is to get managers out into the
8 field to look at ongoing activities and work and to
9 assure themselves that the types of things that they
10 have developed in terms of expectations for
11 performance and how they expect work and activities
12 to be accomplished, are there safety standards being
13 met by the work force, and, generally, they describe
14 a fairly satisfactory results from their management
15 observation program thus far. They do have issues
16 relative to things like job planning, housekeeping,
17 some documentation issues, but, in general, they felt
18 that the results have been fairly satisfactory in
19 terms of how well they believe their safety standards
20 and expectations are being translated to the staff.

21 The other major area they talked about is --
22 one of the issues that has emanated from looking at
23 the licensee's root cause is the role that their
24 operations department has played relative to
25 establishing safety standards at the plant, and I

1 think the licensee has determined, and we would ~~degree~~
2 agree that their operations department did not take
3 a leadership role in the past in establishing safety
4 standards, and it's something they want to embody
5 into their organizational philosophy, so they
6 described some of the ongoing activities that they
7 have in terms of developing this approach, bringing
8 the operations department to the floor in terms of
9 leading safety standards, and they describe some of
10 the activities that their operations department is
11 getting involved in and taking a greater role, things
12 like plant safety reviews and maintenance work
13 activities.

14 The second area they discussed talked about
15 some of their near goals relative to activities to
16 support potential plant restart, and we talked to
17 some degree about some near term activities mainly to
18 support this testing that I talked about of the
19 bottom of the reactor vessel head to assure
20 themselves and assure us that those penetrations are
21 not leaking, and what they described is that
22 basically beginning in about the middle of January or
23 so they hope to be able to begin the evolution of
24 reloading the fuel in the core, putting the reactor
25 vessel head, the new reactor vessel head on top of

1 the core, performing an integrated leak rate test of
2 the containment. Of course, they got this big hole
3 to move the reactor vessel heads in and out. They
4 have to assure themselves that containment is leak
5 tight, so they have to do what's called an integrated
6 leak rate test, where they pressurize containment and
7 observe it for leaks, and then eventually bring the
8 actual reactor plant up to normal operating pressure
9 and temperature using basically their large reactor
10 coolant pumps and the pump heat that that generates
11 to bring the plant up to temperature and basically do
12 a seven day stay at that and then go and look around
13 evaluate the plant for leaks. Also to give them an
14 opportunity to test a number of these systems that
15 they have been working on, so they described their
16 plans to do that. There is a lot of work that
17 remains physically before the plant can even be at
18 the position to be able to do that. They have a
19 number of valves that are being worked on to assure
20 leak tightness. They're doing some major work on
21 some of their reactor coolant pumps to assure that
22 those are going to be leak-free, and there is a
23 number of issues that have emerged from all of the
24 work they have done to try and identify all the
25 issues that -- basically what they call mode

1 restraint. In other words, they can't change their
2 mode of operation until they complete a lot of these
3 activities, and so there's hundreds of those issues
4 that still need to be resolved, so the licensee still
5 has a lot of work on their plate to even get to that
6 point.

7 Third area we talked about with the licensee
8 was their containment health. Basically they have
9 completed for the most part their discovery
10 activities in terms of identifying all of the issues
11 in containment that would have been a result of the
12 boric acid and leakage, and so they basically have
13 about 900 plus issues. They have not yet identified
14 or reviewed all of those issues to determine what the
15 corrective actions are; however, they do have some
16 major work in progress, in particular, rebuilding the
17 containment air coolers, expanding a screening area
18 for the emergency sump, and, basically, recoating and
19 painting the entire containment and some of the core
20 flood tanks.

21 Let's see, system health reviews, I talked
22 about this earlier as an area that the NRC has
23 ongoing inspection activities. They still have a
24 lot of work to do in that area, though, they have
25 completed many of the reviews and are awaiting

1 management to sign off basically, and approval of the
2 results of those review, but there's a number of key
3 design issues that have emerged from those reviews
4 that await resolution. We, matter of fact, will have
5 a meeting with the licensee probably on December 23rd
6 in the Region III office to discuss some of their
7 plans and activities as result of the lessons learned
8 and the findings that they have had from their system
9 health assurance, so that will be a pretty key
10 meeting for us to get a better feel for where they're
11 going in terms of system health.

12 Plant programs is an area where much of the
13 review work is done. I talked about that as an area
14 the NRC still has ongoing inspections; however, the
15 licensee is further ahead in assessing their programs
16 and revamping them, and so we will probably be able
17 to complete some of our inspection activities
18 hopefully in January regarding that, and then,
19 finally, some of you may have the opportunity -- I
20 noticed earlier some of you were looking at -- over
21 on the side there, the licensee put up some of their
22 performance metrics that they were using to basically
23 monitor progress at the plant, and one of the points
24 that they try to make is that if you looked at those,
25 basically those show that they believe they're at a

1 point where they've completed the majority of their
2 discovery, and by that, I mean, basically they're
3 identification of issues that need to be resolved
4 whether they're physical issues or program issues and
5 that their work off rate is now starting to exceed
6 their discovery, so, basically, that's kind of a
7 critical point in terms of plant recovery and a plant
8 that's in an extended shut down, when you complete a
9 lot of the work in terms of discovery and now your
10 work off rate exceeds that, so you start to see a
11 decline now on all of the work that's on their ~~plant~~ plate,
12 so they have kind of reached that turning point, but
13 that doesn't mean they're anywhere near being ready
14 for restart. That's a lot of work that remains on
15 their plate just from a physical point of view, not
16 to mention where are they in terms of safety culture
17 assessment which is a big issue we raised with them
18 and something we want to make sure that they discuss
19 with us at our meeting next month. We want to hear
20 some fairly detailed discussion about their
21 activities related to safety culture, how are they
22 monitoring and measuring that, and so that's an issue
23 that we will have some detailed discussion with the
24 licensee next month, so that's probably a little bit
25 longer than I wanted to take, but it was a fairly

1 lengthy meeting and a lot of good discussion. Jack,
2 do you have anything to add?

3 MR. GROBE: Thanks, Bill, that was
4 a really good summary. While Bill was talking -- I
5 already heard the meeting, so I wasn't listening very
6 closely, but I was trying to think of what might be
7 good information to share with you. We're involved
8 in this day in and day out in a great amount of
9 detail and sometimes we get lost in the trees and
10 when folks like you come out to find out what's going
11 on, you're not in the level of detail that we are,
12 and we sometimes lose sight of the fact that some
13 foundational information might be helpful. I wanted
14 to just spend three or four minutes and tell you what
15 this is all about because it probably appears kind of
16 strange.

17 Over the last several years we've put in
18 place a reactor oversight program for all of the
19 operating reactors in the United States that has a
20 number of elements that are foundational to its
21 success, and that reactor oversight program is
22 comprised of two principle things; one is performance
23 indicators, each licensee in the United States, each
24 operating utility is required to report on a
25 quarterly basis to the NRC a set of performance

1 indicators and we've specified what those indicators
2 are and then collect the data, report them to us and
3 we double-check in the field if that data is actually
4 accurate and representative of the true performance
5 of the plant, and going along with that set of
6 performance indicators is our regular inspection
7 program which is comprised of roughly 2000 hours of
8 inspection by both resident inspectors, like Scott
9 Thomas, who is the Senior Resident at Davis-Besse, as
10 well as regional specialists that travel around to
11 different reactor sites. They're experts in various
12 technical disciplines, so the performance indicators
13 and the inspection program work together. We call
14 that our routine reactor oversight process.
15 Underpinning or foundational to that reactor
16 oversight process is several items, several things.
17 One is the belief that this industry has been around
18 for a while and it's a mature industry. If you look
19 at the safety performance of the nuclear industry
20 over the last decade to 20 years, it has steadily
21 improved and the nuclear plants in the United States
22 are safer today than they have ever been in the past,
23 so it was based on that fact that it was a recognized
24 appreciation that this is a mature industry, and then
25 there are three things that we call crosscutting

1 issues. One of them is the safety culture of the
2 plant and that is absolutely pivotal to the safety
3 performance of the plant. The second one is the
4 corrective action program. Sometimes you've heard
5 people talk about a learning organization -- you can
6 call it a number of different things, but it's an
7 organization that is mature enough to listen to
8 what's going on in the plant and react to it, so that
9 if on day in and day out they find issues, they don't
10 ~~hind~~ hide them, they don't ignore them, they deal with
11 them. We call that the corrective action program,
12 and the third one is capable and competent staff.
13 There's two aspects, two of those three crosscutting
14 issues that the revelations that occurred last March
15 came through loud and clear, those foundational
16 elements didn't exist, and that is the corrective
17 action program. A number of the issues that you saw
18 in the pictures tonight, those issues were known to
19 members of the plant, corrective action documents
20 called condition reports were initiated and then not
21 adequately resolved. The corrective action program
22 was not functioning effectively, and the second thing
23 is it came through clearly and the company reported
24 to us that they had lost focus on safety, that they
25 were putting production pressures ahead of safety

1 issues. Because of those issues the agency, the
2 NRC, Nuclear Regulatory Commission, determined that
3 this plant could not -- within our context, we
4 couldn't apply the routine oversight program to
5 Davis-Besse. We have a special -- you might call it
6 a circuit breaker in our inspection program. It's a
7 procedure. Sometimes you have heard at this panel
8 referred to as the 0350 Panel. That's a procedure.
9 It's Manual Chapter 0350. It describes for those
10 situations when you come into a circumstance that is
11 not appropriate for our routine inspection program,
12 it sets out a set of criteria, so this panel has
13 become the routine inspection program for
14 Davis-Besse. In situations like this, the agency
15 brings together a group of experts from very diverse
16 backgrounds. Bill Dean is the Senior Executive in
17 our headquarter's offices. I'm a Senior Executive
18 from Chicago. Jon's an expert in licensing.
19 Christine is an expert in inspection, the Resident
20 Inspector, and there is a number of typical staff and
21 managers that are on this panel, and we replace the
22 routine oversight program because the commission has
23 lost confidence -- had lost confidence in Davis-Besse
24 that they could effectively function and we could
25 provide effective oversight with our normal

1 inspection program. So what this panel done is
2 observe day-to-day activities at the plant, and we
3 structure an inspection program that's appropriate
4 for Davis-Besse in its situation today. We were
5 chartered in April, I guess, and one of the
6 expectations of the panel is to identify those key
7 issues that are necessary for resolution if the plant
8 is permitted to restart -- would be permitted to
9 restart. We call that a restart checklist, and
10 we've published that. It's been revised once since
11 it was published. It contains approximately 15 or
12 20 specific items on it covering systems, programs,
13 people, management structures -- a whole plethora of
14 different types of issues that this panel has
15 determined need to be adequately addressed prior to
16 this plant being permitted to restart. Our
17 responsibility as a panel is to provide oversight to
18 gain the resources necessary for both headquarters
19 and the regional offices. We've had inspectors from
20 our other regions as well as headquarters, contract
21 inspectors out here doing inspections at the plant
22 and provide oversight to those inspections and make
23 sure that before this plant would be permitted to
24 restart, that we are comfortable that it could be
25 restarted and operated safely. The process for that

1 decision -- because I know many of you might be
2 interested in that -- is that this panel would do its
3 work. If we come to the conclusion that we think the
4 plant is ready to restart, then we have to present
5 that to our bosses. My boss is Jim Dyer. He's a
6 regional administrator in Chicago, the Region III
7 office. Bill's boss is Sam Collins, Director of the
8 Office of Nuclear Reactor Regulation. Sam has
9 responsibility for every reactor in the United
10 States. Jim has responsibility for the Region III
11 reactors, and we would make a recommendation and have
12 to defend that recommendation to those two gentlemen
13 and only then would a decision be made by the NRC
14 that the plant could restart.

15 The focus of this panel is safety. There
16 have been a number of questions that have come up
17 over the past several months about schedule pressures
18 and things of that nature. Schedule is not our
19 business. The licensee is going to make whatever
20 progress they make. We're going to monitor that
21 progress with appropriate inspection resources and
22 oversight, and as they make progress, we're measuring
23 that progress through our independent inspection. We
24 will evaluate whether or not sufficient progress has
25 been made and whether the plant can be operated

1 safely. We're not at that point yet. As Bill
2 pointed out, there's a lot of work yet to be done, so
3 I wanted to give you a little bit of that foundation
4 of what we are and why we're here. There are some
5 other groups working on this project and Amy brought
6 one to light a few minutes ago, and that is our
7 Office of Investigations, completely independent,
8 they're looking at things that happened before March
9 and they're looking at why they happened, so that
10 investigation is ongoing. Our Inspector General is
11 looking at us. They report to Congress because we
12 did not perform up to standard either. Our
13 inspection program didn't discover this issue that
14 was progressing over a number of years, so we've got
15 a number of different groups looking at us. Our
16 Inspector General is looking at our performance. In
17 addition to that, Bill mentioned we have a Lessons
18 Learned Task Force that was a group of NRC experts
19 that were brought together that have nothing to do
20 with Davis-Besse, and they're looking at -- they were
21 chartered to look at a number of the programs and
22 behaviors of the Commission, the staff and the
23 Nuclear Regulatory Commission and why we missed this
24 issue, and they are making recommendations for
25 improvement in our programs, so there's a lot of

1 different activities going on, but this panel itself
2 is responsible from April onward to look at what's
3 necessary to have confidence that this plant can
4 operate safely and measuring whether or not the
5 company is approaching those standards, and if at
6 some time in the future they get there, then we'll be
7 able to have confidence that the plant can move
8 forward because we will have done an extensive amount
9 of inspection above and beyond our routine type of
10 oversight.

11 So, Christine, why don't I give it back to
12 you, and you can moderate questions.

13 MS. LIPA: Sure. Let me just
14 cover a couple administrative items, first of all.
15 It occurs to me that since there are so many people,
16 you might not have all gotten handouts, but I wanted
17 to let you know that our web site, which is www.nrc.com
18 www.nrc.gov, has a lot of documents. Go to that web
19 site and there is a Davis-Besse link. This is our
20 December newsletter, and on the back page it has
21 contact information for our Public Affairs Officer, I
22 wanted to point out Viktoria Mitlyng in the back and
23 her information, her phone number and her E-mail are
24 all on here if you want to contact her with any
25 questions.

1 Also, we have question cards for anybody who
2 does not want to come up to the podium and ask
3 questions tonight, we have question cards, or you can
4 contact us by E-mail after this meeting and we'll try
5 to get back to you and answer your questions.

6 The other thing I wanted to pointed out is
7 this meeting is being transcribed. We have Marlene
8 here transcribing the meeting, and what we have been
9 doing for our public meetings for at least six months
10 or so now is, we have a transcript that is available
11 about four weeks after the meeting that we put on our
12 web page. And, again, because it's being
13 transcribed when you come up to the podium to ask a
14 question, speak your name clearly for the record and
15 then ask your question. Try to keep it to five
16 minutes, please. That's important tonight with so
17 many people here, and that's all I have for that. I
18 also wanted to point out a few other NRC folks.
19 We've got Roland Lickus in the back.

20 MR. LICKUS: (Indicating).

21 MS. LIPA: And he's the State
22 and local Government Affairs from the Region III
23 office. We also have Nancy Keller. She's our
24 resident office assistant.

25 MS. KELLER: (Indicating).

1 MS. LIPA: We have Jay Collins,
2 he's running the slides for us today. He's an
3 engineer on rotation from headquarters.

4 MR. COLLINS: (Indicating).

5 MS. LIPA: And there are some
6 other NRC inspectors in the room as well, and then
7 there's Doug Simpkins. Doug Simpkins is in the
8 back. Doug is the Resident Inspector, and he and
9 Scott are the two NRC inspectors that are at the
10 plant day-to-day, and the next -- so next we'll start
11 with public questions and comments, and I wanted to
12 started with the young group of folks here since you
13 had your hand up earlier, if you guys wanted to go
14 first that would be all right.

15 MS. SHAW: I'm a little bit
16 shorter. Hi. My name is Lori Shaw, and I'm here
17 with a group of students. I wanted to make a
18 comment and ask two questions.

19 My first comment is -- and I'm sure this was
20 not intentional, but I saw a lot of students'
21 eyebrows go up, and the comment was, maybe you don't
22 have the depth of knowledge, and my comment when we
23 were at another meeting a comment was made by an NRC
24 person, well, maybe you couldn't read that off the
25 web site, and I just wanted to make a comment that

1 that can be intimidating to people in the audience
2 who want to get up and voice their opinions.

3 The two questions that I have is, one, for
4 the NRC, these students who have been doing some
5 research, they're 10 to 12 year old -- 13 year olds,
6 sorry, Sam, students -- and before this was announced
7 they had dug up that for 10 years there had been
8 warnings to the NRC and the industry that these
9 nozzles would leak and France had done moisture
10 detective devices, and so the question is why didn't
11 the NRC, when they knew it was a problem, take
12 prevention ahead of time, and why would a group of
13 students come up with a recommendation like this
14 before industry leaders?

15 MS. LIPA: Okay. Well, first of
16 all, thanks for your comment at the beginning. The
17 issue of the nozzle cracking has actually been known
18 for several years in the United States as well, and
19 the NRC has issued generic correspondence which is
20 generic letters and bulletins to the utilities to be
21 on the lookout for this. I don't think it was until
22 recently that it was -- became a big problem, like it
23 has become. Previously, it was just a known
24 phenomenon that could occur so the utilities were
25 expected to do inspections and be on the lookout for

1 leakage.

2 MS. SHAW: The second question
3 was, I was concerned that maybe I had heard that
4 wrong, was that after you did a start-up trial and
5 let the plant run that they would do visual
6 inspections, and it seemed like that was the thing
7 that got Davis-Besse in the problem in the first
8 place because only through ultrasonic technology and
9 the moisture tapes can we really tell if there is a
10 problem, and so how would that provide accurate
11 information if after start-up if they are only going
12 to do visual inspections?

13 MR. DEAN: Good questions, Lori.
14 Let me embellish first the answer that Christine gave
15 you relative to, you know, what did the NRC know
16 about cracking, it happened in France, how come we
17 didn't do anything about it, and, in fact, we did do
18 a number of things about it, but I think if you look
19 at the Lessons Learned Task Force report that the
20 independent group that Jack talked about and the NRC
21 developed, one of the things that they identified was
22 that while the issue was known in the United States,
23 okay, the approach the United States took was one of
24 increased leakage monitoring, and the fact that what
25 was observed in France and what was observed here

1 early in the United States were cracks that were of
2 an ~~axle~~ axial orientation which were not considered other
3 than being potential for small leaks of reactor
4 coolant which could be cleaned up and repaired if
5 they occurred, were not a safety issue, and it wasn't
6 until an inspection was done at Oconee, as a result
7 of NRC activities for plants to be conscious and look
8 at this, well, they detected cracks that were of a
9 circumferential nature. In other words, they were
10 now the -- around the nozzles, where if those things
11 were to progress to a through wall position, could
12 then if there were some sort of transient cause
13 ejection, so then now you have a significant safety
14 issue, and that was in the late '90s, 2000 where that
15 issue was discovered at Oconee, and so from that
16 point on, the NRC's posture relative to this cracking
17 issue changed to one where we started issuing a -- as
18 Jack said, bulletins, which are very significant
19 correspondence from the NRC that provides specific
20 guidance to the industry on what to do and how to
21 treat the issue, so we did not approach it the way
22 the French did. The French said, we'll just replace
23 reactor vessel heads. The agency and the industry
24 took an approach that this is not a significant
25 safety issue because of the axial orientation of the

1 cracks. It wasn't until it became circumferential
2 that that elevated the NRC's safety posture.

3 MS. SHAW: Thank you.

4 MR. GROBE: Bill, why don't you
5 explain why a circumferential crack is of greater
6 concern?

7 MR. DEAN: Jay, can you throw up
8 that --

9 MR. COLLINS: Yeah, wait a second.

10 MR. DEAN: Okay. This is a
11 diagram of a typical control rod drive mechanism
12 nozzle, and what I was referring to is that the
13 cracks that have been observed in France and the ones
14 we observed in the United States were basically
15 cracks of an axial orientations, basically
16 length-wise along that nozzle, and all that would
17 really accomplish or create if this crack became
18 through wall is that you could get leakage and you
19 would get some seepage of boric acid and reactor
20 coolant up here, and as Jack noted earlier once that
21 reactor coolant hits the top of the head, the
22 moisture evaporates and you leave the boric acid
23 crystals, and the boric acid crystals is basically a
24 white powdery substance really are relatively benign
25 as long as they're not wet. Okay? The issue that

1 occurred here at Davis-Besse was that because of the
2 boric acid that was not removed -- I think Tim noted
3 earlier, okay, that was not removed, they had a crack
4 develop, but you had a cap as you will of boric acid
5 that prevented this seepage from the axial crack in
6 the nozzles from getting up here and evaporating, and
7 basically what you have was basically a formation of
8 a boric acid, kind of a liquid pool of boric acid
9 that is very corrosive, and that's what you saw the
10 results of in that cavity, and that's a direct result
11 of the failure of the licensee to effectively clean
12 the head and be able to inspect and evaluate this
13 area. Okay?

14 Now, to answer the question about
15 circumferential, if you were to have a crack -- a
16 through wall crack in this orientation, you could
17 actually have through a pressure transient
18 separation, which would cause ejection, and now you
19 would have a loss of coolant accident. You would
20 have coolant now coming out through this hole in the
21 reactor vessel and so that's when we elevated our
22 safety -- when we started seeing cracks in a
23 circumferential orientation. Now, we have this
24 concern about possible separation and ejection of the
25 nozzle.

1 MS. SHAW: Thank you. I'm not
2 sure after some of the comments the students will
3 feel comfortable getting up and asking stuff, but
4 maybe after the meeting they can share some of their
5 questions and concerns with you.

6 MR. GROBE: I hope so, and I also
7 appreciate your first comments. I wasn't trying to
8 be critical of anybody in the audience. I was being
9 critical of ourselves. Sometimes we lose sight
10 because we're so meshed in this and engrossed in
11 everything that's going on, we lose sight of making
12 sure we communicate effectively, and I wanted to make
13 sure we provided sufficient background of information
14 so that you could understand what was going on.

15 We just received a comment, and I'm glad
16 somebody is using the question forms. Let me read
17 it, and I think I understand the question, and I can
18 answer it.

19 Acknowledging that Davis-Besse information
20 sharing related to the head condition in late 2001
21 was not accurate, please characterize the licensee's
22 recent reporting and sharing -- out of batteries?
23 -- please characterize the licensee's recent
24 reporting and sharing of information related to the
25 0350 process.

1 Has Davis-Besse provided accurate timely
2 information to support this review process? The
3 answer to that, to the best of my knowledge, is yes.
4 We have extensive interaction with the licensee
5 almost on a daily basis both from headquarters and
6 the regional office, and I have no experience where
7 information complete and accurate information wasn't
8 provided on a timely basis, and there has been a lot
9 of information sharing, so I appreciate that
10 question.

11 MS. LIPA: Okay. Are there any
12 other local members of the public that would like to
13 come up and ask a question?

14 MS. MUSER: Hi, my name is Mary Jo
15 Muser. I have a brief comment and then a couple
16 questions.

17 The fact that FirstEnergy omitted pictures of
18 the deterioration of the reactor head to the NRC and
19 that the NRC admits that the regulatory process
20 relies heavily on trust between the NRC and the
21 nuclear industry, is not sure that the rust recently
22 found on the bottom of the reactor is not going to
23 entail more cover ups on the safety of this plant in
24 regard to the industry. The NRC's failure to order
25 an immediate shut down when leaks were suspected back

1 in November of 2001, given the fact that air filters
2 had to be routinely changed every other day due to
3 clogging from airborne rust particles means you
4 failed to comply with your own regulations.

5 Why did you reject an independent panel to
6 review the safety of this plant? Let me finish.
7 Also, seeing how nuclear experts agree that if there
8 had been a core breach, people as far as way as a 500
9 mile radius would get sick of cancers. How can we
10 feel safe with Davis-Besse's 10 mile radial
11 evacuation plan.

12 Also, have you ever refused a plant from
13 reopening, and who is going to be held accountable
14 for all this?

15 MS. LIPA: Okay, well, I'm not
16 sure I can keep track of all the questions, so let me
17 talk a little bit about the 2.206 petition that you
18 referred to, and that was a request by a group of
19 people to have an independent panel, and the NRC
20 considered that request. We also, as Jack described
21 earlier, when the plant was placed under the 0350
22 process which is a completely different process of
23 inspection than the reactor oversight process, that
24 was one of the bases for why we did not believe an
25 independent panel was warranted because there is

1 additional oversight as a result of the Oversight
2 Panel, that's what most of these people are part of
3 the panel, so that's the answer to that question.
4 I'm trying to think -- what was one of the other
5 questions?

6 MS. MUSER: Basically by failing,
7 you failed to comply with your own regulations, so I
8 don't understand why. You really didn't answer why
9 an independent panel -- I think the public would have
10 felt more safely about that. Also about the
11 evacuation plan. A 10 mile radius I don't feel is
12 very effective. I think everybody else would agree
13 with that.

14 MS. LIPA: Well, I don't have the
15 details on that, but I know that that was all built
16 into the licensing basis for the plant, and that was
17 all reviewed before the plant was licensed to operate
18 here, the basis for the 10 mile. I can't get into a
19 lot more specifics on that.

20 Anybody else on the panel that has more on
21 that?

22 MR. GROBE: Sure.

23 MS. MUSER: I mean, if you lived
24 11 miles away and there was a breach of the core,
25 would you evacuate?

1 MR. GROBE: Let me make sure we're
2 operating from a sound technical basis here. There's
3 a number of barriers in a nuclear reactor from the
4 release of radioactive materials. The first barrier
5 is the ~~fuel~~ fuel pellets themselves. The vast majority
6 of the radioactive materials created in a nuclear
7 reactor is contained within the ceramic pellet of
8 that fuel, and it never leaves that pellet. Each
9 pellet is about the size of the tip of your little
10 finger.

11 The second barrier is the fuel pin itself,
12 and there is a lot of these fuel pins in the reactor,
13 and each one of those is designed to be leak tight.

14 The third barrier is the reactor coolant
15 system, and this is the barrier that was degraded at
16 Davis-Besse. It wasn't breached. It was degraded,
17 it was significantly degraded.

18 And then the fourth barrier is the
19 containment structure, and Scott described earlier
20 the containment structure and how it's built at
21 Davis-Besse. Each of these barriers is capable of
22 preventing the release of radioactive materials.

23 Three of those four barriers were still completely
24 intact. The fourth barrier was degraded, so in the
25 event of loss of a coolant accident, that's what we

1 call if the reactor coolant system had been breached
2 we call that a loss of coolant accident, if in the
3 event of a loss of coolant accident there are a
4 number of safety systems that are designed to
5 mitigate that type of accident, so you have these
6 other barriers, but you also have systems to mitigate
7 the consequences of a ~~hot~~ loss of coolant accident.
8 Those systems -- there is two of everything. We call
9 that redundancy, and in many cases the specific
10 pieces of equipment where there is redundancy or
11 different, we call that diversity, so that you might
12 have a turbine driven pump and a motor driven pump.
13 We try to design things that way, so there's an
14 extraordinarily low risk of what we call common cause
15 failure which would have both systems fail
16 simultaneously when you need them.

17 The only reactor accident that I'm aware of
18 that has resulted in significant contamination, a
19 great distance from the plant is the Chernobyl
20 accident. The reactor designs ~~and~~ in the Soviet Union at
21 that time did not have a containment structure. The
22 Chernobyl plant was a very, very significantly
23 different design. It's a graphite moderated gas
24 cooled reactor, so it's a very, very different
25 reactor than what we have in the United States.

1 There has been an accident in the United States where
2 there was a loss of coolant situation. That was the
3 Three-Mile Island. At Three-Mile Island, there was
4 no release of radioactive materials of any
5 consequence, and that's because these other barriers
6 provided the defense in-depth that is designed into
7 the safety of nuclear plants in the United States.

8 Now, I don't want anyone to get the
9 impression that what I'm doing is -- what I'm saying
10 is diminishing the importance of what happened at
11 Davis-Besse. The violations that occurred and the
12 degradation of reactor coolant system is very
13 significant, but there are a number of barriers that
14 are there to prevent the release of radioactive
15 materials and to mitigate the consequences of an
16 accident. The basis for the 10 mile emergency
17 planning zone is founded in good health physics, and
18 health physics is a study of radiation effects on
19 people, and it was concluded that that was an
20 appropriate distance to mitigate the consequences of
21 an accident should it occur.

22 MS. MUSER: Have you ever refused
23 a plant that was deemed unsafe from reopening?

24 MR. GROBE: There have been a
25 number of plants that have not reopened once they

1 have gotten into this condition. Those decisions
2 were made based on finances by the company that
3 operated the plant. An example in our region, in
4 Region III, the midwest would be the Zion plant
5 outside of Chicago. It got into a situation like
6 this, had a restart oversight panel, an O350 Panel,
7 and the company eventually determined that it was not
8 in their best interest to restart the plant. What I
9 said earlier and I'll reiterate here because it's
10 very appropriate, the focus of this panel is safety,
11 and the plant will not restart unless it can be
12 restarted safely. That could take a short period of
13 time, matter of months, it could take a matter of
14 years depending on how the utility approaches the
15 effort and what kind of progress they make. We're
16 here for the duration, and the plant won't restart
17 unless we're comfortable that it can restart safely.
18 If prior to that point in time the company decides
19 not to restart, that's their business decision and is
20 of no concern to this body.

21 MS. MUSER: Thank you.

22 MR. THOMAS: We have a question
23 that was passed up that I'll answer real quick.

24 The question is, how could the NRC let
25 Davis-Besse operate with the six inch hole in the

1 reactor? I guess my quick answer is we wouldn't let
2 it operate with a six inch hole even the degradation
3 that was found, we didn't know that this degradation
4 existed at the time the extension was granted to let
5 it operate until mid February, so the short answer to
6 your question is, we would not let it operate in this
7 condition, and it would be required to be shut down.
8 Hopefully that answered your question.

9 MS. LIPA: Come on up.

10 MR. BLATT: Good evening. I'm
11 John Blatt, a resident of Port Clinton, Ottawa
12 County. Davis-Besse is just down the beach from my
13 home on Westshore Boulevard in Port Clinton. I'm
14 not a Clevelander or a Columbus resident. I'm here
15 as a local. I'm former Mayor of the Village of
16 Put-in-Bay, about 10 miles downwind from here. I
17 was a nuclear trained operator in the Navy in the
18 '60s and remain current in the industry since then.
19 I believe nuclear energy is absolutely essential to
20 our need to have abundant, low cost electricity in
21 the area for economic use and growth. Suggestions
22 from some to convert this plant to fossil fuel or to
23 close it down are ill-conceived. Coal and oil
24 create pollution which we cannot afford in this
25 tourist area. The trucks or trains to bring the

1 fuel would further congest the region. Nuclear
2 power is state of the art and is the least expensive
3 way to provide the services to us.

4 I understand that the operator and the
5 Nuclear Regulatory Commission made some mistakes and
6 the newspapers are correct and feel confident that
7 the present safeguards would make this a very safe
8 electrical generating facility. I worked with the
9 Nuclear Regulatory Commission in the past and have
10 nothing but confidence and respect for their
11 procedures. Do not let us become another California
12 where well intentioned misguided individuals
13 permitted a state not to prepare for its electrical
14 needs. Thank you.

15 (Applause).

16 MS. LIPA: Thank you for your
17 comments, John.

18 MR. SCHRAUDER: Good evening. My name
19 is Bob Schrauder. I'm the Director of the Support
20 Services Department at Davis-Besse, and I wanted to
21 answer a question that the woman prior had, and,
22 first of all, I cannot, will not take responsibility
23 for decisions that were made by past management. I
24 want everybody to understand that when we talk about
25 the management at Davis-Besse the management is

1 different, so when you talk about the management at
2 the plant now, you're talking about me, and so I take
3 it personally, as you would, so I won't respond to
4 what previous management did, what information they
5 had, why they made the decisions that they will, but
6 I do have an answer as to how do we know that the --
7 what we're looking at at the bottom vessel will be
8 dealt with openly and honestly and that we will relay
9 accurate information to the very best of our ability
10 to the NRC, and the answer to that question is
11 because I'll make sure we do, and I will put my
12 integrity up against anybody's in the room or in the
13 country. I believe very strongly nuclear power and
14 I believe very strongly in Davis-Besse, and the
15 answer to your question is, you have my word, and
16 that is all I can give you, is my word that I will
17 make sure that to the very best of our ability all of
18 the knowledge that we have relative to the bottom of
19 the reactor vessel will be shared with the public and
20 with the NRC and will be dealt with appropriately.

21 MS. LIPA: Thank you, Bob.

22 (Applause).

23 MR. WHITCOMB: Good evening, Ms.

24 Lipa, gentlemen. My name is Howard Whitcomb. I'm
25 a resident of Ottawa County, I'm a former employee of

1 Davis-Besse, and I was there when Mr. Schrauder was
2 there. I'm also a former NRC inspector.

3 My prepared comments tonight support what
4 Lori said earlier. It's clear to me that the people
5 in Northwest Ohio are a lot smarter than the people
6 in Lisle, Illinois want to give them credit for.
7 Over the last eight months, the NRC has made claims
8 regarding this restart checklist and its intent to
9 assure the public that FirstEnergy corrects the
10 glaring mismanagement problems at Davis-Besse.
11 Noticeably absent tonight from your presentation is
12 any update as to where you are with that restart
13 checklist. Over the last eight months, the public
14 has had to endure repeated attempts by both the NRC
15 and FirstEnergy to mislead and confuse the public
16 regarding important issues at Davis-Besse Nuclear
17 Plant. In other words, the comments raised tonight
18 about the information or the lack of apparent
19 information. A lot of the public gets their
20 information from what's provided to them by the NRC,
21 and if they're not up to speed it's because somebody
22 has carefully and craftily put information out that
23 they only want the public to know about. I have
24 personally raised some issues over the last several
25 months, and based on recent articles provided by the

1 local news media, it is clear that the NRC continues
2 to fail in its efforts to regain the public's trust.

3 In a recent article on December 2nd, the
4 Sandusky Register reported that a particular
5 photograph, and I believe the photograph to be the
6 one that Ms. Ryder raised questions about earlier
7 showing the image of a rust reactor head was not
8 provided by FirstEnergy management pursuant to a
9 request by the NRC in October of 2001. A spokesman
10 for FirstEnergy is quoted as saying, quote, it was
11 there for the asking, unquote. Four days later in a
12 briefing to the members of the Advisory Committee on
13 Reactor Safeguards, you, Mr. Grobe, claimed that the
14 commission has seen definite improvement in the
15 safety culture at Davis-Besse since March 2002. Mr.
16 Grobe, upon what basis do you make such a ridiculous
17 statement?

18 MR. GROBE: Appreciate your
19 question, Howard. Let me respond, first, to a
20 couple of your premises. We are committed to
21 providing full information, full access to the
22 public, to all of the information we know, all of the
23 findings we have. We put ourselves here in front of
24 the public on a monthly basis, and, quite frankly,
25 every time we come to the site, we put ourselves in