

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)

DTE ELECTRIC CO.)

(Fermi Nuclear Power Plant, Unit 3))

Docket No. 52-033-COL

ORDER
(Setting Deadline for Proposed Transcript Corrections)

The Commission held an evidentiary hearing on February 4, 2015, at its Rockville, Maryland headquarters to receive testimony and exhibits in the uncontested portion of the captioned proceeding. The hearing transcript is appended to this Order. Pursuant to my authority under 10 C.F.R. § 2.346(a) and (j), the parties may file any proposed transcript corrections no later than February 18, 2015. The parties may coordinate their responses and file a joint set of corrections.

IT IS SO ORDERED.

For the Commission

NRC Seal

/RA/

Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland,
this 9th day of February, 2015.

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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HEARING ON COMBINED LICENSE FOR FERMI, UNIT 3: SECTION
189A OF THE ATOMIC ENERGY ACT PROCEEDING (PUBLIC)

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WEDNESDAY

FEBRUARY 4, 2015

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The Commission met in the Commissioners'
Conference Room, 1st Floor, One White Flint North, 11555
Rockville Pike, Rockville, Maryland, at 8:30 a.m.,
Stephen G. Burns, Chairman, presiding.

PRESENT:

- STEPHEN G. BURNS, Chairman
- JEFF BARAN, Commissioner
- WILLIAM C. OSTENDORFF, Commissioner
- KRISTINE L. SVINICKI, Commissioner

1 ALSO PRESENT:

2 FRANK AKSTULEWICZ, NRO

3 DAN BARSS, NSIR

4 MARCIA CARPENTIER, OGC

5 MANAS CHAKRAVORTY, NRO

6 MARK DELLIGATTI, NRO

7 JENNIFER DIXON-HERRITY, NRO

8 MARGARET M. DOANE, OGC

9 RAUL HERNANDEZ, NRO

10 DAVID HINDS, GE-Hitachi

11 RONALDO JENKINS, NRO

12 HENRY JONES, NRO

13 ANDREW KUGLER, NRO

14 RON MAY, SR., DTE

15 JAVAD MOSLEMIAN, Sargent & Lundy

16 ADRIAN MUNIZ, NRO

17 RYAN NOLAN, NRO

18 THOMAS SCARBOROUGH, NRO

19 PETER SMITH, DTE

20 TYSON SMITH, DTE

21 STANLEY STASEK, DTE

22 ANGELO STUBBS, NRO

23 MALLECIA SUTTON, NRO

24 SARAH TABATABAI, RES

25 STEVEN THOMAS, Black & Veatch

26 ALSO PRESENT: (CONT.)

1 GLENN TRACY, NRO

2 ANNETTE L. VIETTI-COOK, SECY

3 RANDALL WESTMORELAND, DTE

4 ZUHAN XI, NRO

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 Steven Thomas, Engineering Manager

Staff

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8	Angelo Stubbs, Senior Reactor Systems Engineer,	
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P-R-O-C-E-E-D-I-N-G-S

8:31 a.m.

CHAIRMAN BURNS: I'm going to call this hearing to order. The Commission is here today to conduct an evidentiary hearing on DTE Electric Company's September 18th, 2008 application for a Combined License to construct and operate a new nuclear power generation facility at the existing Fermi Nuclear Power Plant site in Monroe County, Michigan.

This hearing is required under Section 189 of the Atomic Energy Act of 1954, as amended. The Commission will also be reviewing the adequacy of the NRC Staff's Environmental Impact analysis under the National Environmental Policy Act of 1969, commonly referred to as NEPA.

The way we'll work this morning is we'll --DTE and the Staff will provide testimony in witness panels that provide an overview of the application, address safety issues, and then environmental issues associated with the review. And there will be Commission questions following each panel.

The Commission will rotate its questioning --the questions in terms of the Commissioner that proceeds with the questioning, and Commissioners may reserve time from their allotted time during a particular panel discussion for later use, if they so

1 desire.

2 To provide context to the proceedings, we
3 also note that the Commission will hear an overview
4 presentation on the certified design for the GE-Hitachi
5 Economic Simplified Boiling Water Reactor, or ESBWR.

6 The purpose of that discussion is to
7 provide context for the hearing, and not to reopen
8 issues previously resolved in the design certification
9 rulemaking, which I believe the Commission concluded
10 last fall.

11 The Commission will not delve extensively
12 into the ESBWR design issues; although, areas of
13 interface between the certified design and specific
14 characteristics at the Fermi site will be considered.

15 Before I proceed with some of the other
16 procedural outlines, I'll ask my fellow Commissioners
17 if they have any opening comments they'd like to make.
18 Commissioner Svinicki.

19 COMMISSIONER SVINICKI: Thank you, Mr.
20 Chairman. I know we have a very long day ahead of us and
21 I welcome all of our participants and presenters. And
22 I just want to note that, of course, we will eliminate
23 aspects of the record before us, but that the Commission
24 has access to an extremely voluminous written record in
25 this matter, as well, not all aspects of which will be
26 discussed today. But I just wanted to be clear that the

1 discussion we have today is only one part of our review.
2 Thank you.

3 CHAIRMAN BURNS: Thank you. Commissioner
4 Ostendorff.

5 COMMISSIONER OSTENDORFF: Thank you,
6 Chairman. I'd also like to echo Commissioner Svinicki's
7 comments. I think the record is very fulsome. I want to
8 thank the Applicant, the Staff, OCAA and OGC here for
9 their work in preparing the Commission for this
10 important meeting. Thank you.

11 CHAIRMAN BURNS: Commissioner Baran.

12 COMMISSIONER BARAN: Thank you, Mr.
13 Chairman. I would just like to take a moment to commend
14 the Staff for all the hard work and numerous hours spent
15 preparing for this hearing both during the recent
16 holidays and in the preceding years resolving the
17 technical issues that arose during the certification of
18 the ESBWR and this first COL for the ESBWR.

19 This hearing plays an important role in the
20 Agency's process for determining whether to issue a COL.
21 This is my first COL mandatory hearing as a
22 Commissioner, and as a member of the Commission I see
23 my role at this hearing as asking probing questions of
24 both the Applicant and the Staff to insure that the NRC
25 can make the statutory and regulatory findings
26 necessary to issue the COL.

1 I look forward to your presentations today,
2 and the responses to the questions. Thanks.

3 CHAIRMAN BURNS: Thank you.

4 To proceed again with some of the outline
5 for what we'll be doing today in its context, after the
6 hearing the Commission will expect to issue a decision
7 promptly with due regard of the complexity of the issues
8 before it.

9 With respect to the findings on the safety
10 side, the Commission will determine whether the
11 applicable standards and requirements of the Atomic
12 Energy Act of 1954 and the Commission's regulations,
13 specifically those in 10 CFR Section 52.97 have been
14 met; whether any required notifications to other
15 agencies or bodies have been duly made; whether there
16 is reasonable assurance that the facility will be
17 constructed and will operate in conformity with the
18 license, the provisions of the Act, and the Commission's
19 regulations; whether the Applicant is technically and
20 financially qualified to engage in the authorized
21 activities, and whether the issuance of the license will
22 not be inimical to the common defense and security, or
23 to the health and safety of the public.

24 With respect to its environmental review,
25 the Commission under 10 CFR 51.107, Subsection A, will
26 determine whether the requirements of NEPA, Section

1 102.2(a)(c) and (e) of the Act, and the applicable
2 regulations in 10 CFR Part 51 have been met.

3 It will independently consider the final
4 balance among the conflicting factors contained in the
5 record of the proceeding with a view to determining the
6 appropriate action to be taken, determine after
7 weighing the environmental, economic, technical, and
8 other benefits against environmental and other costs,
9 and considering reasonable alternatives whether the
10 Combined License should be issued, denied, or
11 appropriately conditioned to protect environmental
12 values, and to determine whether the NEPA review
13 conducted by the Staff has been adequate.

14 With that, I'd first ask counsel for the
15 Applicant and then for the Staff to identify themselves.

16 MR. SMITH: This is Tyson Smith, counsel for
17 DTE Electric.

18 MS. CARPENTIER: Marcia Carpentier,
19 counsel for the NRC Staff.

20 CHAIRMAN BURNS: Thank you. And to begin the
21 first phase here, we'll have a swearing in of the
22 witnesses. And first I would ask the parties to name
23 their witnesses, to read the names of their witnesses
24 starting with DTE.

25 MR. SMITH: Certainly. DTE witnesses are
26 Ron May, Peter Smith, Michael Brandon, Randall

1 Westmoreland, Steven Thomas, Ed Meyer, Brandon Gomer,
2 David Hinds, Patricia Campbell, Javad Moslemian, and
3 Robert Youngs. And one of our witnesses, Robert Hooks,
4 was unable to attend today.

5 CHAIRMAN BURNS: Okay. I would ask those
6 witnesses whose names were just read, to raise your
7 right hand, and then take the oath.

8 Do you swear or affirm that the testimony
9 you will provide in this proceeding is the truth, the
10 whole truth, and nothing but the truth?

11 (Chorus of yeses)

12 (DTE WITNESSES SWORN)

13 Chairman BURNS: All right, thank you. You
14 may be seated.

15 And Staff Counsel, would you read the names
16 of the witnesses for the Staff?

17 MS. CARPENTIER: Certainly. I wanted to ask
18 one clarifying question first. Would you like to have
19 the names of those who are not in attendance but were
20 on the pre-filed list, or would you also like --or would
21 you like us to go straight to the ones who are present?

22 CHAIRMAN BURNS: Are the ones who are on the
23 list who are not present going to testify?

24 MS. CARPENTIER: No, they are not. There was
25 redundancy in the initial list --

26 (Simultaneous speech)

1 CHAIRMAN BURNS: Okay. Then I think I would
2 just have those who are --the Staff plans to have testify
3 today.

4 MS. CARPENTIER: All right, thank you.

5 There are 68 witnesses for the Safety
6 Review and 12 for the Environmental Review. For the
7 Safety Review the Staff witnesses are Frank
8 Akstulewicz, Brian Anderson, Dan Barrs, Laurel Bauer,
9 Robert Caldwell, Margaret Caruso, Manas Chakravorty,
10 Theresa Clark, Christopher Cook, Gordon Curran, Mark
11 Delligatti, Antonio Dias, James Downs, Kenneth Erwin,
12 Robert Fitzpatrick, Scott Flanders, Joseph Giacinto,
13 Adelaide Giantelli, James Gilmer, Tekia Govan, Peter
14 Habighorst, Craig Harbuck, Michelle Williams, excuse
15 me, Michelle Hart, Kimberly Hawkins, Raul Hernandez,
16 Charles Hinson, John Honcharik, Ronaldo Jenkins, Robert
17 Johnson, Henry Jones, Michael Junge, Rebecca Karas,
18 Kerri Kavanagh, Jim Kellum, Andrew Kock, George
19 Lipscomb, Gregory Makar, Michael McCoppin, John
20 McKirgan, David Misenhimer, John Monninger, Wendell
21 Morton, Lynn Mrowca, Adrian Muniz, Cliff Munson,
22 Charles Murray, Ryan Nolas, Judy Petrucelli, Sheila
23 Ray, Aida Rivera-Varona, John Rosina, Thomas
24 Scarborough, Eric Schrader, Angelo Stubbs, Sarah
25 Tabatabai, Frank Talbot, Seshagiri Tammara, Dinesh
26 Taneja, John Tappert, Al Tardiff, Glenn Tracy, Andrea

1 Valentin, Robert Vettori, Duncan White, Stephen
2 Williams, Zuhan Xi, Jim Xu, and Jacob Zimmerman.

3 For the Environmental side Mark Delligatti
4 and Scott Flanders have already been named as Safety
5 witnesses. Additional witnesses are Jack Cushing,
6 Jennifer Dixon-Herrity, Brad Harvey, Stacey Imboden,
7 Andrew Kugler, Kirk Lagori, Daniel Mussatti, Donald
8 Palmrose, Maleccia Sutton, and David Weeks.

9 CHAIRMAN BURNS: Okay. I would ask those
10 individuals identified as witnesses for the Staff to
11 stand and to raise your right hand.

12 Do you swear or affirm that the testimony
13 that you will provide in this proceeding is the truth,
14 the whole truth, and nothing but the truth?

15 (Chorus of "I do")

16 (NRC WITNESSES SWORN)

17 CHAIRMAN BURNS: Thank you. You may be
18 seated.

19 Are there any objections from either of the
20 parties to inclusion of the witness list as part of the
21 record?

22 MR. SMITH: There are none from the
23 Applicant.

24 MS. CARPENTIER: None from the Staff.

25 CHAIRMAN BURNS: Okay. We'll proceed then
26 to the admission of evidence. Are there any edits from

1 DTE to its exhibit list?

2 MR. SMITH: There are none.

3 CHAIRMAN BURNS: Okay. Would you read the
4 range, Mr. Smith, of the numbers of the exhibits to be
5 admitted?

6 MR. SMITH: Certainly, Mr. Chairman. The
7 DTE Exhibits are DTE 000001 through DTE 000010.

8 (Whereupon, the above-referred to
9 documents were marked as DTE Exhibits
10 000001 through DTE 000010, for
11 identification.)

12 CHAIRMAN BURNS: Okay. Thank you. Is there
13 a motion to admit those exhibits into the record?

14 MR. SMITH: I move that we admit those
15 exhibits into the record.

16 CHAIRMAN BURNS: Are there any objections
17 to the admission of those exhibits into the record?

18 MS. CARPENTIER: None from the Staff.

19 CHAIRMAN BURNS: Then it's so ordered.

20 (Whereupon, the above-referred to
21 documents previously marked as DTE
22 Exhibits 000001 through DTE 000010 for
23 identification, were received in
24 evidence.)

25 CHAIRMAN BURNS: I'm going to ask then the
26 Staff to read the range of numbers of the exhibits to

1 be admitted. First, I'll ask you are there any edits to
2 your exhibit list?

3 MS. CARPENTIER: There are no changes to the
4 exhibits themselves; however, Exhibit 7 in the
5 pre-filed list had an "A" after it. That "A" is no longer
6 necessary.

7 CHAIRMAN BURNS: Okay. So, we'll just use
8 that, Madam Secretary, as Exhibit 7. Is that how I
9 understand it?

10 MS. CARPENTIER: Yes.

11 CHAIRMAN BURNS: Okay. Do you have a motion
12 --would you read then the range of numbers and the
13 exhibits.

14 MS. CARPENTIER: Certainly. Our exhibits
15 range from NRC 000001 to NRC 000016.

16 CHAIRMAN BURNS: Okay, thank you.

17 (Whereupon, the above-referred to
18 documents were marked as Exhibits NRC
19 000001 through NRC 000016, for
20 identification.)

21 CHAIRMAN BURNS: Okay, thank you. Do you
22 make a motion to enter those exhibits into the record?

23 MS. CARPENTIER: So moved.

24 CHAIRMAN BURNS: Are there any objections?

25 MR. SMITH: There are no objections from the
26 Applicant.

1 CHAIRMAN BURNS: Hearing no objection, so
2 ordered. They're admitted into the record.

3 (Whereupon, the above-referred to
4 documents previously marked as Exhibits
5 NRC 000001 to NRC 000016 for
6 identification, were received in
7 evidence.)

8 CHAIRMAN BURNS: Then I think we can proceed
9 with some more substance here now, and going to our first
10 panel.

11 The first panel will be an Overview, deal
12 with overview issues. The first panel will be witnesses
13 from DTE Electric. Again, we remind the panel, the
14 witness and the panel that they are under oath. And I
15 would also advise you should assume that the Commission
16 is familiar with the pre-hearing filings.

17 Gentlemen, would you identify yourselves
18 for the Commission?

19 MR. MAY: My name is Ron May, Executive Vice
20 President for DTE Energy.

21 MR. SMITH: And I'm Peter Smith, Director of
22 Nuclear Development.

23 CHAIRMAN BURNS: Thank you. And at this
24 point, you may proceed with your presentations. Thank
25 you.

26 MR. MAY: We'll proceed with Peter

1 conducting the first segment.

2 CHAIRMAN BURNS: That's fine, great.

3 MR. SMITH: Thank you. So, we'll move to
4 Slide 2. Today I'm going to talk about three basic areas
5 that we were requested to. One is what our strategy and
6 background related to our project was.

7 CHAIRMAN BURNS: Could you pull the mic a
8 little closer to you?

9 MR. SMITH: Oh, okay.

10 CHAIRMAN BURNS: We're having a little
11 trouble hearing.

12 MR. SMITH: Okay, that's good. Is that
13 better?

14 CHAIRMAN BURNS: Yes.

15 MR. SMITH: Okay, thanks.

16 We're going to talk a bit about the Design
17 Center Working Group approach that we used, or we were
18 involved with during this, and a bit about the ESBWR
19 design certification we'll rely on for our application.

20 Slide 3. So, this project evolved in the
21 --it started in the 2005-2006 time frame when a number
22 of activities within Michigan indicated that there was
23 going to be a substantial need for new baseload capacity
24 by 2020 in Michigan. And given the environment at the
25 time, NP 2010, Part 52, and the interest in new nuclear,
26 we looked carefully at whether a nuclear plant could

1 meet part of that need within Michigan. So, that was the
2 precursor to this license application.

3 The other factor that influenced our
4 timing of the license application was the production tax
5 credit deadline that was set at December 31st of 2008,
6 so we wanted to be like many others who are going to take
7 advantage of being able to qualify for that first
8 milestone in the production tax credits.

9 So, you know --and the whole world has
10 changed. At the time that the 2005-2006 energy studies
11 were done, there was growth predicted, and that was
12 going to be the prime driver for new need, as well as
13 retirements of aging fossil units in our system, and in
14 general in the Midwest; however, the economic downturn
15 in 2008 changed the growth pattern. However, when you
16 look at the environment today, there's --the reasons are
17 different, but the potential need is there. So, when we
18 look at --we think it's important for a diverse
19 portfolio. We were a longstanding primarily coal
20 generator. We've diversified in the past few years. We
21 now have roughly around 1,000 megawatts of wind
22 generation in our system and probably will have more.

23 We're looking into natural gas fired plants
24 in the short term to meet the potential of carbon
25 emission regulations. And we have a number of older,
26 smaller fossil units, coal fired units that are

1 constantly challenged by the economics of adding
2 emission controls to them to comply with the
3 environmental rules. So, given that whole mix, and then
4 you add on the direction that most are heading to comply
5 with the carbon rules of relying on natural gas, we think
6 it's important to have the option of diversity in
7 generation, so we won't be fully dependent on one
8 --primarily one source and be able to insulate our
9 customers.

10 So, when I look forward, you can almost do
11 the numbers and find out that, you know, that 3,800
12 megawatt projection that was done in 2005-2006 is
13 probably on that order between now and 2025 or 2030 and
14 beyond, so that's why we have continued with this
15 project.

16 So, in late 2006 we set about the strategy
17 on how we were going to do this and obtain Board approval
18 for preparation of the license application. And we had
19 some things in mind --I'm sorry, I moved on to Slide 4.
20 Strategy for licensing and constructing our new plants
21 was developed. And we decided that we would employ the
22 Combined License approach. You know, we had licensed
23 Fermi 2 which was in the minds of many people who were
24 involved at that time. Fermi 2 got a construction permit
25 in 1968 and a low power license in 1985. And there were
26 lots of fits and starts during that for a number of

1 reasons, but a 17-year long capital project where you're
2 carrying interest charges on is very taxing on corporate
3 health. So, we're very interested in a shorter, smarter,
4 more methodical approach. So, we made a condition that
5 we would get a Combined License prior to making any
6 further decisions on proceeding, and take a large amount
7 of the regulatory risk and up front time off of the
8 process.

9 We also subscribed ourselves to the Design
10 Center Working Group approach. As an S-COLA at the time
11 we entered this, we had no intention of being first. We
12 saw ourselves as in the second wave of COLs in that pool
13 of applicants that were in that 2007-2008 time frame,
14 but things have changed and we have adjusted.

15 As a matter of policy, we fully embrace
16 standardization. And what was established for me in our
17 organization was a very high threshold for deviation,
18 so the rules that I worked under for this project were
19 no departures, and actually no deviations from the
20 reference COL at the time, which was Dominion's North
21 Anna application. So, what would happen if we were in
22 that space, I had to go to what we call a Change Review
23 Board which is chaired by Ron May and the Chief Nuclear
24 Officer and explain why it is that I have a need to
25 deviate. And we'll talk about the results of that
26 governance, but that governance exists today. We're

1 absolutely, totally committed. We want a standard plan.
2 We don't want to be custom from anybody. We want to drive
3 this so that it's simple to maintain, and simple to keep
4 up with in the future.

5 Our current unit is quite --it was --we were
6 the architect engineer initially for that, and it's got
7 quite a bit of diversity in it, and it's got many unique
8 features. And that's a lesson for us from the past.

9 Another thing that we did with this project
10 is we completely removed it from the operating
11 organization, so our project is conducted out of a group
12 called Major Enterprise Projects which we manage the
13 lion's share of large capital projects for the entire
14 corporation, so this fit well in it. And this was at the
15 beginnings of Major Enterprise Projects, large
16 environmental emission controls at our Monroe Power
17 Plant were the two major projects that were under that
18 group at the time, and since the group has grown
19 immensely, and we now manage, you know, on the order of
20 about \$1 billion a year of capital for --capital
21 projects for the corporation ranging through the whole
22 system from natural gas, information technology,
23 distribution, operations, environmental and fossil
24 generation, and wind, and Fermi 2. We do all of the
25 capital work at Fermi 2.

26 So, it allowed us to do a number of things.

1 And one of the strategies in using the Project
2 Management Organization and its development was --and
3 being separate from Fermi 2 is, for example, we were able
4 to adopt an independent quality assurance program for
5 Fermi 3, so we have an NQA1 Program for Fermi 3 versus
6 the originally licensed program for Fermi 2, so we gain
7 experience with NQA1.

8 We have an organization within our Project
9 Management Organization that's unique. It's a Quality
10 Management Organization that was initially set up to
11 provide the quality assurance function for the Fermi 3
12 project, but what we have done is we have applied a
13 graded approach of quality management techniques and
14 requirements to every project that we do. So, what we're
15 doing in our organization is we're building a
16 quality-oriented culture that's procedure-oriented,
17 process-oriented. And the size of our organization now
18 is about 300 people. Our benchmarking early on that to
19 effectively manage a future engineering procurement
20 construction contract it would take about 150 people
21 from the owner, so what we have done in the process here
22 is we've built this organization with a quality culture
23 that is very good at managing projects that when the time
24 comes to build a new nuclear unit, that we'll be able
25 to apply all those same techniques, and we already have
26 a quality focus of people to apply to it. So, we had a

1 --we're building a capability to manage really well a
2 future project. And, actually, we've done very well in
3 managing this project and most others that we take on.

4 The independence from the Fermi
5 organization turned out to be a blessing in many
6 respects. This kind of project is a huge distraction on
7 both ends. Everyone in the operating plant is interested
8 in the new plant and vice versa. It was very easy for
9 us to become a distraction to the operating unit, so the
10 separation helped there.

11 One of the other unique things that
12 happened as a result of that is when I went to hire staff
13 to support this project, I was not able to hire from the
14 operating organization, so it forced me to go and hire
15 people with fundamentally a non-nuclear background, so
16 we developed an appropriate training program to bring
17 people up to speed and supplement it with experienced
18 consultants to further build the staff.

19 We use the existing Fermi site for a number
20 of reasons. One, the site had space for an additional
21 unit. I, in the research for this project, came across
22 a 1968 artist rendering that shows four units on the
23 site, which was the Fermi 1 liquid metal fast breeder
24 reactor; Fermi 2, a Fermi 3 that was Siamese to the north
25 end of Fermi 2, and a Fermi 4 that would have been in
26 the same location. And I'll show you that later on a

1 drawing of where this one was. And there was a lot of
2 infrastructure already in place to support an
3 additional unit. So, we presumed that many of the
4 environmental aspects associated with it, because we
5 had already applied for a construction permit for the
6 original Fermi 3, and other environmental factors on the
7 --site hazards had already been evaluated and found
8 acceptable, and it's a pretty benign site. So, that was
9 our --that became our first choice as many others.

10 And then when we started the project, the
11 actual project in 2007, we had not selected a reactor
12 technology, so we started our site investigation work
13 in parallel with reactor technology selection. However,
14 we did the site investigation work in a fashion that
15 regardless of what the outcome was in the reactor
16 technology selection would be, that we would have
17 satisfied all of the requirements necessary to support
18 a COL. So, that all married up in November of 2007 when
19 we informed NRC that we had selected the ESBWR and we're
20 going to move into the ESBWR Design Center Working
21 Group.

22 If we'd move on to Slide 5, I just wanted
23 to give a couple of little background things regarding
24 the Fermi site. So, it's located in Monroe County,
25 Michigan. It's about halfway between the City of Toledo
26 and the City of Detroit on the shore of Lake Erie.

1 One of the unique features is that the plant
2 is about seven miles from the international border with
3 Canada, which is shown in Lake Erie in the river. The
4 site is part of the Detroit River International Wildlife
5 Refuge. In fact, we were one of the largest participants
6 in the wildlife refuge, and approximately 650 acres of
7 the site is co-managed with the U.S. Fish and Wildlife
8 Service as part of the International Wildlife Refuge.
9 And that's work out very well for us, and for Fish and
10 Wildlife.

11 If we move on to Slide 6, the Fermi site has
12 about 1,260 acres, so about half the site is part of the
13 wildlife refuge. It currently has Fermi 1 on the site,
14 and in the photograph or the artist rendering the Fermi
15 1 location is right near the two rock projections, the
16 intake drawings out into Lake Erie and the structure
17 still exists. All of the nuclear components have been
18 removed and disposed of in Fermi 1, so it's basically
19 the structures that remain. And we decided that we
20 needed to remove those in advance of Fermi 3
21 construction, so as part of this project when it would
22 go forward because that's really prime area used to
23 support construction, and it helps us avoid impacts on
24 other undeveloped areas of the site to support
25 construction of the new unit.

26 Also on the site is Fermi 2, the operating

1 plant. And that's shown --that's the brown-colored
2 structures with the two cooling towers to the north of
3 them close to the lake. And then, of course, the blue
4 artist rendering and the single cooling tower for Fermi
5 3 are to the southwest of operating plant Fermi 2.

6 So, the site has lots of advantages for us.
7 One I had mentioned, that it had already been evaluated
8 for a new nuclear unit in the '70s. We have really good
9 transportation access to major roads. We're in the
10 proximity of Interstate 75. We have railroad access to
11 the site, and we have barge access to the site, so we're
12 pretty unrestricted as far as our ability to transport
13 components to and from.

14 And much of the necessary infrastructure to
15 support a new unit is already in place. For example, we
16 have a transmission system that exists already, and the
17 corridor already exists for Fermi 3 as it was
18 anticipated in the '70s. We have connections with the
19 local sewer and water, you know, those kinds of services
20 that already exist. We have an established emergency
21 plan already for Fermi 2, so many of the attributes are
22 already there that support another unit.

23 One of the complications of the site is that
24 if you look at the site today without my artist
25 rendering, the footprint where Fermi 3 is, is actually
26 where a number of support structures for Fermi 2, like

1 warehouses and training buildings, and administrative
2 buildings, engineering buildings, which would all have
3 to be relocated to support that construction.

4 If we move on to Slide 7, so I'm going to
5 talk a little bit about the design center review
6 approach, Design Center Working Group approach. So, we
7 responded to Regulatory Issue Summary 2006-06, which
8 described the NRC's approach to review the really
9 expected large number of applicants for COLs that were
10 coming in the 2007-2008 time frame. And, of course, that
11 approach encourages standardization during --of COLA
12 content and in Request for Additional Information
13 responses with the Staff, and the Applicants
14 participate in the Design Center Working Group. So, as
15 I have mentioned previously, we selected the ESBWR, we
16 informed NRC of that selection, and subsequently joined
17 the ESBWR Design Center Working Group which consisted
18 of at that time in addition to ourselves, Dominion,
19 Exelon, and Entergy. So, we were in a pretty good group
20 of applicants with a considerable amount of resource to
21 apply to this project, and we started to participate.

22 And at that time, the reference COL
23 application for the ESBWR Design Center Working Group
24 was Dominion's North Anna Unit 3, and then the remainder
25 were S-COLA's River Bend and Power Cells, and Exelon's
26 Victoria County application.

1 In September of 2008, we submitted our
2 application, and as time went on the Design Center
3 Working Group diminished in members. None for technical
4 concerns over the ESBWR. They were all related to
5 economic factors. And the Fermi 3 application became a
6 little bit by default the reference COL in 2010. So,
7 actually the participation that we had within the Design
8 Center Working Group, we were well prepared to take on
9 that role. The Staff had already issued an SER with open
10 items that had been through ACRS and so we had a pretty
11 good defined scope of where that project was. And we
12 decided to continue forward, and we're looking forward
13 to being the first ESBWR license holder.

14 Moving on to Slide 8, kind of the result of
15 our governance and of participating in the Design Center
16 Review Approach, you know, we now reference the
17 certified design rule in our application. It's a very
18 complete design certification, and we'll talk a little
19 bit about that later in this panel. And we supplemented
20 the DCD information in our application and answered the
21 older items to support demonstrating that the ESBWR is
22 applicable to the Fermi site.

23 The net result of our governance is we have
24 one departure from the DCD, and we have one exemption
25 request associated with the application. The departure
26 relates to reconfiguring the rad waste building

1 internally to support additional storage of Class C
2 waste, and that was originally --it evolved out of the
3 reference COL, at the time, Dominion, as there was a
4 contention about access to low-level rad waste
5 facilities and limited storage capability within the
6 ESBWR, and the path forward that the article adopted was
7 reconfigure the rad waste building and take a departure.
8 And in our governance of not departing from the
9 reference COL, as part of our mantra we adopted that,
10 as well. And we also had a similar contention and
11 resolved it through the departure.

12 The one exemption relates to Part 74
13 requirements on special nuclear material
14 accountability control. And, basically, what the
15 exemption does is it applies the same rules to us as to
16 Part 50 licenses. There's a disconnect between the
17 regulations between Part 52 and Part 50, so it's a
18 relatively benign exemption that's really unrelated to
19 anything technical about the ESBWR and our site.

20 Moving on to Slide 9, I'm going to give a
21 really brief overview of the ESBWR. First of all, it's
22 a passive design which safety systems require no AC
23 power to operate for at least 72 hours. And the unique
24 feature of that is the use of natural circulation and
25 passive containment cooling and heat removal systems.
26 So, the biggest fundamental advantage is decay heat is

1 deposited by natural mechanisms outside of the
2 containment boundary, is the theory and, therefore, you
3 don't end up depositing energy and pressurizing the
4 containment without having active heat removal systems.

5 It has a robust seismic design envelope,
6 and so we --and we have a relatively benign seismic site,
7 so we have margin which we'll talk about later in another
8 panel. And another feature that I think simplified our
9 application is there's no site-specific safety-related
10 structures, so I had to do no conceptual designs of
11 anything safety-related on site because it's completely
12 addressed within the scope of the DCD, so my application
13 became demonstrating that my site was suitable and met
14 all the parameters associated with the ESBWR DCD in the
15 end versus having to do a conceptual design,
16 safety-related design of, for example, a safety-related
17 service water system as some of the active plants have
18 to do. And that, I think, complicates both the
19 application and the review of it.

20 And then the simplicity of the design, a
21 great amount of effort went into simplifying the design
22 and reducing the number of components in systems.
23 There's about 25 percent fewer components in the ESBWR
24 than in a comparable active BWR plant, and I feel really
25 confident that everything that's woken me up over the
26 last 30 years in the middle of the night to address some

1 problem with, our operating plan is it doesn't exist in
2 the ESBWR. So, it's a much simpler plant both in design
3 and operation.

4 It has a very low core damage frequency
5 associated with it, so again it's another safety aspect.
6 And I think a lot of that has to do with simplicity and
7 no reliance on active systems.

8 And then, you know, just from a security
9 standpoint, the design includes spent fuel pool is below
10 grade as well as the main control room, looking at it
11 from a 9/11 standpoint. So, we went down the path of
12 selecting the ESBWR. I think, as we'll talk later, as
13 well in the session about Fukushima, many of the
14 recommendations from the Near-Term Task Force were
15 already included within the design of the ESBWR, so
16 conformance with the recommendations was fairly
17 straightforward.

18 And that's all I had to present on this.
19 I've brought a whole room full of experts to go as deep
20 as we need to into any questions that you might have for
21 us. Thank you.

22 CHAIRMAN BURNS: Mr. May, do you have any --

23 MR. MAY: No, I'm not going to add anything
24 to his opening remarks.

25 CHAIRMAN BURNS: Thank you. Well, we'll
26 proceed with questioning for this overview panel from

1 DTE. I'll lead off the questioning.

2 You described the Design Center Approach,
3 and touch on the reference COL, and subsequent COLs. Can
4 you discuss the nature of any additional work, if any,
5 that you had to take on when you, in effect, became the
6 lead having originally thought you might be the
7 subsequent COL?

8 MR. SMITH: There wasn't a lot. Dominion and
9 the rest of the DCWG had left the application fairly well
10 advanced, and so, you know, I think if I were to put a
11 percentage on it, I think at the time I was socializing
12 everybody in my company to the concept of being the
13 reference COL. I would talk that it was about 75 percent
14 done, and I think that turned out to be very true.

15 One of the things that added to our work was
16 there was, what I would call a change in policy. There
17 used to be three COL items, action items that you had
18 to address, holder items, which had, you know, a forward
19 view that it was something you address post-license and
20 holder items disappeared. So, for example, one of the
21 holder items was related to the turbine missile
22 analysis, so when you do a turbine missile analysis, you
23 need to know the material properties of the turbine
24 holders in order to effectively do that analysis. And
25 that was a holder item because no one had ordered a
26 turbine, so no one had material specifications for the

1 material that would actually build a turbine. So, that
2 ended up being an action item for us to address within
3 the COL application, so we engaged with General Electric
4 to complete a bounding study of turbine missiles that
5 were --that was based on bounding generic material
6 properties would be used. So, that was kind of an added
7 piece of work, but there was not a lot of work that we
8 picked up in that regard. And I think that was part and
9 parcel of the fact that the design certification was
10 ongoing in parallel with licensing.

11 CHAIRMAN BURNS: All right, thank you. As
12 you may know, the NRC continues to review its --review
13 the Dominion COL. I was down at North Anna site several
14 weeks ago, and it's --what kind of communication does
15 DTE and Dominion continue to engage in to share
16 information on their respective COL activities?

17 MR. SMITH: So, we --us, GE, and Dominion
18 reinvigorated the Design Center Working Group. You
19 know, I think, you know, from my perspective, we were
20 pretty much done when that transition occurred as far
21 as remaining work for us. So --and I think as Dominion
22 became more engaged with us they recognized how much the
23 application had progressed since they had left. So, I
24 think to a large degree their policy has been to adopt
25 what we have done in the past, and I think the Staff has
26 encouraged that, as well, under the, you know, one

1 issue-one review approach. But we still have frequent
2 interactions with GE and Dominion in that fashion,
3 although we don't have a plethora of issues that are
4 generic to either the ESBWR design or any of the
5 applications because we've advanced it to that point.
6 So, many of the issues are truly site-specific issues
7 associated with Dominion's application. But we also
8 have plans going forward to become more involved in
9 advancing the design.

10 CHAIRMAN BURNS: Thank you. Commissioner
11 Svinicki.

12 COMMISSIONER SVINICKI: Thank you, Mr.
13 Chairman. Good morning, and thank you for that overview
14 presentation.

15 As the swearing in of the witnesses
16 demonstrated, we have a lot of presenters over the
17 course of today in the room right now, so I want to offer
18 this bit of operational experience that I have about the
19 microphones in use today. They work very well but they
20 have what I would call a very well defined and specific
21 sweet spot, so this is being remotely broadcast as well
22 as to public interest group and members of the public
23 over the internet, so to be sure that everyone can hear
24 you with clarity, once you find that sweet spot, if you
25 don't sit back in your chair, I think it's helpful.
26 People won't have to tune their volume up and down who

1 are tuning in remotely. And, of course, we have a very
2 content-rich agenda, so we want to be sure to capture
3 all of this for the record. So, I wanted to offer to
4 people, so you've got to find the spot and kind of stay
5 in the zone, and your voice will be picked up more than
6 adequately.

7 Let's see here. This is an overview
8 presentation. We will have more specific discussion on
9 a number of these topics, but let me pose a couple of
10 questions here.

11 On Slide 4, you talked about environmental
12 and seismic siting issues would be minimized based on
13 your technology selection. And on Slide 9 you went into
14 a much more detailed but generic discussion about the
15 attributes of the ESBWR technology.

16 My question asks what safety and
17 environmental attributes in terms of the site location
18 married with the technology made the greatest
19 contribution to your final selection of the ESBWR, and
20 what kind of contribution did those factors make?

21 MR. SMITH: I'm going to think about that a
22 little bit, because that was a long time ago that we made
23 the selection.

24 COMMISSIONER SVINICKI: And there may have
25 been operational and other business considerations. I'm
26 specifically asking about environmental attributes of

1 the site, safety considerations of the technology or
2 other BWR experience that you have as a company. And how
3 --which of those factors played a large contribution,
4 if any, and how?

5 MR. SMITH: So, I think to a large degree our
6 previous experience with BWR influenced what we were
7 looking at. And in our review of our --of the perspective
8 we perceived that the ESBWR would provide us the most
9 margin between our site characteristics and what the
10 design certification required at the time.

11 COMMISSIONER SVINICKI: So, you mean in
12 terms of the design certification, the envelope of
13 factors?

14 MR. SMITH: Yes, for example, the seismic
15 envelope, like I mentioned, was robust. But I think we
16 were influenced a lot by, you know, the site had already
17 been reviewed twice previously, and we were very
18 confident that we'd be successful in siting a unit at
19 the site. So, I'm not sure that --to measure how much
20 influence that had in the overall selection.

21 We had about 2,500 different parameters
22 that we had looked at during the review. And I was kind
23 of separated from it because I was running the site
24 investigation work, and had a team that was put to gather
25 that. And then I was involved in the final selection with
26 our now Chief Nuclear Officer, Paul Fessler.

1 COMMISSIONER SVINICKI: Okay, thank you.
2 And, Mr. Smith, in discussing some of the history of the
3 evolution of the Fermi site, I made a note here, you
4 discussed Fermi 2 and the time spanning 1968 to 1985.
5 You went on to say that for Fermi 3 the intention of your
6 company would be to have a "shorter, smarter, more
7 methodical approach." Could you elaborate on what you
8 mean by that?

9 MR. SMITH: Oh, so what we have laid out in
10 support of the application for many of the
11 milestone-related things is we developed a construction
12 schedule that originally was --you know, it was like
13 others thinking in the early time that it would be
14 something that we might look into early on in getting
15 the COL. So, having the COL out of the way eliminates
16 --you know, we have a very well defined compliance space
17 for us, so there's not a risk of new changes to evolve
18 during a review. So, we thought that was of great value.

19 The other thing in our schedule that we set
20 up is we have a 10-year schedule laid that basically is
21 pinned to a commercial operation date and goes
22 backwards. And I will admit that 10 years is probably
23 longer than it needs to be because it hasn't been
24 refined, but we wanted to make sure that we had the right
25 planning horizon if we were going to --you know, of what
26 it would take if we decided that we wanted to build this

1 unit, that we should make that decision 10 years in
2 advance. And the first four years of that is all about,
3 you know, going to the Public Service Commission and
4 gaining incentive and necessity, for example, and
5 negotiating an EPC contract, and doing --we have a lot
6 of site preparation work to do to reorganize the site
7 so we don't end up surrounding Fermi 2 with this huge
8 construction project and interfere with the operation
9 of that unit. So, we thought that out very well.

10 Another tenet for us is we've got to this
11 point, which has --you know, if you wanted to say how
12 complete is the design to get a design certification and
13 a COL, it's probably, I don't know, 25 or 30 percent I
14 think would be the indication that I think was in Reg
15 Guide 1.206. But I think from the standpoint of
16 understanding what it's really going to take to
17 construct, we want to see the detailed design advance,
18 so that's kind of one of the next steps that we're
19 considering right now of how we can make that happen,
20 or how we can influence that happening.

21 And then the third piece of it is really in
22 our project and construction management practices. We
23 were recently recognized as one of the finalists for
24 Project Management Organization of the Year by the
25 Project Management Institute, which was a pretty big
26 deal for us. But we have a very good track record of

1 delivering projects ahead of schedule, under budget,
2 and that would apply to this project, as well.

3 So, the detail of --the secret is planning
4 and executing the plan faithfully, and monitoring your
5 performance relative to the plan. And we have done a
6 considerable amount of looking at construction
7 experience of others, and we have a pretty good idea,
8 I think, of what we would be looking for.

9 COMMISSIONER SVINICKI: Thank you. And I
10 just note that should the Commission authorize granting
11 of the license, whatever that duration of time you would
12 have regulatory obligations and commitment during that
13 time. So, I'm over my time, Mr. Chairman. One of the
14 uniquenesses here is that Commissioners can reserve
15 their time, but they may not go into deficit, which I've
16 already done, and I apologize. Thank you.

17 MR. SMITH: I hope I didn't run you into
18 deficit.

19 CHAIRMAN BURNS: Commissioner Ostendorff.

20 COMMISSIONER OSTENDORFF: Thank you,
21 Chairman. Thank you for your presentations. It was very
22 helpful.

23 Mr. Smith, I want to just make sure I
24 understood a comment you made on the baseload capacity
25 on Slide 3. I understand that 3,800 megawatt projection
26 made almost 10 years ago was looking at your needing that

1 by 2020. Now it's maybe further out in the future, 2025,
2 2030, and that you wanted to continue with the option
3 for a new nuclear plant in order to achieve diversity
4 of power supply. Is that --

5 MR. SMITH: Correct.

6 COMMISSIONER OSTENDORFF: Is there a --I
7 don't know if you mentioned, do you have project
8 --retirements of coal plants that aggregate into how
9 many megawatts?

10 MR. SMITH: I don't know what the exact
11 megawatt number is, but we have projections of our
12 fossil retirements, yes. And a lot of it is driven for
13 compliance with carbon dioxide restrictions right now,
14 and satisfying other environmental regulations because
15 it just becomes economic to invest large amounts of
16 capital into 60-year old/150 megawatt units.

17 COMMISSIONER OSTENDORFF: Does the State of
18 Michigan have any specific air quality requirements
19 that affect your retirement decisions for your coal
20 plants?

21 MR. MAY: They do.

22 COMMISSIONER OSTENDORFF: This is a very
23 high level. I just --

24 MR. MAY: No, no, they do. As you look at
25 these smaller, older units they're inefficient, and
26 they tend to have air quality requirements, especially

1 in light of the most recent rules and regulations that
2 would force us to add precipitator equipment to
3 scrubbers, to other things. They're small, that puts
4 them into a non-economic situation so they'll be
5 retired. They're also 60-years old. They should be
6 nearing retirement anyway, so the composition of the
7 fleet isn't really being driven by regulation alone, but
8 by the idea that we would be retiring. And that was some
9 of the earlier requirement that you saw, and so it's kind
10 of playing out, but it's being escalated and moved
11 forward by the regulation.

12 COMMISSIONER OSTENDORFF: Okay. Thank you,
13 Mr. May.

14 Mr. Smith, on Slide 4, I appreciated your
15 discussion of the Project Management. I know that you
16 talked a little bit with Commissioner Svinicki. I wanted
17 to ask one question on your Project Management. If I
18 heard you correctly, I think I heard you say that you
19 did not hire from the existing Fermi 2 organization. Is
20 that --did I understand correctly?

21 MR. SMITH: That is correct.

22 COMMISSIONER OSTENDORFF: That was a
23 conscious decision?

24 MR. SMITH: That was a conscious decision.

25 COMMISSIONER OSTENDORFF: Can you talk
26 briefly about how you insured proper operating

1 experience, knowledge, management of operating a
2 boiling water reactor to this new project team?

3 MR. SMITH: So, one of the things I was able
4 to do is I was able to hire people with past Fermi
5 experience, or past nuclear experience that were within
6 organizations within DT Energy, so I wasn't completely
7 restricted. And then I had a free hand in being able to
8 hire consultants, so I brought in a number of
9 experienced consultants to --some of them were retirees
10 that I had worked with in the past to support my growing
11 organization.

12 COMMISSIONER OSTENDORFF: At the end of the
13 day you felt like you had properly captured the
14 experience and the operating maintenance features of a
15 boiling water reactor in order to --

16 MR. SMITH: Yes. Actually, the training
17 program that we put together for the people that worked
18 in my group consisted of doing the equivalent of the NRC
19 Operator Generic Fundamentals class. And then we
20 developed a ESBWR Systems class that was pretty much the
21 equivalent of what an operator in an SRO program would
22 get. And I hired, actually, a former training supervisor
23 to develop that program for us.

24 COMMISSIONER OSTENDORFF: Okay. I just will
25 comment, not a question. I appreciate Chairman Burns'
26 questions on the --shifting over to being the reference

1 plant. I thought that was some appropriate things, so
2 I thank the Chairman for asking that question. I had the
3 same question, as well.

4 I'm going to help my colleague,
5 Commissioner Svinicki, out, and I'll stop my questions
6 there.

7 CHAIRMAN BURNS: Commissioner Baran.

8 COMMISSIONER BARAN: That was almost
9 exactly the amount of her deficit, too, so we broke even.

10 Mr. Smith, you've said that DTE is fully
11 embracing standardization, and that's one of the
12 reasons that your application includes a limited number
13 of departures and exemptions from the certified design.
14 One reason for many of the departures from the AP1000
15 for Vogtle and Summer, though, has been the Lessons
16 Learned while building the AP1000 in China.

17 This may be a difficult question to answer
18 at this stage, but how confident are you that you would
19 be able to build the ESBWR as designed at the Fermi 3
20 site?

21 MR. SMITH: From my perspective, I'm
22 confident until shown otherwise, and I have a high
23 threshold for change. And I think my friends at General
24 Electric know how I feel about the subject. But in
25 reviewing the ESBWR, a lot of operating experience went
26 into that design. Many things that had been issues for

1 operating BWRs are eliminated or corrected, or
2 addressed appropriately.

3 The other thing I note is it's also
4 difficult to be doing a design certification in parallel
5 with detailed design and then ultimately construction.
6 And in the case of the ESBWR, GE-Hitachi went on to the
7 focus of doing what was necessary from an engineering
8 standpoint to support the design certification, so the
9 completeness of the detailed design is the next big
10 step. But when you have a certificate already in place,
11 so you know what compliance is, and you have a clean
12 sheet of paper pretty much in design space. And given
13 the experience of others, one would be looking forward
14 to being able to design it in a fashion that it can be
15 implemented in the field.

16 COMMISSIONER BARAN: What parts of
17 construction from your point of view carry the most
18 uncertainty? Are there any systems or parts of the plant
19 that you expect to be particularly difficult to
20 construct?

21 MR. SMITH: I don't think I'm in a position
22 to really answer that because, you know, the experience
23 we've looked at is ABWR construction, and there's a lot
24 of similarities. But I don't think we've got to the point
25 of having the detail to be able to answer that I think
26 in a definitive fashion.

1 MR. MAY: Let me interject, though.

2 COMMISSIONER BARAN: Okay.

3 MR. MAY: From a broad perspective, the site
4 will take some energy to vacate so we can build this
5 unit. And we're right next to an operating unit, of
6 course. We'll be resetting a number of the buildings,
7 the switch yard which is obviously needed for the new
8 plant. I think all of those things early on we know are
9 complicated, and they'll be activity that we would want
10 to do in the period of time between the license, the
11 design completion, and site readiness. So, that's
12 probably where we focused more.

13 We think that we've done a pretty good job
14 of mitigation on the site so that we don't overreach into
15 the wetlands and other areas. We're talking to ourselves
16 about the fact that we should do that mitigation in that
17 same time frame so that it's all done. But the biggest
18 thing that I worry about as we're looking forward beyond
19 that is just making sure the design is really mature,
20 and that the supply chain and the quality of that supply
21 chain is really understood so that when we get to
22 construction, which we want to be quick, precise, puts
23 less risk at the operating site to be as fast and as
24 efficient as we can. So, I think this next period is
25 really a period of strong planning, strong engineering,
26 exercise supply chain, watching the industry, and

1 MR. TRACY: Thank you. Good morning, Mr.
2 Chairman and Commissioners.

3 I'll provide brief introductory remarks to
4 preface the Staff's Overview that follows. As you know,
5 Frank and Mark will provide presentations after my
6 overview. Next slide.

7 The proposed unit referred to as Fermi 3 is
8 located at the Enrico Fermi Atomic Power Plant in Monroe
9 County, Michigan. Mr. Akstulewicz and Mr. Delligatti
10 will briefly describe the Staff evaluation for the Fermi
11 3 Combined License Application. This will consist of an
12 overview of the safety review, including the use of the
13 Design Center Review Approach, the Staff's
14 environmental review, and a summary of the Staff's
15 Regulatory findings based on the reviews.

16 The Staff completed its review of the Fermi
17 3 Combined License Application in November 2014. The
18 review began in the second half of 2008 when the
19 Applicant submitted its initial version of the
20 application. Since then, the Staff has expended
21 approximately 52,000 hours on the safety review, and
22 another 17,000 hours on the environmental review, which
23 has involved well over 100 engineers, scientists, and
24 technical specialists, many of them here today.

25 During this time, the Staff conducted over
26 80 public meetings and conference calls in support of

1 the Fermi 3 Combined License Review. The Applicant
2 responded to approximately 800 Staff questions, of
3 which approximately 200 were associated with the
4 environmental review, and about 600 with the safety
5 review.

6 In addition, the Staff considered more than
7 830 comments on the Draft Environmental Impact
8 Statement. Additional efforts were provided by
9 technical support contractors under NRC monitoring.
10 Contractors provided approximately 28,000 hours to
11 support the environmental and the safety reviews.

12 While completing its review of the Fermi 3
13 application, the Staff performed in parallel a review
14 of the Economic Simplified Boiling Water Reactor, or
15 ESBWR design certification. The ESBWR design
16 certification was also a major project for the New
17 Reactor Program as the Staff expended approximately
18 237,000 hours in completing the ESBWR design
19 certification review. In addition, contractors
20 provided approximately 33,000 hours in support of the
21 Staff's safety review efforts in that project.

22 The Final Safety Evaluation Report for the
23 ESBWR design certification was issued in March 2011, and
24 a supplement of it was issued in September 2014. The
25 Final Rule for the ESBWR design certification was
26 published on October 15th, 2014, and became effective

1 on November 14th, 2014. However, it is not the number
2 of hours, but rather the content and the quality of the
3 Staff's work and our engagement with our stakeholders
4 and the Applicant in keeping with the Agency's values
5 and the principles of good regulation that are most
6 important. We hope to display those aspects of our
7 review to you today.

8 Within the NRC, the Office of New Reactors
9 led the Fermi 3 Combined License Application review
10 effort and provided most of the Staff's technical
11 expertise. However, other offices made significant
12 contributions to the review, the Office of Nuclear
13 Security and Incident Response conducted evaluations in
14 the areas of security and emergency preparedness. The
15 Office of Nuclear Reactor Regulation evaluated the
16 financial information and assisted in the resolution of
17 some safety issues. And the Office of Nuclear Material,
18 Safety, and Safeguards and Region I provided support in
19 Parts 30, 40, and 70 license reviews.

20 In addition, the NRC Region III office
21 supported our many environmental meetings in the
22 community near the Fermi site. The U.S. Army Corps of
23 Engineers, Detroit District, and the Department of
24 Homeland Security also contributed to our review.

25 The Staff has found that the Final Safety
26 Evaluation Report, the Final Environmental Impact

1 Statement, and our statement in support of this hearing
2 provide an adequate basis for meeting the necessary
3 regulatory findings.

4 We look forward to participating in this
5 mandatory hearing, and the successful completion of the
6 hearing phase of the Fermi 3 Combined Licensing process.

7 I'll now turn the presentation over to
8 Frank Akstulewicz, followed by Mark Delligatti for the
9 balance of the Staff's Overview. Thank you.

10 MR. AKSTULEWICZ: Thank you, Glenn. Good
11 morning, Mr. Chairman and Commissioners.

12 On September 18th, 2008, the Detroit Edison
13 Company submitted its application to the NRC for a
14 Combined License to construct and operate Fermi 3, an
15 ESBWR to be located at the existing site of Fermi 1 and
16 2 in Monroe County, Michigan.

17 When the Detroit Edison Company changed its
18 name on January 1st, 2013 to DTE Electric Company, the
19 legal entity remained the same. The Fermi 3 COL
20 application incorporates by reference the ESBWR design
21 certification document, Revision 10, and 10 CFR 52,
22 Appendix E, which is the ESBWR design certification
23 rule. Slide 4, please.

24 The Fermi 3 COL application contains
25 material incorporated by reference from the ESBWR.
26 Based on the finality that the NRC regulations afford

1 to a certified design, the scope of the Staff's COL
2 technical review did not include items that were
3 resolved within the scope of the certified design.
4 Instead, the COL review focused on plant-specific
5 aspects of the application that are the responsibility
6 of the COL applicant, such as COL information items and
7 operational programs.

8 In addition, the Fermi 3 COL application
9 includes sections that are standard for COL applicants
10 in the ESBWR Design Center in accordance with the Design
11 Center Review Approach. Slide 5.

12 The Design Center Review Approach is
13 outlined in Regulatory Issue Summary 2006-06. That was
14 endorsed by the Commission's Staff Requirements
15 Memorandum associated with SECY-06-0187 dated November
16 16, 2006.

17 It directs the Staff to perform a single
18 technical review for each standard or generic issue
19 outside the scope of the design certification, and to
20 utilize that review to support decisions on multiple COL
21 applications referencing the same design. Slide 6,
22 please.

23 The single review is performed for the
24 reference COL and is applied to each and every
25 subsequent COL referencing the design. Slide 7, please.

26 The Fermi 3 COL application is the

1 reference COL application for the ESBWR Design Center.
2 In November 2007, the North Anna Unit 3 COL was
3 originally designated as the reference COL, and the
4 Fermi 3 application was designated as a subsequent COL.

5 The Staff issued a Safety Evaluation Report
6 with open items in August of 2009 that documented the
7 review of both the standard and site-specific content.
8 In May 2010, Dominion Energy informed NRC that it was
9 changing its choice of reactor technology for the North
10 Anna Unit 3 COL application to the US APWR. Subsequent
11 to the Dominion Energy decision, Fermi 3 assumed the
12 role of the reference COL for the ESBWR Design Center.
13 Slide 8, please.

14 As part of the subsequent COL to reference
15 COL transition, the Staff verified that the standard
16 content that had been evaluated for the North Anna Unit
17 3 application was directly applicable to the Fermi 3
18 application. DTE Electric Company resolved the
19 remaining open items related to standard content that
20 were identified in the Staff's North Anna Unit 3 Safety
21 Evaluation Report. Therefore, a portion of the review
22 of standard content for this Design Center was performed
23 while North Anna Unit 3 was the reference, and then the
24 remainder while Fermi 3 was the reference COL. Slide 9.

25 In accordance with 10 CFR 52.87, the
26 Advisory Committee on Reactor Safeguards examined the

1 Staff's Safety Review of the Fermi 3 COL application.
2 The Applicant and the Staff supported six ESBWR
3 Subcommittee meetings specifically related to the Fermi
4 3 COL application and its advanced final safety
5 evaluation.

6 The Staff presented the results of this
7 review of the Fermi 3 COL application to the ACRS Full
8 Committee on September 4, 2014. In response, the ACRS
9 provided a letter on September 22, 2014 that concluded
10 that there is reasonable assurance that the Fermi 3 can
11 be built and operated without undue risk to public
12 health and safety.

13 The ACRS letter also identified three
14 generic issues related to seismic reevaluations,
15 mitigating strategies, and spent fuel pool
16 instrumentation. In addition, the ACRS letter discussed
17 an issue related to the protection of equipment from
18 tornado-generated missiles. Slide 10, please.

19 The Staff's response to the ACRS' September
20 2014 letter report can be found in a letter dated
21 November 14, 2014. After completing its response to the
22 ACRS, the Staff issued the Fermi 3 Final Safety
23 Evaluation on November 18th, 2014. Slide 11, please.

24 SECY-14-0132 dated November 20, 2014 was
25 prepared to support this mandatory hearing. In this
26 paper, the Staff summarized the basis that would support

1 the Commission's determination that the Staff's review
2 is adequate to support the findings set forth in 10 CFR
3 52.97, and 10 CFR 51.107. This SECY paper provided an
4 overview of the findings that support the issuance of
5 the Fermi 3 COL.

6 In order to issue a COL, the Commission must
7 be able to conclude that each of the following findings
8 in 10 CFR 52.97 is met. I will summarize the Staff's
9 basis supporting each of the findings.

10 First, the applicable standards and
11 requirements of the Act and the Commission's
12 regulations have been met. The Staff reviewed the
13 application and evaluated against the specific
14 requirements located in 10 CFR. Based on the Staff's
15 review documented in the Final Safety Evaluation Report
16 and the Final Environmental Impact Statement, the Staff
17 concludes that for the purposes of issuing a COL for
18 Fermi 3, the applicable standards and requirements of
19 the Atomic Energy Act of 1954, as amended, and the
20 Commission's regulations have been met.

21 Second, any required modifications, or
22 notifications, I'm sorry, to other agencies or bodies
23 have been duly made. As documented in the SECY paper,
24 all required notifications, including those to the
25 Michigan Public Service Commission, and the Federal
26 Energy Regulatory Commission, as well as the required

1 Federal Register notices have been made. Slide 12,
2 please.

3 Third, there is reasonable assurance that
4 the facility will be constructed and will operate in
5 conformity with the license, the provisions of the Act,
6 and the Commission's regulations. As the SECY paper
7 states, the Staff believes that the Staff's review as
8 documented in its FSER, its FEIS, and the ITAAC and
9 license conditions contained in the COL provide the
10 necessary assurance that the unit will be constructed
11 and operated as required. Slide 13.

12 Fourth, the Applicant is technically and
13 financially qualified to engage in the activities
14 authorized. The technical and financial qualifications
15 of the Applicant are summarized in the SECY paper, and
16 documented in detail in Chapter 1 of the Staff's Final
17 Safety Evaluation.

18 Fifth, the issuance of the license will not
19 be inimical to the common defense and security, or to
20 the health and safety of the public. Based on the Staff's
21 review of the application as documented in its Final
22 Safety Evaluation, the Staff concludes that the
23 issuance of the COL will not be inimical to common
24 defense and security, or the public health and safety.

25 Sixth, the findings required by Subpart A
26 of 10 CFR Part 51 have been made. The Staff's conclusions

1 related to the findings required by Subpart A will be
2 presented by Mark Delligatti, who will now provide an
3 overview of the Staff's Environmental Review.

4 MR. DELLIGATTI: Thank you, and good
5 morning. Could I have Slide 14, please?

6 As Glenn indicated earlier, I'm the Deputy
7 Director of the Division of New Reactor Licensing in the
8 Office of New Reactors. I will be discussing the
9 Environmental Review and will provide an overview of the
10 process we used in conducting the review, the draft
11 record of decision, and the staff's recommendation as
12 a result of the review. I will also discuss the
13 regulatory findings that need to be made before a
14 license can be granted.

15 Subsequent to the SECY paper which
16 described the Staff's findings that 10 CFR Part 51,
17 Subpart A is met, the Staff learned that a new species,
18 the rufa red knot bird, was listed as threatened under
19 the Endangered Specie Act. Because of this listing, the
20 NRC Staff has initiated consultation with the U.S. Fish
21 and Wildlife Service. Our efforts on this matter will
22 be discussed later in Environmental Panel 1.

23 The Staff prepared an Environmental Impact
24 Statement, or EIS, for the Fermi 3 Combined License
25 Application in accordance with the National
26 Environmental Policy Act of 1969, and the requirements

1 of 10 CFR Part 51. The Staff prepared the EIS based on
2 its independent assessment of the information provided
3 by the Applicant, and information developed
4 independently by the Staff, including information
5 gathered through consultations with other agencies. The
6 U.S. Army Corps of Engineers, Detroit District fully
7 participated with the Staff as a cooperating agency in
8 preparing the Fermi 3 EIS under the terms of an updated
9 Memorandum of Understanding between NRC and the Corps
10 for the review of nuclear power plant applications.

11 As a member of the Environmental Review
12 Team, the Corps Staff participated in site visits,
13 consultations with other agencies, and development of
14 the Draft EIS, and Final EIS. I would like to note that
15 Ms. Colette Luff from the Corps' Detroit District is
16 with us today, and we thank her for her assistance
17 throughout this process. Slide 15, please.

18 The NRC began the Environmental Review
19 process for the Fermi 3 Combined License Application by
20 publishing a Notice of Intent to Prepare an EIS and
21 conduct scoping in the Federal Register on December 8th,
22 2008. Two scoping meetings were held to obtain public
23 input on the scope of the Environmental Review in
24 Monroe, Michigan on January 14th, 2009.

25 The Staff reviewed the comments received
26 during the scoping process, and responses were

1 developed during --for each substantive comment. These
2 responses were documented in a Scoping Summary Report
3 and they're also provided in Appendix D of the Final EIS.

4 The Staff contacted federal, state,
5 regional, and local agencies, and federally recognized
6 Indian tribes during the scoping period to solicit
7 comments, and considered these comments in the
8 preparation of the Draft EIS. Slide 16, please.

9 The Staff consulted with the U.S. Fish and
10 Wildlife Service, National Marine Fishery Service,
11 federally recognized Indian tribes, the Michigan State
12 Historic Preservation office, and other agencies, as
13 required by the Endangered Specie Act, the National
14 Historic Preservation Act, and other statutes. The
15 Draft EIS was issued in October 2011. A 75-day period
16 for Draft EIS comments began on October 28th, 2011, the
17 date of publication of the U.S. Environmental
18 Protection Agency Notice of Availability.

19 The Staff held two public meetings on
20 December 15th, 2011 in Monroe, Michigan to describe the
21 results of the Staff's Environmental Review, to provide
22 members of the public with information to assist them
23 in formulating comments on the Draft EIS, and to respond
24 to questions, and accept comments. The Staff developed
25 responses to comments received on the Draft EIS, and
26 provided those comments in --provided those responses

1 in Appendix E to the Final EIS.

2 On January 18th, 2013, the Staff published
3 the Final EIS as NUREG-2105 entitled, "Final
4 Environmental Impact Statement for the Combined License
5 for Enrico Fermi Unit 3 Final Report." As stated in the
6 Final EIS, the Staff's recommendation related to
7 environmental aspects of the proposed action is that the
8 COL should be issued. The Staff based its recommendation
9 on the Fermi 3 COL Application Environmental Report,
10 consultation with federal, state, tribal, and local
11 agencies, and the Staff's own independent review, the
12 Staff's consideration of comments related to the
13 Environmental Review that were received during the
14 public scoping process, the Staff's consideration of
15 comments on the Draft EIS, and the assessment summarized
16 in the EIS, including the potential mitigation measures
17 identified in the Environmental Report and in the EIS.
18 Slide 17, please.

19 10 CFR 51.102 requires that a concise
20 public record of decision be prepared for any Commission
21 decision on any action for which a Final EIS was
22 prepared. The Staff included a draft record of decision
23 that more fully meets this requirement as a reference
24 in the SECY. This document states, "The decision being
25 made identifies all alternatives considered in reaching
26 the decision, and discusses preferences among the

1 alternatives." Slide 18, please.

2 "And," it states, "whether the Commission
3 has taken all practicable measures within its
4 jurisdiction to avoid or minimize environmental harm
5 from the alternative selected." Slide 19.

6 This slide lists the environmental
7 findings pursuant to 10 CFR 51.107(a) that the
8 Commission must make to support the issuance of the
9 Fermi Unit 3 COL. The Staff believes that the scope of
10 the environmental review, the methods used to conduct
11 the review, and the conclusion reached in the EIS are
12 sufficient to support a positive determination
13 regarding these findings.

14 For the first finding, in accordance with
15 NEPA Section 102(2)(a), the Staff's Environmental
16 Review used a systematic, interdisciplinary approach to
17 integrate information from many fields, including the
18 Natural and Social Sciences, as well as the
19 Environmental Sciences. The Staff's review comports
20 with NRC's requirements in Appendix A to 10 CFR Part 51,
21 "Format for Presentation of Material in Environmental
22 Impact Statements." The Staff concludes that the
23 environmental findings in the EIS constitute the hard
24 look required by NEPA and have reasonable support in
25 logic and fact.

26 The Staff's process for developing the EIS

1 will be discussed further in a separate panel as a part
2 of this mandatory hearing. In accordance with NEPA
3 Section 102(c), the EIS for Fermi COL addresses the
4 Environmental Impact of the proposed action, any
5 unavoidable adverse environmental effects,
6 alternatives to the proposed action, the relationship
7 between local short-term uses of the environment and the
8 maintenance and enhancement of long-term productivity,
9 and any irreversible and irretrievable commitments of
10 resources that would be involved in the proposed action
11 should it be implemented.

12 As supported by correspondence presented
13 in Appendix F to the EIS, the Staff concludes that the
14 requirement of NEPA Section 102(c) was fulfilled by
15 consulting with and obtaining comments from other
16 federal agencies with jurisdiction by law or special
17 expertise. As noted earlier, the U.S. Army Corps of
18 Engineers fully participated with the NRC as a
19 cooperating agency in preparing the EIS. The Staff did
20 not identify any other federal agencies as cooperating
21 agencies in preparing this EIS.

22 In accordance with NEPA Section 102(2)(e),
23 the Staff concludes that the EIS demonstrates that the
24 Staff adequately considered alternatives to the
25 proposed action. The alternatives considered in the EIS
26 include the no-action alternative, site alternatives,

1 energy alternatives, system design alternatives, and
2 mitigation alternatives for severe accidents.

3 For the second and third findings, Chapter
4 10 of the EIS provides the Staff's cost-benefit
5 assessment which considered among other things the need
6 for power, as well as reasonable alternatives to the
7 proposed action. Slide 20, please.

8 Based on that analysis, the Staff concluded
9 that the building and operation of proposed Fermi 3
10 would have accrued benefits that would be expected to
11 outweigh the economic, environmental, and social costs.
12 As a result, the Staff recommends that the COL be issued.

13 For the fourth finding, the Staff believes
14 that the Commission will be able to find after this
15 hearing and completion of consultation on the rufa red
16 knot bird that the NEPA review performed by the Staff
17 has been adequate. As will be discussed in more detail
18 in later presentations, the Staff performed a thorough
19 and complete Environmental Review sufficient to meet
20 the requirements of NEPA, and adequate to inform the
21 Commission's action on the COL request. Slide 21,
22 please.

23 During this hearing, the Staff will be
24 presenting information on the issues listed on this
25 table. SER-Panel 1 will discuss its seismic and soil
26 structure interaction reviews. SER-Panel 2 will discuss

1 highlights of the Staff's evaluation of Fermi's
2 response to the Fukushima Near-Term Task Force
3 recommendations. EIS-Panel 1 will provide a summary of
4 the process for developing the EIS, the assessment of
5 Environmental Impacts Analysis of Alternatives
6 included as recommendations in the FEIS.

7 In the second EIS Panel, the Staff will
8 describe its review of the historic preservation
9 related to Fermi 1, and international interactions.
10 However, in accordance with the Commission's final
11 scheduling note, the Staff will not specifically
12 address the Continued Storage Rule during today's
13 hearing presentations.

14 This concludes the Staff's remarks. We are
15 prepared to respond to any questions you may have.

16 CHAIRMAN BURNS: Thank you, and for this
17 panel, too, I'll proceed, and we'll continue the order
18 we used for the DTE panel.

19 A couple of questions I had. I recall being
20 here during the AP1000 and Vogtle --AP1000 design
21 certification and Vogtle COL proceedings, and one
22 question I have of the Staff, there were some challenges
23 during that period in terms of the parallel, going the
24 parallel paths, which ultimately need to come together
25 when a design is referenced in the COL.

26 Were there particular challenges you had

1 with the ESBWR and this application for DTE's COL, or
2 were there some things maybe made a little smoother
3 because we've at least gone down the path at least once
4 before?

5 MR. AKSTULEWICZ: Let me try to answer that.
6 I think my more immediate answer is no, there were no
7 challenges of the kind that we experienced on the
8 AP1000, as trying to do the certification in parallel
9 with the two COLs. I will note that part of that is
10 because when the certification was near its final
11 stages, much of the issues had been resolved, and there
12 was a singular issue that was the schedule driver, if
13 you will. So, the Applicant, the COL Applicant had the
14 opportunity as part of its normal updating processes to
15 capture the material that had been, you know, evolving,
16 if you will in time for that to be reviewed by the Staff
17 in an orderly fashion. So, we did not have the crisis
18 reviews that we were having trying to get the two COL
19 reviews at the same time.

20 CHAIRMAN BURNS: Okay, thank you.

21 We've talked a bit about this changing
22 between the reference COL and the subsequent COL. Of
23 course, now we have a Fermi Unit 3 COL as the reference
24 COL application. Although, as DTE says, it doesn't have
25 a current commitment to construct the unit, it wants to
26 put it on the shelf when, you know, the business case

1 and other circumstances would make from its standpoint
2 more logical to go forward. So, now we have Dominion
3 North Anna as the subsequent COL.

4 What are the implications, if any, perhaps
5 there are none, if, in effect, the situation reverses
6 again, if Dominion goes forward, DTE decides the time
7 is not right for them if they receive the COL. Are there
8 any particular challenges for us if, in effect, North
9 Anna 3 becoming the de facto reference COL again?

10 MR. AKSTULEWICZ: The object of the
11 question I think is, what would happen if Dominion were
12 to start construction before DTE? I think once --the
13 challenge issues with respect to reference COLs and
14 subsequent COLs resolves when the licenses are issued.
15 At that particular point in time, the requirements are
16 well established for the specific licensee, the
17 obligation to construct to those requirements have been
18 established, and it really doesn't matter in the form
19 in which those requirements were established, whether
20 they were the R Col or the S COL. They are the
21 requirements, and they are obligated to construct to
22 them.

23 I think as suggested by Pete Smith, or Ron
24 May, I forget who made this remark, but the devil is in
25 the detail design. And once that detail design is
26 established as part of the final closeout of, you know,

1 preparation for construction, it doesn't matter whether
2 the two COLs would be in construction simultaneously,
3 or whether they would be in advance order flipped in that
4 particular fashion.

5 MR. TRACY: I agree with Frank's response.
6 And there are lessons, Chairman, you could learn from
7 observing the ongoing activities between Vogtle and
8 Summer.

9 CHAIRMAN BURNS: One of the things that --in
10 regard to this, and I'd like your reflections on it, as
11 well, is that in response to one of the pre-hearing
12 questions the Commission received on Design Acceptance
13 Criteria, so called DAC, Applicant noting that a piping
14 design completed for the first ESBWR would be available
15 to the subsequent ESBWR plants under the Design Control,
16 or Designed Center approached. So, again, if they
17 weren't, in effect, first, that would just go --North
18 Anna might be first, but again that --I think what you're
19 saying, as long as we've made the conclusions that DAC
20 is acceptable, it just, in effect, if you will the
21 branding or whatever would flip on it.

22 MR. TRACY: That is correct.

23 CHAIRMAN BURNS: Okay. Are there any first
24 plant, or first of a kind ITAAC for the ESBWR like there
25 were for the AP1000?

26 MR. AKSTULEWICZ: I do not know the answer

1 to that. I don't believe so, but I'll ask Ronaldo Jenkins
2 to come up and see if he can provide some insight.

3 CHAIRMAN BURNS: And when you come up,
4 please identify yourself for the record.

5 MR. JENKINS: My name is Ronaldo Jenkins.
6 I'm Licensing Branch Chief for this project.

7 I will have to call upon someone in the
8 --Tom Scarborough.

9 MR. AKSTULEWICZ: I think in the interest of
10 time I think we'll take this and try to provide an answer
11 later in the day, if we can, or for the record.

12 CHAIRMAN BURNS: Okay. We'll make a note of
13 that. Commissioner Svinicki.

14 COMMISSIONER SVINICKI: I want to thank the
15 NRC Staff for the presentation. In particular, I will
16 note that you offered testimony regarding the number of
17 total hours of safety and environmental review. The
18 Staff also provided similar testimony in the Vogtle and
19 Summer proceedings. And although it --I think for me
20 it's important for a couple of reasons. First of all,
21 as the Chairman and other Commission colleagues noted
22 in opening today's mandatory hearing, this is not a de
23 novo review. It is undertaken --the mandatory hearing
24 is undertaken for the purpose of the Commission
25 establishing a position on the sufficiency and
26 completeness of the Staff's review activities. So, I

1 think as Mr. Tracy noted, it's not necessarily just the
2 number of hours, it is also the quality and completeness
3 of the Staff's activities. But I do think that these
4 statistics illuminate the sense of how much of the
5 Staff's effort went into this. And although not a
6 subject matter of the mandatory hearing, Mr. Tracy also
7 noted that the design certification of the ESBWR
8 entailed, I think you said over 237,000 hours. And I
9 would note having had the privilege of being in the room
10 when Mr. Tracy signed at least ceremonially the
11 paperwork documenting the Staff's completeness of that
12 review, it was a Staff Recognition Event, and I felt that
13 the energy in the room was kind of low, but now hearing
14 this number I'm aware that perhaps people were just flat
15 out exhausted, and that was why. So, again, I appreciate
16 you adding those statistics to the record which I don't
17 think exist anywhere else in the record. And I think
18 that's an important part of communicating the
19 thoroughness of the review.

20 In terms of the presentation that you gave,
21 I would note that I have been serving on this Commission
22 for the entire pendency of this application and review,
23 so as a practical matter it is a bit difficult at the
24 overview level to formulate questions for something
25 that I've been engaging with some of you basically
26 monthly during the entire pendency of the review through

1 your routine reporting and other one-on-one engagements
2 that I've had with you.

3 I did note, again, just to provide further
4 elaboration, Mr. Tracy, you noted that both the Army
5 Corps of Engineers and the Department of Homeland
6 Security contributed to the NRC Staff's review. Mr.
7 Delligatti has already talked about the Corps of
8 Engineers. Could you please elaborate at a high level
9 on the DHS scope of the consultation or contribution
10 they made to the review?

11 MR. AKSTULEWICZ: I'll take that.
12 Department of Homeland Security provides a resource to
13 us that involves our Emergency Preparedness function,
14 so they worked with us and with FEMA to assess the
15 capability of emergency preparedness in the area of the
16 site that we have in front of us. That's the scope.

17 COMMISSIONER SVINICKI: What form does
18 their input take?

19 MR. AKSTULEWICZ: We actually engage with
20 them. They provide us a report that documents their
21 assessment of capabilities in the area, and then we use
22 that report as part of our input into our safety
23 evaluation, which I believe is in Chapter 14, or Chapter
24 13, one of those two chapters.

25 COMMISSIONER SVINICKI: Thank you. Mr.
26 Delligatti, you talked a bit about the Draft Record of

1 Decision that has been provided and laid before the
2 Commission, and would be issued in that form if the
3 Commission authorizes issuance of the license. In
4 looking at the Vogtle and Summer process it's hard not
5 to be struck by a difference. And I would ask you to
6 discuss, is the difference here more in terms of the
7 format that this Draft Record of Decision takes? And if
8 there are any substantive differences in the underlying
9 evaluation and findings, I'm not aware of them, but
10 would you let me know if there are any? Thank you.

11 MR. DELLIGATTI: No. It is basically a
12 question of the format. As you recall, we were audited
13 and it was determined that while we considered the
14 documentation that we had traditionally used as the
15 Record of Decision for the Environmental Review, it was
16 determined this was not sufficient, and we needed to
17 call it out as a separate document. However, the
18 information level is basically the same.

19 COMMISSIONER SVINICKI: Thank you.
20 Chairman Burns asked about the potential timelines for
21 construction that might alter who's going first and who
22 is a follow-on or subsequent constructor if licenses are
23 granted. My question is a little bit different. I
24 engaged with the Applicant in their overview
25 presentation about the potential for a span of time
26 between license issuance and beginning significant site

1 activities. Could you address at a high level the
2 commitments and obligations that a license holder would
3 have during that period of time? Just, again, I know it's
4 a complex topic, but just at a high level, could someone
5 summarize that?

6 MR. AKSTULEWICZ: Sure. We --this was one of
7 the topics also for the pre-hearing questions, but let
8 me elaborate. There are three specific regulations that
9 govern the requirements for the license holder at that
10 particular point in time, or an Applicant while they're
11 in the review process to keep the documentation current.
12 And during the review, there are obligations to --I'm
13 sorry, during --if there are departures that occur once
14 they're licensed and before they begin construction,
15 there's a six-month report that is required to update
16 the Staff on the departures that are occurring with
17 respect to the licensing basis. Then there are the
18 traditional reports that are the FSAR updates that are
19 captured either as part of the review process while the
20 COL is ongoing, or post-licensing. They operate just as
21 if they were a Part 50 plant where they have an
22 obligation to report, you know, no greater than two
23 years FSAR updates that occur. So, there is that
24 continuing obligation with respect to the record.

25 COMMISSIONER SVINICKI: Okay, thank you.
26 Thank you, Mr. Chairman.

1 CHAIRMAN BURNS: Thank you. Commissioner
2 Ostendorff.

3 COMMISSIONER OSTENDORFF: Thank you,
4 Chairman Burns. Thank you for your presentations this
5 morning.

6 I appreciate your kind of providing a broad
7 brush view of the scope of the effort, not only in the
8 Office of New Reactors, but also in Nuclear Security and
9 Incident Response, the Regions, and other supporting
10 activities. I thought that was very helpful.
11 Commissioner Svinicki has commented on the hours. I
12 second her comments on your noting the importance of the
13 quality of the Staff working on that, and I think we're
14 all very proud of our Staff's efforts in this area. So,
15 I thank everyone here and those that are not here for
16 their work.

17 I also think it's significant, highlight
18 the 80 public meetings you've had. Again, having served
19 in the Department of Defense, and Department of Energy,
20 the public outreach that you have conducted here on
21 behalf of the Nuclear Regulatory Commission is
22 impressive, important, and greatly appreciated.

23 I'm going to shift to Mr. Delligatti here
24 for a question. I appreciate your highlighting the
25 cooperating agency role of the Corps of Engineers, and
26 highlighting I think --I didn't see the lady you talked

1 about, but I guess she's out here someplace.

2 MR. DELLIGATTI: Sitting behind the pole,
3 maybe.

4 UNIDENTIFIED: She just stepped out. She'll
5 be back.

6 COMMISSIONER OSTENDORFF: Okay. Well, in
7 her absence and in her presence we'll thank her for her
8 role from the Detroit Office of the Army Corps of
9 Engineers and that relationship.

10 I just want --at a high level is there any
11 --I know that we have a mission, the Army Corps of
12 Engineers has a mission. At a high level, any
13 philosophical differences as to how to approach this
14 task working with the NRC?

15 MR. DELLIGATTI: We have found, because we
16 work with the Corps on most of these documents, that
17 their --our jobs are cooperative. What we do assists
18 them, and what they do, they're particularly concerned,
19 of course, with the waterways. They're particularly
20 concerned with making their determination of the least
21 environmentally damaging alternative. But we have found
22 that we basically work very well together, and that we
23 don't often have problems. And in the case of this
24 particular plant, I don't think there were any problems
25 at all.

26 COMMISSIONER OSTENDORFF: Okay, thank you.

1 I guess I'm going to ask Frank this question, but others
2 may want to chime in here. Big picture, you know, it's
3 been noted that this review has been going on for some
4 time with the design certification for the ESBWR and
5 Detroit Edison's submission. Was there anything about
6 the Vogtle and Summer COL reviews by the Staff that
7 perhaps informed a different approach in any aspects of
8 this particular COL review for Fermi 3?

9 MR. AKSTULEWICZ: That's an interesting
10 question. They're --the Lessons Learned that we did
11 post-issuance of the Vogtle-Summer COLs identified a
12 number of things that we could have done differently,
13 but for the impact on the Fermi review, it has progressed
14 so far along that it was really no way to really recover
15 or try to implement some of the design, or process
16 changes that we identified as part of that Lessons
17 Learned effort. So, I guess the answer is there wasn't
18 anything that we could apply from the Vogtle-Summer
19 experience to this particular effort.

20 COMMISSIONER OSTENDORFF: Okay. Glenn, do
21 you want to add anything to that?

22 MR. TRACY: Just from the ITAAC side of
23 things, I think DTE was obviously carefully observing
24 what was going on. We had issued a RIS 2008-05 regarding
25 ITAAC and ITAAC improvement activities, and they could
26 be very aware and engaged in those, and they could cull

1 out their opinions in terms of the complexity, or shall
2 I say how detailed the ITAAC are or not. And I think they
3 could apply those insights.

4 COMMISSIONER OSTENDORFF: Okay. Frank, I'm
5 going to go back to you. On Slide 13 there's discussion
6 about the safety review findings and there's one about
7 the Applicant being technically and financially
8 qualified. And I know that the SECY paper has a couple
9 of pages that talks about the technical qualification
10 piece. Recognizing this is a public meeting, I think it
11 might be helpful just to hear very briefly a high level
12 summary of how our Staff goes about assessing the
13 technical qualifications of the Applicant. Can you
14 please do that?

15 MR. AKSTULEWICZ: Okay, I'll try. The first
16 and foremost way to look at it is we assess the technical
17 capability as part of our review process. There are --
18 clearly, the requirements that they are required to meet
19 are laid out in our regulations. Being a former or a
20 current license holder, they understand those
21 obligations, and the communication that happens between
22 the NRC and the Applicant and those particular aspects
23 plays in that particular form, so we can assess their
24 understanding of the requirements going forward.

25 The second thing is we look at their QA in
26 detail. Their --that QA function is probably one of the

1 most important features of our determination of their
2 ability to move forward. And I know we've got several
3 pre-hearing questions about, you know, EPC contractors
4 and contractors in general. The essence of the QA
5 Program is so central to them making sure that they bring
6 in competent support as they initiate the construction,
7 or as you've heard the Applicants talk about, the
8 contractors that they brought in to support the actual
9 application themselves are governed by these very
10 programs, and so the quality of that effort is evaluated
11 not only just as a one-time review process, but as part
12 of our inspection and oversight of the activities, as
13 well.

14 And I think the other thing that they
15 mentioned, which we didn't necessarily factor in, was
16 the fact that they had served as a architect/engineer
17 in Unit 2. That provides a large learning experience
18 going forward for any future construction or
19 application of that particular design.

20 COMMISSIONER OSTENDORFF: Thank you. Thank
21 you, Chairman.

22 CHAIRMAN BURNS: Commissioner Baran.

23 COMMISSIONER BARAN: One finding that we
24 have to make in deciding whether to issue a COL is that
25 issuance of the license will not be inimical to the
26 common defense and security. Can you discuss briefly how

1 the Staff made this proposed inimicality finding for
2 Fermi 3?

3 MR. AKSTULEWICZ: Okay. We don't do a
4 specific inimicality review, per se. The determination
5 of inimicality is based on the full body of the review
6 record where we look at the impacts both from the safety
7 and position, or the potential for risk from the design
8 as well as the environmental impacts. So, it's a
9 consolidated effort that forms our general finding.

10 COMMISSIONER BARAN: The Staff recently
11 noted in a SECY paper, and you just referred to this now,
12 that there's no standard review plan or other formalized
13 guidance specifically related to the inimicality
14 finding. Given the lack of guidance, are you comfortable
15 with your current practice in making this finding for
16 Fermi 3?

17 MR. AKSTULEWICZ: I personally am, yes.

18 MR. TRACY: I am as well, Commissioner.

19 COMMISSIONER BARAN: As has been noted, if
20 we issue a COL for Fermi 3, DTE could hold the COL for
21 some time before beginning construction. I want to
22 understand if the COL is issued whether the NRC will have
23 sufficient time to select and place construction
24 resident inspectors and to train or prepare other
25 construction inspectors prior to the commencement of
26 construction? Should DTE make a decision to build Fermi

1 3, what sort of lead time will NRC need from them in terms
2 of notification to make sure that we're ready to oversee
3 construction?

4 MR. TRACY: All applicants and ultimate
5 licensees are extremely aware of our needs through
6 multiple discussions we've had in the public regarding
7 the interactions in order to be ready for our Staff's
8 resources. That's just not for any applications, but
9 it's ultimately in every aspect of what we do. So, I am
10 confident DTE realizes that the notification to
11 ourselves in terms of our ability to insure TTC and the
12 simulator for the ESBWR design, and what year that
13 absolutely needs to be in place in order to effect our
14 examiners. The typical long pole in the tent is operator
15 licensing, so I know DTE, and they can speak for
16 themselves, is aware of giving the NRC the number of
17 years that are required for us to place it in the budget,
18 insure that we have our simulators and our examiners
19 readied, and insure that Vic McCree and our program,
20 which is now getting quite mature and cognizant of what
21 its needs are as a result of the AP1000 experience, that
22 that could be well coordinated. We are talking a number
23 of years, and I would be indicating, anyone can correct
24 me for the record or otherwise, but a minimum of five-six
25 years is what I would like to have in order to be able
26 to effect such a cognizance. However, we could, in fact,

1 move quickly in light --in my view of our maturity we've
2 gained as a result of the AP1000.

3 COMMISSIONER BARAN: Thank you. Thank you,
4 Mr. Chairman.

5 CHAIRMAN BURNS: All right, thank you,
6 again, the witnesses for both panels for this overview
7 of the application, and we'll start to delve more deeply
8 into both the safety and environmental aspects as we
9 proceed.

10 There is one thing the Staff has to confer
11 or to consult among themselves with respect to a
12 question I had raised. What I would ask you to do is
13 inform the Secretary by say early --by the beginning of
14 the afternoon proceedings whether you prefer to provide
15 an oral answer or submit something for the record. Just
16 inform the Secretary, and then depending on --I don't
17 have any particular preference, but if you inform the
18 Secretary, then we can arrange whether to get that
19 answer before the beginning of the afternoon session,
20 or at the very end. So, that would be helpful.

21 We're scheduled to take a brief break. What
22 I would --I think scheduled for five minutes. I will be
23 generous and you can have eight, which really means, as
24 I've learned over the years, it really means we'll be
25 back here, and please be in your seats, particularly the
26 participants and the witnesses by no later than 10:35.

1 Thank you.

2 (Whereupon, the above-entitled matter went
3 off the record at 10:23 a.m., and resumed at 10:34 a.m.)

4 CHAIRMAN BURNS: Thank you, and we will
5 proceed now with the Safety Panel 1. Again, we'll
6 remind the witnesses for each panel that they remain
7 under oath, and we'll also remind them that they should
8 assume that the Commission is familiar with the
9 pre-hearing filings on their behalf, or the behalf of
10 the applicant and behalf of the staff.

11 We will, in this round, hear first from the
12 applicant, DTE Electric, followed by the Staff Panel for
13 Safety Panel 1, and after both panels have testified,
14 we will proceed with Commission questions.

15 So as we did before, I would ask each of the
16 panelists to introduce themselves, starting with the
17 applicant.

18 MR. PETER SMITH: Yes, I am Peter Smith,
19 Director of Nuclear Development.

20 MR. MOSLEMIAN: I am Javad Moslemian from
21 Sargent & Lundy.

22 MR. THOMAS: Steve Thomas, Engineering
23 Manager from Black & Veatch, and I've been involved in
24 the COLA since we started the site investigation.

25 CHAIRMAN BURNS: Okay, and you may
26 proceed. And as Commissioner Svinicki I think well

1 said, look for the sweet spot in your mics.

2 MR. PETER SMITH: Will do. Let's turn to
3 page 2 of my slides.

4 So this is kind of -- we were in the midst
5 in 2012, in the midst of SSI work to address two
6 questions that we had. One was related to meeting the
7 backfill requirements specified in the DCD for backfill
8 on the sides of structures, and the other was related
9 to the characteristic of how the structures are
10 partially embedded in bedrock at our site because the
11 bedrock is fairly close to the surface, and that's not
12 a configuration that was specifically analyzed in the
13 DCD.

14 And so we were performing SSI analysis.
15 Then, post-Fukushima, the recommendation came out to
16 look at the impacts of the Central and Eastern United
17 States Seismic Source Characterization, and we made a
18 decision that we should just redo all of our SSI analysis
19 using the CEUS inputs rather than trying to rationalize
20 why the changes resulting from CEUS were already
21 accommodated by margin in the previous analysis,
22 because at the end of this licensing effort, we wanted
23 to leave a very clean set of analyses going forward.

24 And so we conducted all of that work in
25 2013, submitted our final submittals late in 2013, and
26 then proceeded to answer questions going forward and

1 from that point.

2 So if you turn to page 3, I just included
3 an illustration just to kind of show the cross-section
4 of the site. So the dark purple in the center is
5 bedrock, essentially, and the two structures that are
6 founded in bedrock are the reactor building and the
7 control building, and I just wanted to kind of
8 illustrate the profile of the site.

9 So, and then the last thing I want to say
10 is look at what the results of our SSI analysis -- so
11 we upgraded our inputs to reflect CEUS, we added margin
12 to the inputs, and then we conducted the SSI analysis.

13 So the first figure on -- or the first page
14 of figures, one is horizontal and one is vertical, but
15 what they illustrate is the red line represents the DCD
16 certified seismic design response spectra envelope, the
17 black line, or the bottom line, that's the blue line,
18 is the resulting foundation input response spectra from
19 using the Central and Eastern U.S. Seismic Hazard, and
20 then we had the black line as an enhanced version of that
21 that we had enhanced that we used for the inputs to the
22 SSI analysis to buy more margin on the input end.

23 And as you can see, there's considerable
24 margin between our foundation input response spectra
25 and the certified seismic design response spectra for
26 the ESBWR.

1 So then the next part of this thing is we
2 propagated through the analysis the results of those
3 inputs into the in-structure responses, and so
4 from -- on slide 5, these are the response spectra for
5 the top level of the reactor building, and that happens
6 to be one of the more limiting locations in our analysis,
7 and as you can see, the red line represents our
8 in-structure responses from our set of inputs that we
9 used based on CEUS and the corresponding DCD in
10 structure responses to the DCD evaluation. And so,
11 again, we have considerable margin in the results
12 between us and the DCD.

13 And from that point, I'd be pleased to
14 entertain questions.

15 CHAIRMAN BURNS: Thank you. The Staff
16 Panel? Come forward.

17 And again, I would ask you to state your
18 name for the record, and then you proceed with the staff
19 testimony.

20 MR. MUNIZ: My name is Adrian Muniz.

21 MS. TABATABAI: Sarah Tabatabai.

22 MR. CHAKRAVORTY: Manas -- Manas
23 Chakravorty.

24 CHAIRMAN BURNS: Thank you.

25 MR. MUNIZ: All right, so good morning.

26 As I said before, my name is Adrian Muniz, and I am the

1 Lead Project Manager for the Fermi 3 Combined License
2 Application Review. Next slide, please.

3 The NRC staff's presentation for this panel
4 will discuss two key site-specific aspects of the
5 review. The first is the review of the seismic hazard,
6 and the second is the soil-structure interactions
7 analysis.

8 In light of the staff's Near-Term Task
9 Force Recommendations, Lessons Learned Associated With
10 the Accident at the Fukushima Daiichi Facility, seismic
11 and flooding hazards have been of high interest.

12 Like all COL reviews, Fermi 3 flooding and
13 hazards were evaluated using present-day guidance and
14 methods. The results of the staff's seismic review
15 will be discussed in a moment. As for flooding, the
16 staff evaluation concluded that the design-basis
17 flooding event for Fermi 3 will result in a maximum water
18 level that is below plant grade. Therefore, the event
19 will not flood the site.

20 Given the complexity of the information
21 that will be discussed, we have experts in the audience
22 to assist in answering questions.

23 Now, I'll turn it over to Sarah to discuss
24 the seismic evaluation.

25 MS. TABATABAI: My name is Sarah
26 Tabatabai. I am a seismologist in the Office of

1 Research. I was the lead technical reviewer of Section
2 2.5.2 of the Fermi Final Safety Analysis Report when I
3 was previously in the Office of New Reactors.

4 My review was to ensure that the seismic
5 hazard of the site was adequately characterized in
6 accordance with the applicable NRC guidance and
7 regulations. As part of that review, I focused on the
8 applicant's response to a request for additional
9 information issued by the NRC.

10 This request addressed the seismic hazard
11 reevaluation considering the new Central and Eastern
12 United States Seismic Source Characterization model.
13 This model is also referred to as the CEUS SSC model.

14 DTE Electric Company and other new reactor
15 applicants were requested to consider this new model
16 consistent with existing guidance. At the same time,
17 operating plant licensees were requested to reevaluate
18 their seismic hazard against current reactor
19 requirements and guidance also including the CEUS SSC
20 model. Next slide, please.

21 The Fermi ground motion response spectrum,
22 or GMRS, was originally based on the Electric Power
23 Research Institute models endorsed by NRC guidance at
24 the time of the COL application.

25 In response to the request for additional
26 information regarding the CEUS SSC model, the applicant

1 made major revisions to Section 2.5.2 of the Final
2 Safety Analysis Report. These revisions include an
3 updated earthquake catalogue; probabilistic seismic
4 hazard analysis, or PSHA; site response analysis; and
5 GMRS. Next slide, please.

6 Our review included confirmatory PSHA and
7 site response calculations using the CEUS SSC model.
8 We concluded that the results of these calculations are
9 in good agreement with the applicant's.

10 The figure in the slide "plus" is a function
11 of frequency, the level of size amplification resulting
12 from the upper 397 feet of rock at the FERMI site.

13 The staff's confirmatory results are shown
14 by the green curves, and the applicant's results are
15 represented by the blue curves. This comparison shows
16 that both sets of results are very similar.

17 Based on the results of our confirmatory
18 analyses and our review of the Final Safety Analysis
19 Report, including the applicant's seismic hazard
20 reevaluation, we concluded that the applicant's GMRS
21 adequately characterizes the ground motion at the Fermi
22 site. Next slide, please.

23 We performed additional confirmatory
24 calculations after completion of our Final Safety
25 Evaluation Report. We repeated our PSHA calculation
26 using the CEUS SSC model along with the newly released

1 EPRI 2013 Ground-Motion Model and subsequently
2 developed a new confirmatory GMRS which is shown by the
3 green curve in this slide.

4 The applicant's GMRS, using the earlier
5 EPRI (2004, 2006) Ground-Motion Model is shown by the
6 blue curve, while the ESBWR certified seismic design
7 response spectrum, or CSDRS, is represented by the red
8 curve. The figure shows that the staff's confirmatory
9 GMRS is below the applicant's GMRS at frequencies below
10 approximately 60 hertz.

11 Both the applicant's GMRS and the staff's
12 GMRS fall well below the CSDRS. These results continue
13 to support the staff's conclusion in the Final Safety
14 Evaluation Report.

15 This slide ends my presentation, and Manas
16 will begin his discussion of Section 3.7 with the next
17 slide.

18 MR. CHAKRAVORTY: Thank you, and good
19 morning, Mr. Chairman and Commissioners. I am Manas
20 Chakravorty. I am a Senior Structural Engineer in the
21 Office of New Reactors.

22 I reviewed Fermi 3 Final Safety Analysis
23 Report, or FSAR, Sections 3.7 and 3.8, which provide
24 information on seismic design of Category 1 structures.
25 I will discuss some seismic issues that the applicant
26 addressed to demonstrate acceptability of the ESBWR

1 standard design at the Fermi 3 site.

2 Fermi 3 FSAR incorporates ESBWR Design
3 Control Document, or DCD, Sections 3.7 and 3.8 by
4 reference. 10 CFR Part 52 requires that combined
5 license applications or COLA, referencing DCD, provide
6 sufficient information to demonstrate that the
7 characteristics of the site fall within the site
8 parameter specified in the DCD.

9 According to ESBWR DCD, if the soil
10 characteristics of this site do not meet the conditions
11 defined by the DCD, a site-specific soil structure
12 interaction or SSI analysis may be performed to confirm
13 the seismic design adequacy of the certified design.

14 The applicant performed site-specific SSI
15 analysis to address partial rock embedment effect and
16 the ESBWR requirement of minimum shear wave velocity for
17 the site backfill. The applicant used the ESBWR
18 structural model coupled with the sub-surface model
19 incorporating the Fermi 3 site characteristics. The
20 model also reflected Fermi 3 partial rock embedment
21 configuration. Site-specific foundation input
22 response spectra, or FIRS, based on CEUS and SSC model
23 was used as the input for the soil-structure interaction
24 analysis. Next slide, please.

25 This slide shows the excavation
26 cross-section of the Fermi 3 site, showing the embedment

1 configuration of Category 1 structures. As shown on
2 this slide, reactor building and control building will
3 be partially embedded in the bedrock, set in magenta
4 color, with granular backfill surrounding the
5 structures from prop-up rock to the plant grid. Such
6 foundation configuration was not considered in the
7 ESBWR standard design. In addition, the ESBWR
8 requirement of the minimum shear wave velocity
9 parameter for the backfill was not met. As such, the
10 applicant performed the site-specific analysis as was
11 specified in the DCD. Next slide, please.

12 Although very similar to slide 6 that Sarah
13 presented, this slide shows the margin in the seismic
14 input for the reactor building. It shows a comparison
15 of the reactor building, enhanced first, shown in
16 purple, used by the applicant in SSI analysis, and the
17 ESBWR certified seismic design response spectra, or
18 CSDRS, shown in red.

19 Also shown there is the FIRS obtained from
20 staff's confirmatory analysis shown in green.
21 Site-specific FIRS are enveloped by the ESBWR CSDRS.

22 Also note that staff's analysis results are
23 similar to the applicant's results. In addition, staff
24 reviewed the information in the FSAR and responses to
25 the requests for additional information. The staff
26 also checked the referenced ESBWR DCD and conducted

1 additional audits of the site-specific seismic analysis
2 and calculations.

3 The staff confirmed that, at the Fermi 3
4 site, the resulting site-specific seismic demands are
5 bounded by the ESBWR standard design. Next slide,
6 please.

7 In conclusion, the applicant has provided
8 sufficient information to demonstrate that Fermi 3 COLA
9 meets the relevant ESBWR requirement and the applicable
10 NRC guidelines and regulations. The staff also
11 concludes that the ESBWR seismic design is adequate at
12 the Fermi 3 site.

13 This concludes our presentation on this
14 Safety Panel.

15 CHAIRMAN BURNS: Okay, thank you. We'll
16 proceed with Commission questions. Again, they may be
17 posed to either the panelists -- and for this panel,
18 we'll start with Commissioner Svinicki.

19 COMMISSIONER SVINICKI: Okay, thank you.
20 This is Safety Panel 1, so the topic orally presented
21 is the seismic -- I was mentioning that the Commission,
22 through the mandatory hearing, will establish a view on
23 the sufficiency of the staff's review.

24 So what is clear to non-seismologists is
25 that you did a lot of work. You looked at a lot of
26 things. You looked at sensitivity analysis,

1 confirmatory analyses that you undertook.

2 I appreciate the bottom-line conclusion,
3 which was on the staff's last slide, that it is the
4 staff's conclusion based on all of this extensive hard
5 look at this issue that the regulatory requirements are
6 met, and you've confirmed that.

7 There was a pre-hearing question posed to
8 the staff, though, regarding -- propounding the
9 question would take more than my six minutes, but at
10 bottom, you were asked how did the staff verify the
11 adequacy of the use of the (2004, 2006) EPRI Ground
12 Motion Model instead of the 2013 EPRI Ground Motion
13 Model in looking at post-Fukushima seismic risks?

14 And I am just going to step through, the
15 staff has a written response here, I want to be sure that
16 I understand it, so extracting from the staff's very
17 detailed response, what I'd note out of this is that the
18 NRC staff states that DTE had previously submitted
19 sensitivity analyses in response to a request for
20 additional information that compared the EPRI
21 (2004,2006) Ground Motion Model results to newer ground
22 motion models, and that DTE had concluded, and this says
23 the NRC staff agrees, that the median ground motions
24 obtained with the newer prediction equations produce
25 similar or lower ground motion amplitudes, and thus
26 produce lower hazard levels for the site.

1 And then the staff goes on to describe that
2 they did additional tests, looking at the Central
3 Illinois test site, looked at data there, and the bottom
4 line was that the staff concluded that the results
5 continue to indicate that DTE's use of the EPRI
6 (2004,2006) Ground Motion Model is conservative and
7 therefore acceptable.

8 Do I kind of, at a layperson's level,
9 extract that chronology adequately?

10 MS. TABATABAI: That's correct, yes.

11 COMMISSIONER SVINICKI: Okay, thank you.

12 So -- and this will seem a little confusing,
13 but this Safety Panel is also the appropriate time for
14 other chapters that relate to perhaps witnesses that are
15 not seated right now, so I wanted to address a
16 non-seismic topic, and this is where this gets fun, and
17 I have all these pages of information that I will try
18 to manhandle here.

19 But this has to do with the Commission's
20 policy on the regulatory treatment of non-safety
21 systems, and I am not certain what staff witness or
22 applicant witness would address this, but both the staff
23 and the applicant were asked pre-hearing questions.
24 For the applicant, their response is found basically in
25 the response to question 17, and for the staff, there's
26 a different number here -- no, it is 17 for them as well,

1 part (b).

2 So is there a staff and applicant witness
3 who could very generally take the response that is very
4 detailed in the record and again just articulate the
5 response to the question about the regulatory treatment
6 of non-safety systems? Both of you gave responses to
7 this. I would note that the applicant's, I think,
8 covered a bit more of the history of the regulatory
9 policy in this area, but Mr. Chairman, I would ask to
10 recognize witnesses coming to the microphone.

11 CHAIRMAN BURNS: Would you stand forward,
12 state your name, and confirm that you took the oath at
13 the beginning?

14 MR. NOLAN: Yes. My name is Ryan Nolan,
15 and I did take the oath. I am a Reviewer in the
16 Balance-of-Plant Branch.

17 CHAIRMAN BURNS: Okay, proceed.

18 COMMISSIONER SVINICKI: Could you again,
19 just to make the topic somewhat less arcane and a little
20 more understandable, talk about the standing policy and
21 the distinctions that are drawn for different systems?

22 Again, just, you know, kind of go into it
23 and I'll tell you if you're -- I am just looking to
24 illuminate it a little bit more at a conversational
25 level.

26 MR. NOLAN: Okay. So with respect to

1 external missiles, I think that's what the question was
2 asking --

3 COMMISSIONER SVINICKI: Yes, it was.

4 MR. NOLAN: -- was tornado missiles, and
5 what we focused on is -- RTNSS is B systems, and those
6 are systems --

7 COMMISSIONER SVINICKI: And again, RTNSS
8 is this fun new acronym that is regulatory treatment of
9 non-safety systems. You can use the acronym, I just
10 wanted to define it.

11 MR. NOLAN: That's correct. And those are
12 our non-safety related systems that are used for
13 long-term safety of the plant. And so these are systems
14 that are used --

15 COMMISSIONER SVINICKI: But they are not
16 relied upon in the first instance to provide the
17 responses, is that correct?

18 MR. NOLAN: That is correct. They are not
19 used until about 72 hours, and that's -- they are
20 primarily used 72 hours to seven days.

21 COMMISSIONER SVINICKI: Okay. So there
22 is a regulatory distinction in the treatment, and it has
23 to do kind of with when the reliance begins on these
24 particular systems or components or --

25 MR. NOLAN: That's correct.

26 COMMISSIONER SVINICKI: Okay, thank you.

1 Would the applicant like to just state,
2 again, at a high level, its understanding of this
3 distinction and how this was treated in your analyses?

4 MR. PETER SMITH: So I -- at the high level,
5 we're consistent with the staff's witness, and we also
6 note that the -- all of the RTNSS structures are within
7 the scope of the DCD, so the -- the DCD ends up setting
8 a set of parameters that we have to show that we meet,
9 that it's applicable. So --

10 COMMISSIONER SVINICKI: Was there any
11 divergence between the applicant and the staff in the
12 definition of any of these systems?

13 MR. PETER SMITH: I don't believe so.

14 COMMISSIONER SVINICKI: Okay. Would the
15 staff confirm that?

16 MR. NOLAN: That's correct.

17 COMMISSIONER SVINICKI: Okay, thank you.

18 Thank you, Mr. Chairman.

19 CHAIRMAN BURNS: Thank you. Commissioner
20 Ostendorff?

21 COMMISSIONER OSTENDORFF: Thank you,
22 Chairman. Thank you for your presentations today.

23 I am going to start out with questions that
24 are not represented, I think, by this group here,
25 no -- please take no offense at that, but Adrian, you'll
26 need to probably put on your project manager hat.

1 I want to ask a question about squib valves,
2 so is there a squib valve person here that can come up?

3 MR. MUNIZ: Yes, we do have a person here.
4 Tom Scarbrough is coming to the mic.

5 COMMISSIONER OSTENDORFF: I'm not sure why
6 people are chuckling over there.

7 So the question, while you come to the
8 podium --

9 CHAIRMAN BURNS: Again, state your name
10 and confirm that you are under oath.

11 MR. SCARBROUGH: My name is Thomas
12 Scarbrough, and I am under oath.

13 COMMISSIONER OSTENDORFF: Okay, thank
14 you. So in the context of the AP1000 design, squib
15 valves have been a challenge, going forward with the
16 Vogtle and Summer. I won't go into the details here.
17 You know those better than I do.

18 But I know that we have a license condition
19 dealing with squib valves for Fermi 3, and I'm curious
20 as to how the AP1000 experience to date might have
21 informed the construct of a license condition for ESBWR.

22 MR. SCARBROUGH: Yes sir. Vogtle and
23 Summer, we developed a license condition for their squib
24 valves there. With Fermi, we took the same logic of
25 that license condition and applied it to sort of two
26 critical systems. There's a more wide range of squib

1 valves and ESBWR, larger site, you know, different sizes
2 and such.

3 So we focused on the automatic
4 depressurization system, the ADS, and the
5 gravity-driven cooling system. And those are the two
6 that we applied the license condition to. But the
7 license --

8 COMMISSIONER OSTENDORFF: And just tell
9 me --

10 MR. SCARBROUGH: Yes.

11 COMMISSIONER OSTENDORFF: -- on these, I
12 have just a very simplified schematic, so I'll look at
13 the schematic of the passive safety systems for the
14 ESBWR and the explosive valves are the squib valves
15 here, correct?

16 MR. SCARBROUGH: Yes sir.

17 COMMISSIONER OSTENDORFF: Okay.

18 MR. SCARBROUGH: Yes sir.

19 COMMISSIONER OSTENDORFF: All right.

20 MR. SCARBROUGH: Yes sir. And so that's
21 what we applied to. There were some smaller ones there.
22 The current ASME Operation and Maintenance Code does
23 have a condition for intercessing of squib valves, but
24 we have more specific requirements in our license
25 condition.

26 And so for the smaller ones, which are very

1 similar to the standby liquid control system in
2 operating BWRs, we were going to let the OM Code deal
3 with those, but they still have to deal with that.

4 Now, in the future, since Vogtle and
5 Summer, the ASME OM Code has upgraded in the 2012 edition
6 of the Code to include conditions for new reactor squib
7 valves, all of them, not only the ones that we have
8 focused on in the licensing division, but all of them
9 have conditions that are very similar to this license
10 condition because I am on the ASME Code, and we made sure
11 that we were consistent when that was all developed.

12 So -- and we're currently in the process of
13 preparing a 55(a) rulemaking to incorporate by
14 reference that 2012 edition of the OM Code, so in the
15 future, Fermi or any other new plant would be required
16 by 50.55(a) to use the latest version of the Code. So
17 we're going to be capturing it in two ways -- when we
18 have a license condition, and also down the road, there
19 will be -- the OM Code actually will capture the same
20 requirement.

21 COMMISSIONER OSTENDORFF: Thank you very
22 much, that's very helpful. I appreciate that.

23 MR. SCARBROUGH: Okay, thank you.

24 COMMISSIONER OSTENDORFF: I want to ask
25 Adrian now a question on flooding, so I'll throw the
26 question out, you can figure out who the right person

1 is for this one. And maybe it's one of you all.

2 So certainly, during your -- the time of
3 your work, the Near-Term Task Force Recommendation 2.1
4 on flooding hazard reevaluations was carried out by
5 Fermi 2 and other plants, some process there.

6 I am curious as to how the post-Fukushima
7 flooding hazard reevaluations might have impacted the
8 flooding hazard review for Fermi 3.

9 MR. MUNIZ: So we have Dr. Jones, Henry
10 Jones, here in the audience to answer that question, but
11 I believe that they were consistent between Fermi 2 and
12 Fermi 3, and he will elaborate on that.

13 COMMISSIONER OSTENDORFF: Okay, thank
14 you.

15 CHAIRMAN BURNS: Dr. Jones, would you
16 identify yourself and your position and confirm that you
17 have been put under oath?

18 DR. JONES: Henry Jones, Oceanographer,
19 Hydrologist, and Meteorologist for the Office of New
20 Reactors, and I am under oath.

21 The conditions are the same. We used the
22 same modern methods, state-of-the-art practice, for
23 Fermi 3 as for the post-Fukushima reevaluation of Fermi
24 2. Actually, Fermi 2 actually used a lot of their
25 analysis from Fermi 3 for Fermi 2, so actually, a lot
26 of the water levels, the water levels for surge, are

1 exactly the same.

2 The only difference you have is when you
3 have real structures, as you know, for wave runup and
4 for precipitation, you have to look at actual design for
5 the operating plant, where you didn't have to do that
6 for Fermi 3.

7 COMMISSIONER OSTENDORFF: Okay. Thank
8 you, Dr. Jones, it's very helpful, I appreciate it.

9 I've got -- Manas, I think this might be
10 your question, but I want to ask a little bit
11 different -- I want to ask a seismic-related question
12 dealing with margin, but not the margin between the
13 enveloping, but more associated with the methodology
14 used for looking at the resilience of structures from
15 the civil engineering standpoint to withstand a seismic
16 event.

17 Is there -- can you talk at a, I liked
18 Commissioner Svinicki's term, conversational level
19 about what methodology was used to assess the inherent
20 margin in the civil engineering structures, let's say
21 containment, to withstand a seismic event?

22 MR. CHAKRAVORTY: These -- in this
23 situation, you know, it's the design basis. The design
24 basis was based on certified design response spectra,
25 which is peak ground acceleration is close to 0.5 g, for
26 the standard plant ESBWR.

1 For Fermi 3, that level of peak ground
2 acceleration is quite low, I mean lower than CSDRS.
3 Maybe it is approximately 0.2, 0.3g.

4 So right off the bat, we do have quite a bit
5 of margin. Okay. Then comes the design aspect of it.
6 The design aspect, first of all, we have margin in the
7 analysis, or in other words, we choose or select a
8 conservative approach when we reviewed the application.
9 Make sure that the analysis is predicting
10 conservatively the numbers based on the input.

11 So there lies some margin. And then the
12 design is done not taking the time history part of it,
13 okay, because when we have done the analysis, we have
14 the time history, but if we're going to go for a design,
15 we take the maximum number of that, okay, and apply that
16 to different floor levels, okay?

17 So -- and those maximums do not happen at
18 the same time, okay, so there lies another margin in the
19 design.

20 Then, on the code allowables, this margin
21 gives us the force, and then this force which acts into
22 the internal stresses in the member, okay, so these
23 internal, you know, stresses are compared to the code
24 allowables, okay, the code has some allowables. And
25 generally, code allowables are based on a lot of test
26 results, also some actual experience, and they normally

1 try to establish that at the lower level, at the lower
2 level possible that it will be reliable, okay?

3 And then, on the other hand, load is
4 predicted a little bit on the higher side, okay? So all
5 this coupling together, we get some additional margin.
6 On top of that, the CSDRS or the ESBWR CSDRS was 0.5 g,
7 right? Then for -- in our chapter 19, okay, the
8 applicant is required to assess, you know, how much more
9 we can go that the important systems would be still
10 functional, or will perform. And that number is almost
11 1.67 times the peak ground acceleration that has been
12 used, okay?

13 So if you add all this up, it's quite a bit
14 of margin, okay, and from my experience looking at this
15 earthquake, I looked at the Virginia earthquake, and
16 when they re-inspected the plant, nothing happened,
17 even --

18 COMMISSIONER OSTENDORFF: Talking about
19 the North Anna event.

20 MR. CHAKRAVORTY: North Anna, yeah.

21 COMMISSIONER OSTENDORFF: Yeah, okay.

22 MR. CHAKRAVORTY: And even though the
23 design basis was exceeded, but we didn't see any sign
24 or symptom of that. Same thing at Anegawa, okay, when
25 I was in Japan. It's the same earthquake, Fukushima,
26 it also hit Anegawa. But due to earthquake -- it did

1 function perfectly. There was not much of any damages
2 that you can really see. You can see damages in the
3 non-safety-related spots, okay, you can see that. They
4 settle -- and they are different. But on the Category
5 1 structures, we didn't see that, anything.

6 COMMISSIONER OSTENDORFF: Okay.

7 MR. CHAKRAVORTY: Okay, so I am not going
8 to quantify a number, but --

9 COMMISSIONER OSTENDORFF: Oh, oh no, yeah.

10 MR. CHAKRAVORTY: -- but these are the
11 areas that they look for, okay?

12 COMMISSIONER OSTENDORFF: That was very
13 helpful. Thank you.

14 MR. CHAKRAVORTY: Okay, thank you.

15 COMMISSIONER OSTENDORFF: Thank you,
16 Chairman.

17 CHAIRMAN BURNS: Commissioner Baran.

18 COMMISSIONER BARAN: Thanks. I have some
19 follow-up questions on RTNSS. Sorry to torture you by
20 getting you back up to the podium.

21 I appreciated the discussion that you had
22 with Commissioner Svinicki on this, so I just wanted to
23 ask a few basic questions on this to make sure I
24 understand it. So as I understand it, Fermi 3, for the
25 Fermi 3 COL, the RTNSS-B functions can be divided into
26 two major categories: long-term cooling functions for

1 the core and spent fuel pool, and post-accident
2 functions that maintained containment integrity,
3 control room habitability, and post-accident
4 monitoring after 72 hours. Is that right?

5 MR. NOLAN: That's correct.

6 CHAIRMAN BURNS: Could you just identify
7 yourself again so the recorder --

8 MR. NOLAN: Yes, this is Ryan Nolan.

9 COMMISSIONER BARAN: The RTNSS-B
10 long-term core cooling function equipment is housed in
11 Seismic Category 1 structures that are designed to
12 withstand tornado missiles, is that correct?

13 MR. NOLAN: That's correct.

14 COMMISSIONER BARAN: However, the RTNSS-B
15 equipment to maintain post-accident functions after 72
16 hours is contained in a Seismic Category 2 structure
17 designed to withstand tornado wind loads and missiles
18 generated by a Category 5 hurricane, but not tornado
19 missiles, is that correct?

20 MR. NOLAN: That's correct.

21 COMMISSIONER BARAN: The NRC staff's
22 response to the ACRS letter on Fermi 3 states that
23 there's been an update to the standard review plan and
24 that that update specified that all RTNSS equipment
25 should be analyzed and designed to withstand the effects
26 of tornado missiles.

1 I understand that this issue was addressed
2 in the ESBWR DCD, but I want to understand the staff
3 response to the ACRS. How would the Fermi 3 COL
4 treatment of RTNSS-B equipment for post-accident
5 functions be affected if the updated standard review
6 plan had been utilized in the review of the Fermi 3 COL?

7 MR. NOLAN: Can you repeat that again?

8 COMMISSIONER BARAN: Sure. So how would
9 the -- how would the Fermi 3 COL treatment of the RTNSS-B
10 equipment for post-accident functions, equipment
11 that's in a Seismic Category 2 structure, how would that
12 be affected if the updated SRP had been utilized in the
13 review of this COL?

14 MR. NOLAN: In that case, they would not be
15 subject to any hurricane missiles, using the latest Reg
16 Guide, for hurricane, it's Reg Guide 1.221. Since
17 Fermi is away from the coast, it would not have to be
18 designed to the hurricane missile, but beyond that, I
19 wouldn't want to have -- I wouldn't want to speculate
20 since it is -- it's staff guidance, it's not a
21 requirement, and so there is alternative approaches to
22 this.

23 COMMISSIONER BARAN: Does the staff
24 currently believe that all RTNSS-B equipment should be
25 designed to withstand the effects of tornado missiles
26 for all future passive advanced light-water reactors?

1 MR. NOLAN: That's the way the guidance is
2 currently drafted, or the SRP 19.3 is worded.

3 COMMISSIONER BARAN: And so why shouldn't
4 this standard be applied to Fermi 3?

5 MR. NOLAN: Well, the guidance that ESBWR
6 used at the time was different. They used an older
7 version of the tornado Reg Guide, Reg Guide 1.76. They
8 used Revision 2 of the SRP, and so the way we approached
9 it is we used the guidance that was available to the
10 staff at that time, and so the guidance at the time was
11 a little bit more conservative in some areas, and then
12 there was some general rules when it came to calculating
13 the missiles, and the way that the SRP was worded is well
14 you just -- you use this rule until there is better
15 guidance, and so Reg Guide 1.76 for tornadoes was very
16 conservative at the time, whereas now, if you were to
17 use the Reg Guide, the tornado wind speed is a lot lower
18 than it was then.

19 COMMISSIONER BARAN: So the updated
20 guidance with respect to tornado missiles is more or
21 less conservative?

22 MR. NOLAN: I think it would depend.

23 COMMISSIONER BARAN: Okay.

24 MR. NOLAN: On the -- it would depend on the
25 location of the site.

26 COMMISSIONER BARAN: And so I guess the

1 general question for staff is: is there any concern in
2 your mind about using the non-updated guidance with
3 respect to tornado missiles for Fermi 3?

4 MR. NOLAN: No. There is no concern.
5 Because these are non-safety-related systems, they do
6 not need to be held at the standard of safety-related,
7 and so as described in -- and I think the CAL memo we
8 referred to in the pre-hearing question is, that was the
9 guidance we used at the time, and the CAL memo was very
10 clear in that these are non-safety-related systems,
11 they do not need to be protected to the safety-related
12 level, but the staff believes some level of protection
13 would be good to have, and we focused the attention on
14 the external events that would broadly affect a
15 community, not local events.

16 COMMISSIONER BARAN: Okay. And from a
17 definitional point of view, when we say it's not
18 safety-related, it's not safety-related for that first
19 72 hours, but would perform a safety function
20 post-72-hours?

21 MR. NOLAN: Right. These would augment or
22 supplement the equipment used in the first 72 hours, and
23 this allows the site to cope out to seven days.

24 COMMISSIONER BARAN: Okay. Well, since
25 we took several minutes on that, let me just turn to DTE
26 and ask if you have anything you want to add on that

1 topic.

2 MR. PETER SMITH: No, we don't.

3 COMMISSIONER BARAN: Okay, thanks.
4 That's fair. Thank you.

5 Asking what I hope -- there is no quick
6 seismic question that can be answered in 30 seconds, so
7 I'll just stop there. Thank you.

8 CHAIRMAN BURNS: Okay, thank you. I have
9 a question for the DTE Electric Panel. You were
10 required to, by the provisions of the ESBWR DCD, to
11 perform a site-specific analysis of soil-structure
12 interaction relating to the evaluation of side backfill
13 for Seismic Category 1 structures, I believe.

14 Can you describe a little more in detail
15 what this site-specific analysis entailed?

16 MR. PETER SMITH: Yes. So if -- the
17 concept of the DCD would have been, if I could have
18 shown, like I had in the initial application, that my
19 certified seismic design response spectra was bounded,
20 bounded for the site, and that I met all of the other
21 soil parameters, then I was -- the DCD analysis was
22 applicable to me.

23 In the case of Fermi, what happened was in
24 Revision 6 of the DCD that was -- you know, the DCD was
25 ongoing under review at the time -- prior to Rev. 6,
26 there was no requirements placed in the DCD on the shear

1 wave velocity in side backfill, so we have this new
2 requirement that is linear, 1,000 feet per second, all
3 the way to the surface. And the problem with that in
4 backfill is that to maintain shear wave velocity, you
5 rely on the compressive forces of the soil above it, so
6 typically, what would happen is the shear wave velocity
7 would drop off as you got closer to the surface.

8 So we could not meet that, and so what we
9 did is we opted to do the site-specific analysis to
10 demonstrate that the plant -- the ESBWR design is not
11 compromised by either the presence of that backfill of
12 a lower shear wave velocity or the complete absence of
13 it. We did basically two bounding cases to show that
14 we were good in either direction.

15 And then, of course, the analysis itself is
16 a complex computer finite-element analysis model that
17 models the structure and the soil interaction, and then
18 you excite it with the complexities of seismic inputs,
19 and Javad, my professor here, is going to slap me if I
20 say something wrong.

21 CHAIRMAN BURNS: He can certainly speak up
22 if it will help.

23 MR. PETER SMITH: Well, he has educated me
24 well, so this is like a test for me.

25 (Laughter.)

26 MR. PETER SMITH: So, and then propagating

1 that analysis through shows the kinds of response
2 spectra and other in-structure parameters, so that was
3 basically the essence, and we did it for the two bounding
4 cases of with and without backfill.

5 CHAIRMAN BURNS: Okay, thank you.

6 One other question I have for the applicant
7 panel -- the review of the ESBWR design certification
8 was extended in part because of issues related to steam
9 dryers identified -- that was identified later in the
10 review of the ESBWR. Can you briefly describe
11 the -- what's involved in the steam dryer monitoring
12 plan that I understand you've committed as the applicant
13 to implement --

14 MR. PETER SMITH: Yeah, and it's
15 also -- would be required by license --

16 CHAIRMAN BURNS: Yes.

17 MR. PETER SMITH: -- license condition,
18 but it's essentially a monitoring plan, and with
19 reporting requirements at various power levels of that
20 escalation.

21 CHAIRMAN BURNS: Okay. Thank you.

22 For the staff, as we've discussed this
23 morning, the applicant was required to perform
24 site-specific analysis of the soil-structure
25 interactions, and Mr. Smith just answered a question
26 related to that. Are there any site-specific ITAAC

1 related to confirming the backfill properties during
2 construction, and what type of properties must be
3 confirmed under the ITAAC?

4 MR. CHAKRAVORTY: I think there are some
5 site-specific ITAACs for backfill. It's in Section
6 10 --

7 CHAIRMAN BURNS: Okay.

8 MR. CHAKRAVORTY: -- of the FSAR
9 application --

10 MS. TABATABAI: Zuhan -- I am sorry, Zuhan
11 Xi, the geotechnical engineer, might be able to
12 elaborate on that as well --

13 MR. CHAKRAVORTY: Yes, Zuhan can -- Zuhan?

14 CHAIRMAN BURNS: Again, identify yourself
15 for the record and confirm you've been sworn in.

16 MR. XI: My name is Zuhan Xi. I am a
17 geotechnical engineer in the New Reactor -- Office of
18 New Reactors. I am in that office.

19 CHAIRMAN BURNS: Okay.

20 MR. XI: Yeah, there is a site-specific
21 ITAAC for the backfill, yes. It's a required according
22 to the DCD requirement for that. But it's except the
23 requirement for the shear wave velocity because shear
24 wave velocity was released by the analysis of the SSI
25 analysis.

26 CHAIRMAN BURNS: Thank you. We may have

1 time for one more question, and actually, perhaps I may
2 save this for the -- I'll reserve the last 40 seconds
3 of my time.

4 Very good. Unless my fellow Commissioners
5 have anything more at this point on this panel, I will
6 thank the witnesses for their testimony, and we will
7 proceed, I believe, to Safety Panel 2.

8 So some of you may be still in place for this
9 second panel, and others will take this couple minutes
10 or so to just do our transition.

11 Okay, perhaps if the staff witnesses can
12 maybe move a little bit aside, that way we have a good
13 viewing -- are able to view the applicant's witnesses.
14 Yeah.

15 Okay. We'll proceed, again, with Safety
16 Panel 2. I remind the witnesses that they are under
17 oath and that they should assume the Commission is
18 familiar with the pre-hearing filings.

19 Again, I'll ask the panel -- we, again, have
20 some commonality -- to introduce yourselves, again, for
21 DTE Electric.

22 MR. PETER SMITH: Yes. I am Peter Smith,
23 Director of Nuclear Development.

24 MR. HINDS: David Hinds, GE-H.

25 MR. THOMAS: Steve Thomas with Black &
26 Veatch.

1 CHAIRMAN BURNS: Okay, proceed.

2 MR. PETER SMITH: So we'll go directly to
3 my slide 2.

4 So, you know, what was identified in the
5 Near-Term Task Force Report was that the passive designs
6 substantially address the recommendations in the ESBWR
7 particularly in a good manner, and so there were four
8 areas that we received direct questions on that we
9 needed to amplify. None of them related to things that
10 had to be implemented in the design itself. The design
11 encompassed everything that was necessary to satisfy
12 the Near-Term Task Force results.

13 So the responses are primarily
14 administrative. We've already talked about the
15 flooding and seismic hazard in the last panel and the
16 seismic reevaluation. And mitigating strategies for
17 beyond design-basis events, the ESBWR already included
18 within RTNSS systems a make-up capability, and also it
19 included connections for an external source to be
20 supplied. So it became -- what we had to address,
21 basically, was the implementation of the NEI, the
22 NRC-endorsed flex strategy that all of the operating
23 plants are going through right now. So it's fairly
24 straightforward for us, and in the ESBWR's space.

25 For spent fuel pool instrumentation, the
26 design already incorporated spent fuel pool

1 instrumentation that essentially satisfied the
2 requirements of the Near-Term Task Force
3 Recommendation, and the -- we have a license condition
4 that really deals with operator training on being able
5 to connect an external power source to re-power the
6 instruments, but it already included instrumentation
7 that met the requirements.

8 And then, finally, on the emergency
9 preparedness staffing and communication, we have a
10 license condition that will require us to reevaluate the
11 adequacy of our staffing and communications at some
12 point, I believe it's 18 months prior to fuel load, and
13 make any corrections that are necessary using the
14 NRC-endorsed guidance for performing the staffing
15 assessment.

16 And again, we have the same thing going on
17 in Fermi -- Fermi 2 space, in parallel.

18 CHAIRMAN BURNS: That's the testimony for
19 this panel.

20 MR. PETER SMITH: Yes.

21 CHAIRMAN BURNS: Thank you. And I'll
22 ask -- the staff can slide back into position, and invite
23 you to provide your testimony. Good morning.

24 MR. MUNIZ: Do you want us to introduce
25 ourselves before we proceed?

26 CHAIRMAN BURNS: Yes, you should -- yes,

1 you should identify yourselves.

2 MR. MUNIZ: So again, this is Adrian Muniz.
3 I am the Lead Project Manager for the Fermi COL
4 application review.

5 MR. STUBBS: Angelo Stubbs, Division of
6 Safety Systems and Risk Assessment.

7 MR. HERNANDEZ: Raul Hernandez, Reviewer
8 for Balance-of-Plant.

9 MR. BARSS: Dan Barss, team leader
10 responsible for emergency preparedness reviews.

11 MR. MUNIZ: The NRC staff's presentation
12 for this panel will discuss the review of the Near-Term
13 Task Force Recommendations, lessons learned,
14 activities associated with the accident at the
15 Fukushima Daiichi facility. Next slide?

16 This -- we are going to have Angelo Stubbs
17 now begin our presentation.

18 MR. STUBBS: Good morning. My name is
19 Angelo Stubbs. I was the lead engineer responsible for
20 reviewing how Fermi 3 addressed Fukushima Near-Term
21 Task Force Recommendation 4.2, on mitigating strategies
22 for beyond-design-basis external events.

23 On February 17, 2012, in SECY paper
24 12-0025, the staff provided the Commission with
25 proposed Orders regarding requirements for mitigating
26 strategies for beyond-design-basis external events to

1 be issued to all power reactors, licensees, and holders
2 of construction permits.

3 In the paper, the staff indicated that for
4 new reactors that are currently under active staff
5 review, the staff plans to ensure that the conditionally
6 approved Fukushima recommendation actions are
7 addressed prior to licensing.

8 On March 12, 2012, the NRC issued Orders
9 requiring operating plants to develop and implement
10 strategies that will allow them to cope without AC power
11 for an indefinite amount of time. Strategies must
12 ensure that reactor core and spent fuel pools are
13 adequately cooled and continuing the function is
14 maintained.

15 The strategies are to be developed using a
16 three phase approach: an initial phase using installed
17 equipment, a transition phase using onsite portable
18 equipment and consumables to sustain coping until
19 resources can be brought in from offsite, and a final
20 phase of indefinite sustainment using offsite
21 resources.

22 In August of 2012, the NRC issued an
23 internal staff guidance to assist nuclear power reactor
24 applicants and licensees with the identification of
25 measures needed to comply with requirements to mitigate
26 challenges to key safety functions. The guidance

1 addressed the development of strategies for maintaining
2 or restoring core cooling, spent fuel pool cooling, and
3 containment function. Next slide, please.

4 The applicant described in FSAR Section
5 1.5.1.1 how Fermi 3, by use of these passive design
6 features, complies with the requirements described in
7 SECY-12-0025. The applicant states that the initial
8 phase mitigation is accomplished using the plant's
9 passive safety systems which provide 72 hour coping
10 capabilities without the use of AC power or water
11 sources external to the systems.

12 The final phase mitigation will use offsite
13 resources to support a continued use of the passive
14 safety systems by providing the required
15 post-72-hour-makeup of the passive cooling systems.
16 Next slide, please.

17 The staff reviewed the Fermi 3 mitigating
18 strategies for responding to an extended loss of all AC
19 power and determined the following: core cooling is
20 accomplished by using the safety-related isolation
21 condenser; heat removal in the core is transferred to
22 the isolation condenser pool; the heat is then
23 transferred from the pool to the surrounding
24 environment through evaporation; the coolant-flowing
25 system is sustained through natural circulation. Next
26 slide, please.

1 Containment cooling is accomplished by
2 using the safety-related passive containment cooling
3 system. The system reduces temperature and pressure
4 under containment by removing heat from a containment
5 and transferring it to a passive containment cooling
6 system pool. The heat is then transferred from the pool
7 to the surrounding environment through evaporation.
8 The coolant flow here is also sustained by natural
9 circulation.

10 Spent fuel pool cooling is also
11 accomplished by passive means. The water in the spent
12 fuel pool provides the cooling of the fuel, and the pool
13 has a sufficient quantity of water to maintain stored
14 fuel in the submerged and cool condition for a minimum
15 of 72 hours before makeup is required. Next slide,
16 please.

17 Based on its review of the information
18 provided by the applicant in the initial phase
19 mitigation and the staff's understanding of the ESBWR
20 passive safety system design, the staff concluded that
21 Fermi 3 complies with the requirements described in
22 SECY-12-0025. The staff also found that the 72 hour
23 initial phase mitigation capability of the ESBWR
24 supplies Fermi 3 with adequate time to transition to
25 final phase mitigation without reliance on a transition
26 phase. Next slide.

1 After 72 hours, the passive safety systems
2 used in the initial phase mitigation will continue to
3 be used to support final phase mitigation. However,
4 the water inventory of the pools that support operation
5 of the passive cooling systems will need to be
6 replenished. Offsite equipment is one option to
7 achieve this goal. Next slide.

8 The Fermi 3 mitigating strategies provide
9 core cooling, containment, and spent fuel pool cooling
10 capability as described in the SECY and Order EA-12-049.
11 The staff proposed a license condition to ensure that
12 the strategies and guidance be developed and
13 implemented to provide for the post-72-hour coping
14 capability. The license condition requires the
15 applicant to complete the development of an overall
16 integrated plan for mitigation strategies including
17 procedures, training, acquisitions, staging or
18 installation of equipment and consumables relied upon
19 in the strategies at least one year prior to the
20 completion of the last ITAAC and to implement the
21 required guidance and strategies before fuel load.

22 Now, Mr. Raul Hernandez will discuss
23 Recommendation 7.1.

24 MR. HERNANDEZ: Good morning. My name is
25 Raul Hernandez. I was the lead engineer responsible
26 for reviewing how Fermi 3 addressed Fukushima Near-Term

1 Task Force Recommendation 7.1, Reliable Spent Fuel Pool
2 Instrumentation.

3 NRC issued an Order to operating reactors
4 requiring reliable spent fuel pool instrumentation.
5 Subsequently, the staff issued guidance for meeting the
6 Order.

7 For new reactors, as previously mentioned,
8 the staff is addressing Fukushima actions such as spent
9 fuel pool instrumentation through the licensing
10 process. The staff guidance describes a series of
11 design and programmatic features needed to determine
12 that the spent fuel pool instrumentation is
13 sufficiently reliable to meet the ordered requirements.
14 Next slide, please.

15 In Fermi 3 FSAR, the Final Safety Analysis
16 Report, the applicant proposes to use the spent fuel
17 pool level instruments described in the ESBWR certified
18 design. The ESBWR spent fuel level instruments are
19 full-range, safety-related, Seismic Category 1,
20 permanently installed, protected from internally and
21 externally generated missiles, physically separated
22 from each other, and powered from separate power
23 sources.

24 The applicant addressed all the same
25 features mentioned in the guidance including power
26 supply, which requires that the equipment have the

1 capability of being powered from alternate power
2 sources, and accuracy, which requires that the
3 instrument be capable of switching power sources
4 without requiring recalibration. Next slide, please.

5 The staff evaluated the level instrument
6 description and determined that Fermi 3 level
7 instruments fully address all design features
8 identified in the guidance. The staff proposed a
9 license condition to address the development and
10 implementation of a training program to ensure that
11 personnel will be trained in the provisions to establish
12 alternate power connections to a level instrument.
13 Based on the design features described in the FSAR and
14 the license condition, the staff found that Fermi 3
15 spent fuel pool level instruments follow the guidance
16 and therefore meet the intent of the Order EA-12-051.

17 Now, Mr. Dan Barss will continue the
18 discussion on how Fermi addressed Recommendation 9.3.

19 MR. BARSS: Next slide, please.

20 Good morning, my name is Dan Barss. I am
21 the team leader responsible for the review of emergency
22 plans.

23 In a request for additional information,
24 the applicant was asked to address Recommendation 9.3,
25 Staffing and Communications. The applicant proposed a
26 license condition to complete an assessment of the

1 staffing needs for a multi-unit event and communication
2 equipment needed for a prolonged station blackout at
3 least two years prior to the initial fuel loading. Next
4 slide, please.

5 Both assessments are to be performed in
6 accordance with NRC-endorsed guidance document NEI
7 12-01, Guidelines for Assessing Beyond Design-Basis
8 Accident Response Staffing and Communications
9 Capabilities, Revision 0. Any identified corrective
10 actions will be completed at least 180 days prior to the
11 initial fuel load. Next slide, please.

12 The staff reviewed and modified the
13 applicant's proposed license condition by replacing the
14 reference to initial fuel load with schedules required
15 by 10 CFR 52.99(a) and 52.103(a), which established the
16 dates for completion of ITAAC and initial fuel load and
17 changed two years to eighteen months so the timing of
18 the license condition would be consistent with the
19 applicant's proposed timing. Next slide, please.

20 The revised license condition is
21 acceptable because it is responsive to Recommendation
22 9.3 as described in SECY-12-0025 and requires the use
23 of NRC-endorsed guidance in NEI 12-01.

24 This completes the staff presentation on
25 this panel.

26 CHAIRMAN BURNS: Okay, again, thank you

1 for your testimony, and for this round of questioning,
2 we begin with Commissioner Ostendorff.

3 COMMISSIONER OSTENDORFF: Thank you,
4 Chairman, thank you for your presentations.

5 I am going to start out with Angelo here.
6 I know that in the context of Fukushima Task Force
7 actions that you're using in several specific areas
8 license conditions, and under our regulatory framework,
9 these license conditions are supposed to be precisely
10 drawn so that verification or compliance with them is
11 largely a ministerial act, so that it's not a difficult
12 or challenging decision for the staff to make as to
13 whether or not that license condition has been
14 satisfied.

15 Can you talk briefly about that general
16 notion as it applies to the various Near-Term Task Force
17 Recommendation license conditions? Do you feel that
18 these are all ministerial as they're drawn, or if Adrian
19 wants to discuss --

20 MR. MUNIZ: Yes, we do feel that all of them
21 are ministerial.

22 COMMISSIONER OSTENDORFF: Are there any
23 concerns or ambiguities there from your standpoint?

24 MR. MUNIZ: From the standpoint of the
25 staff, we didn't see any ambiguity --

26 COMMISSIONER OSTENDORFF: Okay --

1 MR. MUNIZ: -- except --

2 COMMISSIONER OSTENDORFF: -- okay, I am
3 going to ask the applicant the same question. Are there
4 any concerns you have as an applicant here with respect
5 to how the license conditions for Near-Term Task Force
6 Recommendations are drawn?

7 MR. PETER SMITH: No. We had the
8 opportunity to discuss the license conditions with the
9 staff as they were being reviewed, and we were satisfied
10 that they all make sense to us --

11 COMMISSIONER OSTENDORFF: Okay.

12 MR. PETER SMITH: -- and are
13 implementable.

14 COMMISSIONER OSTENDORFF: Thank you.
15 Angelo, back to you. On slide 7, we're talking about
16 the no transition phase mitigation required, as
17 adequate time exists to bring offsite equipment -- can
18 you talk a little bit more about that and to what extent
19 the industry formulation or the regional response
20 centers might be a factor in how that would be executed?

21 MR. STUBBS: Okay, yes. The transition
22 phase was a phase that was to bridge the gap between
23 where your initial installed equipment could take you
24 to the time it would take to bring in something from
25 offsite.

26 The current reactors are at the plants, and

1 their standard station blackout was based on usually
2 four hours, eight hours. And there was limitations
3 based on maybe batteries of certain things, so their
4 approach was to use portable equipment to bridge that
5 gap to the time between -- that they could make with
6 their standard station blackout to when equipment from
7 offsite can be brought in.

8 And in the guidance that we endorsed in the
9 NEI 12-06, that time period is 24 hours or later to bring
10 in offsite.

11 And in the case of the Fermi 3 and the ESBWR,
12 we have the capability of operating for 72 hours
13 without -- with the installed equipment without the need
14 for portable equipment and without operator action
15 required, so with the lack of the need for AC power, the
16 lack of the need -- the use of active equipment to
17 achieve the cooling, and the lack of operator action
18 means that by the time we finish our 72 hour operations,
19 we are in a position where we should be able to go into
20 final phase mitigation.

21 COMMISSIONER OSTENDORFF: Okay. Thank
22 you.

23 And one last question, and it's not
24 associated with the presentations here, but I'll look
25 to Adrian. I noted that Chapter 18, which is supposed
26 to be discussed in the context, if you have any questions

1 here, Chapter 18 deals with human factors engineering.
2 The Commission has had several meetings with the ACRS
3 and with Research over the last two years where we've
4 looked at human reliability analysis, human factors
5 engineering issues, and there's been some discussion at
6 a high level not specific to the ESBWR design cert or
7 certainly this license application, but just at a high
8 level, there's different methodologies out there for
9 human factors engineering, human reliability analysis.

10 Were there any -- just at a high level, any
11 concerns raised in this area about different
12 methodologies, or has that not been an issue for this
13 review?

14 MR. MUNIZ: That has not been an issue for
15 the Fermi application. Chapter 18 is mostly
16 incorporated by our reference to the DCD, but I don't
17 know if you have any specific questions --

18 COMMISSIONER OSTENDORFF: No, just at a
19 high level, yeah.

20 MR. MUNIZ: -- on that.

21 COMMISSIONER OSTENDORFF: Thank you.
22 Thank you, Chairman.

23 CHAIRMAN BURNS: Thank you. Commissioner
24 Baran?

25 COMMISSIONER BARAN: I'd like to follow-up
26 on Commissioner Ostendorff's question or questions

1 about the mitigating strategies license condition.

2 Can you provide a little more detail
3 regarding what needs to be completed to satisfy the
4 license condition? For example, what do you expect to
5 see in the integrated plan, and why was this timed to
6 follow the issuance of the COL instead of being
7 completed as part of the licensing process?

8 MR. STUBBS: Okay. What we expect to see
9 in the integrated plan, if you look at the guidance NEI
10 12-06, it outlines a process that can be taken to satisfy
11 the requirements of the mitigating strategy Order, and
12 we expect for them to follow what was in that guidance,
13 and if they do that, we think that's enough guidance for
14 us to feel comfortable that it achieves what we need to
15 achieve.

16 And what was your second --

17 COMMISSIONER BARAN: Just --

18 MR. STUBBS: -- part of that?

19 COMMISSIONER BARAN: -- on the question of
20 timing, time to follow the issuance of the COL rather
21 than --

22 MR. STUBBS: Right, right. A number of
23 things that would be required to be done cannot be done
24 at this time. We're talking about being able to have
25 procedures, we're talking about being able to procure
26 things, we're talking about things that are going to

1 require more information. There's going to be
2 site-specific detail design information, and maybe some
3 things that are going to tie in to the things that are
4 already going on with the existing -- which are
5 site-specific with the existing.

6 So the time frame we put on this was a year
7 before the last ITAAC in terms of having a build and
8 implement it prior to fuel load, and this is similar to
9 the approach that was taken with the Summer applications
10 when the Commissioner prescribed the license condition
11 to Summer.

12 COMMISSIONER BARAN: Thank you. All
13 three of the license conditions discussed in the
14 presentation are more focused and ask for less
15 information that was asked for in the mitigating
16 strategies license condition for Summer or in the
17 50.54(f) letter sent to Vogtle and Summer. Can you
18 explain why the additional items are not necessary to
19 include in the Fermi license conditions? Is this the
20 result of the passage of time and having a better
21 understanding of how to close out these issues, or is
22 it due to differences in plant design?

23 MR. STUBBS: Okay. Can you give me an
24 example of one of those conditions?

25 In general, you know, there was more
26 reporting requirements in those, and we've seen what's

1 been happening with the operating plants, and we
2 just -- we didn't think that was necessary to have the
3 six-month follow-up reports, so that was removed based
4 on that.

5 And in general, a lot of the other things,
6 maybe they don't -- you may not see them in a license
7 condition, but at this time, we have guidance that
8 is -- that the staff has endorsed, and if you actually
9 look into that guidance, it addresses a number of those
10 things and a lot of additional things.

11 COMMISSIONER BARAN: Thank you. I'll
12 stop there. Thanks.

13 CHAIRMAN BURNS: Okay, thank you. I am
14 actually -- some of my questions regarding mitigating
15 strategies have been asked by my colleagues and been
16 answered, so again, because the chapters here under
17 consideration here deal with both technical
18 qualifications and quality assurance, I'd like to ask
19 a couple questions on those topics.

20 And first, for the applicant, and maybe Mr.
21 Smith you can address this, Mr. May in the opening
22 session spoke to one of the considerations going into
23 an ultimate decision as to whether or not to proceed with
24 construction, included some issues of the supply chain,
25 you know, and I think implicitly the quality and the
26 rigor in the supply chain.

1 I know from my own experiences with
2 advising the staff in my early years at the NRC, QA and
3 quality of components was an issue, and we've seen that
4 also sort of worldwide.

5 Are there any particular provisions in your
6 quality assurance program or other aspects of your sort
7 of monitoring of this issue in the supply chain that
8 are -- or are there any issues or aspects of this, your
9 intent to monitor the supply chain, that are reflected
10 in your quality assurance program?

11 MR. PETER SMITH: I am going to let Stan
12 Stasek -- would you like to address that? Oh, you --

13 CHAIRMAN BURNS: Could you --

14 MR. PETER SMITH: Stan is our Director of
15 Quality Management.

16 CHAIRMAN BURNS: Okay.

17 MR. PETER SMITH: And I don't think we
18 included him on the witness list.

19 CHAIRMAN BURNS: Okay, we'll have him this
20 morning. Thank you. I greatly appreciate our staff
21 here keeping me prepared to do the right things.

22 Would you identify yourself for
23 the -- identify yourself and your position, and then
24 I'll administer the oath?

25 MR. STASEK: Okay. My name is Stanley
26 Stasek. I am the Director for Quality Management out

1 of MEP for DTE.

2 CHAIRMAN BURNS: Okay. And would you
3 raise your right hand? Do you swear or affirm that the
4 testimony you will provide in this proceeding is the
5 truth, the whole truth, and nothing but the truth?

6 MR. STASEK: I do.

7 CHAIRMAN BURNS: Please proceed.

8 MR. STASEK: Okay. Could you repeat your
9 question?

10 CHAIRMAN BURNS: My question is that
11 essentially -- my question was that I was -- when Mr.
12 May testified in the opening panel, he made a point that
13 one of the decisions that DTE Electric would make in
14 terms of making a determination whether to proceed with
15 a COL involved some considerations of the sort of rigor
16 of the supply chain, and again, my observations from
17 early years of construction of the current generation
18 of plants but as well as some issues I know have arisen
19 internationally regarding quality, have arisen, and so
20 my question is in this decision period before you decide
21 to construct as well as after you -- if you did decide
22 to construct, how are you monitoring, how does the
23 quality assurance program address those issues?

24 MR. STASEK: Okay. So the -- it's hard to
25 look ahead and determine what the specific technical
26 issues may be in the future. However, what we currently

1 have in place already within Fermi 3 is a quality
2 assurance program that addresses supply chain issues,
3 potentially.

4 We have a program to assess our suppliers.
5 We have a program to do an annual reassessment of our
6 suppliers. And as we deal with organizations that are
7 already in existence within the industry such as NUPIC,
8 I believe you're probably familiar with NUPIC, that
9 organization is already well-established and in place
10 to address supplier-type issues and to be able to
11 identify those issues early on through audits,
12 assessments, and that.

13 So I think one of the aspects that you were
14 maybe alluding to has been the issues that we've already
15 experienced within the industry around suppliers and
16 the lessons learned that we're already having to
17 address. That's going to be built into our program
18 going forward. That is an aspect that we're currently
19 working on within our organization, is how they would
20 be -- how they would look once we obtain a license.

21 CHAIRMAN BURNS: Okay, and just for
22 everyone else's benefit, would you describe what NUPIC
23 is for the record?

24 MR. STASEK: Okay. That stands for the
25 Nuclear Utilities Procurement Issues Committee. That
26 is a group that was established to allow at this point

1 operating units to actually share the audit
2 responsibilities so that if we have, let's say at some
3 point, 50 or 100 vendors that we would like to place on
4 our approved suppliers list and use those for our
5 efforts, that would be a very onerous-type set of
6 activities for us to have to audit all of those folks
7 directly, so NUPIC was established to allow us to have
8 a sharing amongst the utilities so that we can take
9 credit for other qualified audits that were done under
10 that program.

11 CHAIRMAN BURNS: Okay, thank you.
12 Commissioner Svinicki?

13 COMMISSIONER SVINICKI: I appreciate the
14 questions of my colleagues, which have covered a number
15 of important areas for this particular panel.

16 I think I will recognize and thank the NRC
17 staff for structuring their presentation in such a way
18 that they have, in my observation, rehabilitated a bit
19 of an imprecision that I think could potentially be
20 introduced based on structuring this shorthand that we
21 use of referring to compliance with task force
22 recommendations, and I understand why we use that
23 shorthand, certainly in light of criticism that NRC has
24 not taken action to advance a number of the important
25 issue areas that the Near-Term Task Force
26 Recommendation covered.

1 But the imprecision is that, of course, the
2 NRC does not issue or compel action through task force
3 reports. Task force report recommendations are
4 neither Orders nor regulations nor other compulsory
5 instruments that we have for regulation, so again, I
6 appreciate the precision that the staff has tied their
7 discussion of their safety review to the Orders that
8 were issued, the request for information, relevant and
9 appropriate endorsed, NRC-endorsed guidance that has
10 guided their review.

11 And I think lest people are asking why is
12 this important, as a historical reference, the Vogtle
13 and Summer, when the Commission was considering
14 issuance of the licenses for Vogtle and Summer, there
15 was not a unanimous vote in support of that. The
16 Commission was divided over as I would characterize it
17 the view of one member that sought perhaps through a
18 license condition to compel compliance with Near-Term
19 Task Force Recommendations.

20 Again, the Commission was divided on that.
21 As a member of the Commission at that time, I would note,
22 again, that task force recommendations are not
23 instruments through which we promulgate regulatory
24 requirements, so I would just ask the staff, maybe for
25 completeness of the record, do you affirm that any
26 post-Fukushima actions taken by the Agency that have

1 taken the form of compulsory regulatory instruments
2 such as regulation or Order, do you affirm that you have
3 reviewed the application against such relevant
4 regulatory instruments and that the necessary actions
5 to support your recommendation for issuance of a license
6 in your view have been taken?

7 MR. MUNIZ: Yes, we have.

8 COMMISSIONER SVINICKI: And may I ask the
9 applicant, do you affirm that for those post-Fukushima
10 regulatory actions through which you are required to
11 comply, such as the Orders or other measures that you're
12 asked to comply with, do you affirm that you have taken
13 those actions?

14 MR. PETER SMITH: Yes, we have.

15 COMMISSIONER SVINICKI: And I would ask
16 the NRC staff, is it your understanding as the Agency
17 continues to work on any post-Fukushima regulatory
18 actions that will compel response or requirement by
19 licensees, that it is your understanding that such
20 measures, if a license is granted in this case, will be
21 issued and put in place through the Agency's licensing
22 instruments and processes and will be applied as
23 appropriate to a license holder?

24 MR. MUNIZ: That is correct. That is our
25 understanding.

26 COMMISSIONER SVINICKI: Okay, thank you.

1 Thank you, Mr. Chairman.

2 CHAIRMAN BURNS: Thank you, Commissioner.

3 That brings us, unless there is something
4 else from my fellow Commissioners, to the close of
5 Safety Panel 2, and also to the close of our morning
6 session of this uncontested hearing.

7 Again, the plan is we will take a break
8 until 1:30, we'll start promptly at 1:30 this afternoon
9 with the Environmental Panel, and again, I appreciate
10 the contributions of the witnesses here this morning and
11 the contributions of the Secretary and the Office of
12 Commission Appellate Adjudication in supporting us this
13 morning. And with that, we are adjourned until 1:30.

14 (Whereupon, the above-entitled matter went
15 off the record at 11:50 a.m. and resumed at 1:29 p.m.)

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1 A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

2 (1:29 p.m.)

3 CHAIRMAN BURNS: All right. Good
4 afternoon, everyone. We'll continue with our hearing
5 on the Fermi 3 combined license application.

6 This afternoon we'll be hearing primarily
7 on the environmental issues before going to a closing
8 session. And we'll start the afternoon with the first
9 environmental panel, and we'll start with DTE Electric.
10 And, again, I would ask the witnesses to introduce
11 themselves and remind them that they are under oath.

12 MR. PETER SMITH: Peter Smith, Director of
13 Nuclear Development.

14 MR. WESTMORELAND: Randall Westmoreland,
15 Technical Expert and Environmental Lead for the
16 environmental side of the application.

17 MR. THOMAS: Steve Thomas with Black &
18 Veatch.

19 CHAIRMAN BURNS: Thank you, and proceed.

20 MR. PETER SMITH: Okay. So I have one
21 slide to talk about, which is Slide 2 in my package. And
22 the area that I really wanted to focus on was a lot about
23 our interactions and the benefits that we got as part
24 of the environmental review.

25 CHAIRMAN BURNS: Could you speak a little
26 louder?

1 MR. PETER SMITH: Oh, I'm sorry. I've got
2 to get back to my --

3 CHAIRMAN BURNS: In fact, move closer.
4 Yeah, yeah. Move it closer.

5 MR. PETER SMITH: Sorry.

6 CHAIRMAN BURNS: Thank you.

7 MR. PETER SMITH: I'm a slow learner. So
8 we interacted a lot with regional stakeholders even
9 before we started the project, a lot about what we were
10 intending to do, a lot about the new licensing process,
11 and we basically had a traveling roadshow that Randy
12 Westmoreland and I did in a number of places with state
13 agencies, with local communities, virtually with
14 anybody that we could get an audience with and would
15 listen. And we made contacts with the local tribal
16 nation, the Anderdons of Wyandot. And I think
17 throughout the whole process we have experienced strong
18 state and local support for this project.

19 You know, our submission of the
20 environmental report and the application, there is only
21 a couple of things I want to say. We followed the NRC's
22 guidance in NUREG-1555 and Interim Staff Guidance and
23 other available guidance. We did examine all of the
24 historical information from the Fermi 2 licensing, as
25 well as we essentially did a complete study ourselves
26 to support the environmental report. So we used that

1 for background information.

2 We have accounted for all the existing site
3 infrastructures and access, and our site is not a
4 greenfield. And, you know, overall we believe the
5 environmental report provided a comprehensive
6 assessment of the impacts of Fermi 3 that assisted the
7 staff in fulfilling their obligations.

8 The one thing I did want to say about our
9 stakeholder involvement is, you know, we went through
10 permitting processes with both the state and U.S. Army
11 Corps of Engineers. And both agencies were really
12 engaged right from the beginning, and through that whole
13 process it was a learning process for us on -- about
14 wetlands. And over the time we revised our site plan
15 twice from the initial submission as we increased our
16 knowledge of the site and -- in order to reduce the
17 impacts on wetlands.

18 For example, we eliminated flat parking.
19 In the original site plan, we had many acres of flat
20 parking, which we have accommodated parking structures
21 within the plant so that we can avoid a wetlands impact
22 that we didn't recognize in the beginning. And then,
23 finally, there was an area on the site that we refer to
24 as the "pork chop," which is a wooded wetland area that
25 in our earlier involvement we believed that we were
26 going to be able to utilize that.

1 However, when we did a walkdown with the
2 agencies prior to submittal of our permit applications,
3 we learned that that probably wasn't going to be a good
4 idea. And that caused us to do another review of our
5 -- redesign of our site plan, and actually we ended up
6 with a much better site as a result of that that is going
7 to work much better from a construction standpoint.

8 So, overall, the process went well for us,
9 and that's all I have on the environmental review
10 portion.

11 CHAIRMAN BURNS: Okay. Thank you. Can I
12 call the staff witnesses for Panel 1 up? Okay. Again,
13 welcome, and state your names.

14 MS. DIXON-HERRITY: I'm Jennifer
15 Dixon-Herrity. I'm Chief of the Environmental
16 Projects Branch.

17 MS. SUTTON: Mallecia Sutton, the Lead
18 Environmental Project Manager.

19 MR. KUGLER: Andrew Kugler, Senior
20 Environmental Project Manager in the Technical Support
21 Branch.

22 CHAIRMAN BURNS: Okay. Staff can
23 proceed.

24 MS. DIXON-HERRITY: Good afternoon.

25 CHAIRMAN BURNS: Could you turn your mic
26 on?

1 MS. DIXON-HERRITY: Good afternoon. Next
2 slide, please, Slide 2. Let's go to Slide 3, please.
3 With that, I can take out several sentences in my
4 presentation.

5 During this afternoon's presentation, I
6 will discuss the environmental review, including an
7 overview of the staff's process and impacts we
8 identified. Andrew will discuss the alternatives
9 considered, and Mallecia will discuss our process for
10 addressing new information after the IS is final but
11 before the licensing action is taken, and several
12 endangered species consultations.

13 Slide 3, please. Thank you. The National
14 Environmental Policy Act, also known as NEPA, requires
15 federal agencies to use a systematic approach to
16 consider environmental impacts of major agency
17 decisions. The NRC regulations that implement NEPA are
18 found in 10 CFR Part 51. The NRC determined that the
19 issuance of a combined license is a major federal action
20 under NEPA that requires the development and issuance
21 of an environmental impact statement, or EIS.

22 In addition, the staff's environmental
23 review addresses the requirements of the Endangered
24 Species Act, the National Historic Preservation Act,
25 and other laws. Detailed guidance for conducting our
26 environmental review is found in NUREG-1555, the

1 Environmental Standard Review Plan, and in numerous
2 regulatory guides, interim staff guidance documents,
3 and internal guidance developed to address the
4 potential new and significant information after the EIS
5 is published until the combined license is issued.

6 Slide 4, please. This slide shows the
7 major parts of the NRC environmental review and the
8 completion dates for the Fermi 3 project. Before
9 starting development of the draft EIS, the staff issues
10 a Notice of Intent to conduct scoping and invite public
11 participation.

12 Scoping provides both the stakeholders and
13 the general public the opportunity to participate in
14 determining the scope of the environmental review.
15 Stakeholders in most reviews include, but are not
16 limited to, federal, state, and local agencies,
17 federally recognized Indian tribes, the Fish and
18 Wildlife Service, National Marine Fisheries Service,
19 and the State Historic Preservation Office.

20 The staff then conducts the detailed
21 environmental review. That includes analysis of the
22 applicant's environmental report, audits of the
23 proposed and alternative sites, development of requests
24 for additional information, and confirmatory modeling
25 and analysis. It also includes development of
26 independent information through interviews with

1 stakeholders, review of relevant databases and maps,
2 and other methods.

3 The draft EIS summarizing the staff's
4 findings is filed with the Environmental Protection
5 Agency and is issued for public comment. During the
6 comment period, the staff holds public meetings to
7 present its findings and to solicit comments. The
8 staff considers all substantive comments received and
9 describes how the comments were dispositioned in
10 Appendix E of the final EIS.

11 May I have Slide 5, please. This slide
12 shows the major resource areas considered in the final
13 EIS. To prepare the Fermi EIS, we assembled a team of
14 environmental experts with backgrounds in the necessary
15 scientific and technical disciplines to conduct the
16 review.

17 The NRC contracted with Argonne National
18 Laboratory and with ERI to assist the staff in preparing
19 the EIS. As a cooperating agency, the Army Corps of
20 Engineers also provided technical expertise in
21 developing the EIS, which also supported the
22 evaluations necessarily for its Army Corps permit.

23 Slide 6, please. To guide its assessment
24 of the environmental impacts of the proposed action or
25 alternative actions, the NRC has established a standard
26 of significance for impacts based on the Council of

1 Environmental Quality guidance in 40 CFR 1508.

2 We used the three significance levels of
3 small, moderate, and large, as defined in 10 CFR 51,
4 Subpart A, Appendix B. The definitions are reproduced
5 on this slide.

6 This framework for categorizing impacts
7 helps to explain the effects of the project consistently
8 for each of the resource areas analyzed in the EIS.

9 Slide 7, please. As detailed in the final
10 EIS, for almost all of the resource areas, the impacts
11 from building and operating Fermi 3 would be small.
12 There were no large adverse impacts. In particular,
13 the review team concluded there would be small impacts
14 regarding the use and quality of groundwater and surface
15 water resources to aquatic ecology, use of land, quality
16 of air, radiological and non-radiological health,
17 environmental justice, and the impacts of the fuel
18 cycle.

19 Slide 8, please. There were a limited
20 number of areas where impacts were greater than small.
21 In the area of terrestrial and wetland resources, the
22 staff determined impacts would be small to moderate due
23 to potential loss of wetlands and habitat while building
24 the facility. Minor losses are mitigated by the
25 restoration and preservation of wetlands onsite and at
26 another local site owned by DTE.

1 The potential for moderate terrestrial
2 impact is based on the possible adverse effects because
3 of eastern fox snake mortality caused by vehicular
4 traffic on site roads during operations. The staff's
5 evaluation of the potential impacts of the eastern fox
6 snake recognizes the possibility of moderate impacts if
7 proposed mitigation does not go as planned. Otherwise,
8 terrestrial ecology impacts during operations would be
9 small.

10 The socioeconomic review determined that
11 adverse impacts ranged from small to moderate, mainly
12 from temporary impacts related to traffic. The
13 beneficial impact from taxes ranges from small to large.
14 The cumulative impacts resulting from building and
15 operation of Fermi 3 with past, present, and foreseeable
16 future actions are, for the most part, small, but
17 several resource areas range from small to moderate.

18 In addition to the resource areas that I
19 have already discussed, the demolition of Fermi 1 could
20 cause a small to moderate impact on historic and
21 cultural resource areas, which will be discussed in the
22 next panel.

23 Some resource areas are small to moderate
24 or moderate when considering the cumulative impacts,
25 including air quality due to impacts of greenhouse gas
26 emissions and surface water quantity and quality and

1 aquatic resources due to climate change. However,
2 building and operating Fermi 3 would have only a small
3 incremental contribution to these impacts.

4 Andrew Kugler will now discuss the
5 alternatives considered in the final EIS.

6 MR. KUGLER: Thank you. The review team
7 evaluated alternative energy sources, alternative
8 sites, and alternative system designs, in addition to
9 the no action alternative. In the alternative energy
10 analysis, the review team evaluated options for the
11 generation of base load electrical power, and for the
12 base load sources the review team examined alternative
13 energy sources such as coal and natural gas-fired power
14 plants, and a combination of energy sources, including
15 natural gas, solar, and wind, coupled with the
16 conservation and demand-side management.

17 The staff evaluated in detail the
18 reasonable alternatives that could meet the purpose and
19 need of the proposed action, which was to address
20 Michigan's expected future peak electric demand to
21 compensate for both retirement of aging base load power
22 generating units and the diminishing availability of
23 power from the region's transmission operator.

24 An alternative was not considered to be
25 reasonable if it could not meet the purpose and need of
26 the proposed action, that being the provision of base

1 load power. For the alternatives that could meet the
2 purpose and need, the review team determined that none
3 would be environmentally preferable to the proposed
4 action. Conservation and demand-side management plans
5 were considered independently but were not determined
6 to be capable of meeting the base load energy needs.

7 The review team also evaluated alternative
8 system designs, including six alternative heat
9 dissipation systems, alternative intake, discharge,
10 and water supply systems and locations. The
11 alternative system designs were not found to be
12 environmentally preferable for various reasons,
13 including situations where they would cause hydrologic
14 alterations, higher levels of impingement or
15 entrainment, increased land use requirements, and
16 increased visual impacts.

17 Next slide, please. In terms of
18 alternative sites, the applicant identified candidate
19 sites within its traditional service area based on
20 proximity to such things as transmission lines and
21 sources of water. Next, the applicant screened out
22 areas that would be a potential concern, for example,
23 natural resource conservation areas. Then, it
24 selected parcels of land of sufficient size for the
25 nuclear facility. Twenty-four potential sites were
26 identified.

1 The potential sites were screened to
2 identify the candidate sites. The candidate sites were
3 evaluated using weighting factors to ensure that the
4 alternative sites selected were among the best that
5 could be -- were available in the region of interest.
6 In addition to the Fermi site, the applicant identified
7 the Belle River-St. Clair site, and the Greenwood site,
8 as alternatives.

9 Now, guidance in the staff's environmental
10 standard review plan indicates a review should
11 generally consider at least three to five alternative
12 sites. Therefore, the review team requested
13 information on the sites that were ranked fourth and
14 fifth by the applicant, the Petersburg and South Britton
15 sites. These four alternative sites were then
16 considered by the review team in its evaluation.

17 The review team compared the impacts of
18 building and operating an ESBWR at the Fermi site and
19 at the alternative sites. While there were differences
20 in the impacts between the sites for various resource
21 areas, none of the alternative sites were determined to
22 be environmentally preferable to the Fermi site.

23 That concludes my presentation. Mallecia
24 will now discuss the new and significant process.

25 MS. SUTTON: The Fermi 3 final EIS was
26 published on January 18, 2013. At the time the EIS was

1 completed, the staff's safety review of the application
2 was still in progress. 10 CFR 51.92 requires the NRC
3 staff to prepare a supplement to a final EIS if there
4 are substantial changes in the proposed action that are
5 relevant to environmental concerns, or if there are new
6 and significant circumstances or information relevant
7 to environmental concerns that bear on the proposed
8 action or its impacts.

9 Accordingly, at the completion of the Fermi
10 FEIS, staff followed this process for consideration of
11 any new, significant information to determine whether
12 its supplement to the EIS might be necessary. In the
13 case of Fermi 3, the staff monitored changes to the
14 application and discussed whether there had been
15 changes to the project with the applicant.

16 The applicant referred the staff to the
17 environmental report developed for the license renewal
18 application of Fermi 2, which was submitted on April 30,
19 2014. The staff considered the report and confirmed
20 that there had been no significant changes since the
21 development of the Fermi 3 environmental impact
22 statement.

23 Based on this consideration of new
24 information since the final EIS was published, the staff
25 found that a supplemental final EIS was not warranted.

26 Next slide, please. As part of our

1 environmental review beginning in 2008, we engaged with
2 the resource agencies. Based on the analysis
3 documented in our biological assessment, we found that
4 there were no listed species likely adversely affected
5 by the environmental federal action, and then later in
6 2012 the resource agencies agreed with that conclusion.

7 The U.S. Fish and Wildlife Service listed
8 the rufa red knot bird as a threatened species on
9 December 11, 2014, and plans to list the northern
10 long-eared bat on April 2, 2015. When new species are
11 listed before the NRC reaches and finalizes a decision,
12 the NRC will consult with the Fish and Wildlife Service
13 to determine whether the proposed action would have an
14 adverse effect on the species.

15 With respect to the two species, completion
16 of consultation could delay a final licensing decision
17 by one to six months, depending on whether additional
18 surveys to look at roosting patterns are needed. The
19 applicant has provided surveys that cover all but the
20 roosting for the bat. The staff is already developing
21 a supplement to the biological assessment for the rufa
22 red knot bird that will be submitted to the Fish and
23 Wildlife Service for their review.

24 Likewise, the staff intends to proactively
25 prepare a supplement to the biological assessment for
26 the bat, so that it can be submitted promptly to the Fish

1 and Wildlife Service if the species is listed as
2 anticipated on April 2nd and action has not been taken.

3 Next slide, please. To summarize the
4 staff's findings, Chapter 10 of the EIS presents the NRC
5 staff's recommendation to the Commission. The bases
6 used to make this recommendation are the small
7 environmental impacts for most resource areas. None of
8 the reasonable alternative energy sources, sites, or
9 system designs would be environmentally preferable.

10 New information and changes did not affect
11 these conclusions, and newly listed species could
12 impact timing of the final licensing decision.

13 Next slide, please. As stated in the final
14 EIS, the staff recommendation related to the
15 environmental aspects of the proposed action is that the
16 COL should be issued. The information supported in the
17 recommendation comes from: 1) the Fermi 3 COL
18 application, environmental report; 2) consultation
19 with federal, state, tribe, and local agencies; 3) the
20 staff's own independent review; 4) the staff's
21 consideration of comments received during public
22 process and the comment periods on the draft EIS; and
23 5) the assessment summarized in the EIS, including
24 potential mitigation measures identified in the
25 environmental report and in the EIS.

26 And this concludes the staff's

1 presentation. Thank you.

2 CHAIRMAN BURNS: I thank the staff
3 witnesses for their testimony. We will proceed to
4 questioning of the Environmental Panel 1. And as with
5 the safety panels, questions may be posed to either the
6 staff witnesses or the applicant's witnesses. And we
7 will proceed with questioning, first with Commissioner
8 Baran.

9 COMMISSIONER BARAN: Thank you, Mr.
10 Chairman. I have some questions for staff regarding
11 the treatment of transmission lines in the EIS. The
12 Licensing Board was concerned that by considering
13 impacts from transmission lines as cumulative impacts
14 instead of direct impacts, the EIS did not evaluate them
15 in sufficient detail. How confident are you that the
16 EIS took the required hard look at impacts from building
17 and maintaining transmission lines?

18 MR. KUGLER: This is Andrew Kugler. We
19 are confident that the work that we did is appropriate
20 under NEPA for the type of evaluation we are performing.
21 The action before us is licensing -- or providing a
22 license to build and operate a nuclear power plant.

23 The transmission lines are not part of our
24 licensing action, and, in fact, the company that would
25 build and operate the transmission lines is a completely
26 separate company, and we would not be able to obtain any

1 further information, nor would we have any control over
2 their activities. So we believe the approach we took
3 using the best information that was available was proper
4 and complied with NEPA.

5 COMMISSIONER BARAN: The Board was
6 concerned that if the staff had considered impacts from
7 transmission lines as a direct impact, it would have
8 sought more information on the potential transmission
9 line corridor, including looking more closely at
10 wetlands and endangered species. How would you respond
11 do that concern?

12 MR. KUGLER: Well, following up on my
13 original response, the transmission lines that would be
14 built would be built by a company over which we have no
15 control. They have not determined where they would
16 build the lines with any certainty or how they would do
17 it. So what the staff did was obtain the best
18 information that it was possible to get.

19 So, for example, we established a likely
20 corridor based on existing corridors and the nearest
21 location where they could tie into the grid, and used
22 things like the national wetlands inventory to
23 determine the wetlands that would be in the affected
24 area.

25 But if we took the position that we had to
26 gather detailed information, say surveys, we have no

1 mechanism in which we could actually do that. We can't
2 require surveys of a company over which we have no
3 control, or they are not ready to decide where they are
4 going to put the line. So it really would not make sense
5 to try to do that at this time.

6 COMMISSIONER BARAN: That's helpful. In
7 a prehearing question, the Commission asked if the
8 categorization of impacts as direct or cumulative made
9 a difference to the staff's analysis. It seems that one
10 potential area not discussed in that response where
11 there could be a difference is in the identification of
12 alternatives. Does the staff use the same approach to
13 identify alternatives for cumulative impacts as it does
14 for direct impacts?

15 MR. KUGLER: No, it does not. For
16 something that is a cumulative impact, we do not
17 consider alternatives. To give an example that might
18 be easier or cleaner to look at, let's say one of the
19 things we're looking at for cumulative impacts is that
20 somebody else in the region is planning to build a coal
21 plant, and they might affect some of the same resources
22 that our plant will affect, and so we're going to look
23 at the cumulative impacts.

24 We are in no position to look at
25 alternatives for that other company's plans for
26 building a power plant, and it really wouldn't make

1 sense to do so. So to look at alternatives for
2 something that is beyond our action really does not make
3 sense, I don't think, under NEPA.

4 COMMISSIONER BARAN: And is that the same
5 for mitigation measures? There's a difference between
6 direct or cumulative?

7 MR. KUGLER: Yes. It would be the same.
8 It would be the same, because, again, we have no way to
9 establish what mitigation measures might be carried out
10 by another company.

11 Now, one thing we do recognize, although,
12 again, we have no control over it, is when the company
13 goes to build the transmission lines, they do have to
14 get other permits from other agencies. They may be
15 state agencies as opposed to federal, but those agencies
16 will establish whatever permit conditions they believe
17 are appropriate to protect the environment.

18 COMMISSIONER BARAN: Okay. Thank you.
19 Did the staff's consultation under the Endangered
20 Species Act include the transmission line corridor?

21 MS. SUTTON: The staff, once again, used
22 the national wetlands inventory maps that Fish and
23 Wildlife published to get a survey of what may be within
24 the transmission line corridor and --

25 COMMISSIONER BARAN: Okay. And would you
26 have done that analysis if the Army Corps of Engineers

1 was not a cooperated agency here?

2 MS. SUTTON: Yes. We would still look at
3 that, yes.

4 COMMISSIONER BARAN: Okay. Switching
5 topics, Slide 12 of the presentation, you provided an
6 update on the northern long-eared bat and the rufa red
7 knot bird. One area where the applicant and the staff
8 differed in their responses to the prehearing questions
9 was on whether consultation under Section 7 of the
10 Endangered Species Act must be completed prior to
11 issuing the COL should the northern long-eared bat be
12 listed as threatened or endangered before we make a
13 decision on whether to issue a COL.

14 Mallecia, can you address whether these
15 consultations must be complete before the NRC could
16 issue a COL?

17 MS. SUTTON: So once it came to my
18 attention that the bird was listed, I reached out to Fish
19 and Wildlife to get the surface input that -- do NRC
20 needs to reengage in consultation? And the Service
21 told me, yes, because the species were never discussed
22 in the current EIS, because there wasn't species of
23 concern before the EIS was published.

24 So, and I asked them what information would
25 they need us to provide and they said, "We would like
26 for you to provide a biological assessment." So -- and

1 so we had to engage with consultation. So I did -- we
2 did our due diligence by reaching out to the Service and
3 making sure that we was going to meet the Service
4 requirement.

5 COMMISSIONER BARAN: So the Fish and
6 Wildlife Service indicated to NRC that a biological
7 assessment was necessary here.

8 MS. SUTTON: Yes, sir.

9 COMMISSIONER BARAN: Okay. And I'm over
10 my time, but I've banked quite a bit and I'm going to
11 make a withdrawal. Does the answer -- from what you
12 understand from FWS, does this depend on whether the
13 staff finds that construction may impact or will have
14 no impact on the species?

15 MS. SUTTON: What I was told by the Fish and
16 Wildlife coordination specialist is that we, NRC, can
17 provide to them what we think is our determination, but
18 the determination really relies on what they provide
19 back to us. So if they concur on NRC's no effect
20 determination, they could provide us a concurrence
21 letter back within 30 days or less. If they don't
22 concur with NRC's determination, then they will have to
23 go into the next process, which is the biological
24 opinion, which may take up to 120 days.

25 COMMISSIONER BARAN: Okay. And will the
26 consultation include potential impacts from

1 preconstruction activity, such as clearing and grading
2 the site and building the transmission corridor?

3 MS. SUTTON: Will the biological -- yes, we
4 will look at the cumulative analysis of the project.

5 COMMISSIONER BARAN: Okay. And, Mr.
6 Smith, does DTE disagree with anything the staff just
7 said?

8 MR. PETER SMITH: What we presented in our
9 response was a legal position that we believe if the
10 staff made the conclusion that there was a no effect that
11 there wasn't a legal obligation to seek a consultation
12 with Fish and Wildlife.

13 COMMISSIONER BARAN: Regarding the need
14 for power analysis, in the staff's responses to the
15 prehearing questions, the staff stated that it
16 independently confirmed the conclusions and the base
17 case scenario from the 2007 Michigan Public Service's
18 Commission plan, that the DTE service area would need
19 about three and a half times the capacity of the proposed
20 Fermi 3. Would you describe in more detail how NRC
21 independently confirmed the power to be provided by
22 Fermi 3 is needed?

23 MS. SUTTON: I would have to pose that
24 question to Dan, Dan Mussatti, my technical expert.

25 MR. MUSSATTI: Dan Mussatti.

26 CHAIRMAN BURNS: Okay. Again, identify

1 yourself for the record, including your position and
2 confirm whether you have already taken the oath.

3 MR. MUSSATTI: Yes, sir. My name is
4 Daniel Mussatti. I am the socioeconomics person for
5 the technical review staff. And what else did you want?

6 CHAIRMAN BURNS: Did you take the oath?
7 Were you sworn in?

8 MR. MUSSATTI: I did take the oath this
9 morning.

10 CHAIRMAN BURNS: Okay.

11 MR. MUSSATTI: Yes, I did. What we did to
12 independently confirm what was done by the applicant was
13 to go to other sources that also do projections into the
14 future. And, in particular, we went to the ITC
15 transmission plans for the future, and we went to the
16 Reality First Corporation, which is the overarching
17 group that is part of FERC. Every one of these
18 organizations has to do annual planning to make sure
19 that they have assets in place for future growth to
20 prevent, you know, problems with the grid, brownouts,
21 blackouts, et cetera.

22 And what we found is that their findings
23 were consistent with what was written in the ER by the
24 applicant, that they were facing something like 3,300
25 megawatts worth of growth in demand in the southwestern
26 area, which is the area that DTE sells its power to, and

1 that along with that 3,300 megawatts of growth they were
2 also identifying somewhere in the neighborhood of 3,800
3 to 4,000 megawatts of coal-fired power plants that were
4 old and dirty, and that they were going to have to be
5 retired.

6 So there was about a 7,000 megawatt drop in
7 available capacity in 2024, the year that we used for
8 our analytical stopping point. And with the size of the
9 proposed reactor that would be put in, that's about four
10 and a half times, almost five times the size of the plant
11 itself. So there was plenty of elbow room in there for
12 us to say, "Yes, there is a need for power."

13 COMMISSIONER BARAN: And in terms of the
14 timing of that analysis, my understanding is that the
15 DTE analysis was completed in 2007. Is that right?

16 MR. MUSSATTI: That's correct.

17 COMMISSIONER BARAN: And the independent
18 confirmation you all did, was that also in that
19 timeframe, or was it subsequent to that? The reason I
20 ask is just that, obviously, the energy markets have
21 changed considerably in the last seven or eight years,
22 and I'm just wondering of the timing of the analysis that
23 NRC did.

24 MR. MUSSATTI: The answer is both.
25 Originally, the draft came out and we used the
26 information that was within the ER as our starting

1 point, and we recognized that things were starting to
2 change, that we were -- that the economy was starting
3 to do some things that had not been anticipated and the
4 growth wasn't happening.

5 So when we came to the final drafter -- to
6 the final of the EIS, we added an extra section at the
7 end of the discussion of demand, so that we could talk
8 about, "Yes, we recognize all of these things are
9 changing. Does that change what we have -- had found
10 originally significantly enough for us to have to go
11 back and redo the analysis?"

12 And using exterior sources again, such as
13 we did initially to confirm what was in the ER, what we
14 found is that while the -- there was this drop in the
15 demand that happened rather dramatically at the
16 beginning of the recession, that the slope of growth
17 remained basically the same as it had before.

18 So it was basically like taking a two- or
19 three-year hiatus on the growth, and then it was going
20 to pick up right where we left off. And given the
21 uncertainties that are in any of these permitting
22 applications, we figured that that was still a
23 reasonable analysis that we had performed and that
24 things were still on track.

25 COMMISSIONER BARAN: Thanks. Appreciate
26 it, Dan. Thank you.

1 I have couple minutes left. Mallecia, in
2 both your presentation and in response to our prehearing
3 questions, you addressed the new and significant
4 information process. I have a few followup questions
5 on that.

6 Can you explain how you decide whether to
7 write a memo assessing whether something is new and
8 significant, given that there are probably hundreds of
9 very small changes that you cannot formally assess? Is
10 there a specific trigger for writing a memo?

11 MS. SUTTON: Well, before the staff does an
12 analysis, asks for a new and significant, we look to see
13 there is a seriously different picture than what is in
14 the EIS. And if we think that the information may paint
15 that seriously different picture, then the staff will
16 go out and start to do an analysis to see if the new
17 information is significant or not.

18 COMMISSIONER BARAN: And if you have more
19 than one memo analyzing new information, at some point
20 do you look at all the memos together to see if
21 cumulatively they would require a supplement?

22 MS. SUTTON: Well, what the staff does is
23 on like the environmental preamble, similar to the
24 applicant, it has information that comes in. So it's
25 a greater -- so we -- I may get a lot of information and
26 it doesn't even raise it to the test of a seriously

1 different picture.

2 The technical staff is also looking, and
3 they may get information and say, "Oh, this is not
4 raising a serious different picture." And we have a
5 table that we put all that information in. So the only
6 information that we really analyze is those that we
7 think that reaches that bar that we need to do analysis
8 on.

9 At this time, we have not reached -- or in
10 the position where we have more than one to three
11 analyses that we have had to look at, and then compare
12 it to see if it -- like create a scale.

13 COMMISSIONER BARAN: Yes. Thank you.

14 MS. SUTTON: You're welcome.

15 COMMISSIONER BARAN: Thank you, Mr.
16 Chairman.

17 CHAIRMAN BURNS: Thank you. One other
18 question I'll pose to the applicant's panel. Were
19 there any additional process challenges for you because
20 the Fermi site is part of a -- or adjacent to an
21 international wildlife refuge, namely the Lagoon Beach
22 Unit of the Detroit River International Wildlife
23 Refuge? And, if so, what were they?

24 MR. PETER SMITH: No. There weren't any
25 particular challenges associated with that. We have a
26 cooperative agreement with the Fish and Wildlife

1 Service, and we made them well aware of what our plans
2 were. So --

3 CHAIRMAN BURNS: Is there any obligation
4 on -- in connection with that in terms of consultation
5 with the Canadian government or Canadian authorities?

6 MR. PETER SMITH: No. We have only talked
7 through Fish and Wildlife.

8 CHAIRMAN BURNS: Okay. All right. I
9 think you stated that there was contact with local
10 tribal -- tribes to seek input on cultural resources.
11 Were there any concerns expressed or any particular
12 cultural resources that were identified that you
13 weren't aware of?

14 MR. PETER SMITH: No. Not affecting the
15 plant.

16 CHAIRMAN BURNS: Okay. Let me turn to the
17 staff. Again, perhaps the staff could explain for me
18 the nature of the obligation, if any, in terms of -- to
19 either inform or engage in any consultation with
20 neighboring countries, namely here Canada.

21 MS. SUTTON: That was going to be part of
22 my second presentation.

23 CHAIRMAN BURNS: Okay. I'll wait for
24 that, then. I'll let you go, then, and I'll ask the
25 question then. I guess I'll turn back -- and you may
26 have answered this in part in response to Commissioner

1 Baran's questions, but you talked about the possibility
2 of having to perform a biological assessment in response
3 to some of the prehearing questions we raised relating
4 to both the rufa red knot bird and the long-eared bat.
5 What is involved in that process of preparing the
6 biological assessment, and how does it aid your
7 consideration and determination on the endangered
8 species?

9 And, again, just for -- before you answer
10 that question, just for clarity's sake to refresh my
11 recollection, the issue of the long beard -- long-eared
12 bat -- I was going to call it the long-nosed bat. I'll
13 get it right by the end of our hearing. The long-eared
14 bat, it's a question -- it's not that it is being -- the
15 possibility of listing is as a threatened species, not
16 as an endangered species, on April -- in April?

17 MS. SUTTON: On April 2nd, yes.

18 COMMISSIONER BARAN: But which is it?

19 MS. SUTTON: Threatened.

20 CHAIRMAN BURNS: Okay. Threatened. So,
21 then, could you answer my question in terms of the
22 process, in terms of this biological assessment, and how
23 that aids your determinations?

24 MS. SUTTON: Well, the applicant provided
25 some surveys on both species, the bird and the bat, and
26 that aided the staff in preparing the biological

1 assessment. The staff also looked at any other
2 information that Fish and Wildlife may have on the
3 species, and then they look at our project, and then they
4 weigh our project with that -- with the species and see
5 if there is any impacts from NRC's action that may affect
6 that particular species. And then, the staff would
7 come up with a determination within the biological
8 assessment that is then submitted to Fish and Wildlife
9 Service for their concurrence or input.

10 CHAIRMAN BURNS: Okay. All right. Thank
11 you.

12 MS. SUTTON: You're welcome.

13 CHAIRMAN BURNS: Commission Svinicki.

14 COMMISSIONER SVINICKI: Thank you for your
15 presentations. Just to follow on that point, I'm not
16 sure if I have my terminology clear in terms of the
17 Endangered Species Act consultation. If the staff
18 develops a biological assessment or supplements the
19 existing one pending -- or subsequent to any listing on
20 April 2nd, you mentioned that the outcome of that is the
21 termination.

22 Is that the same as the no effects
23 determination that the applicant is talking about, or
24 is the applicant suggesting a different process where,
25 based on the survey information they provided, the staff
26 could, if it chose to, move directly to a no effects

1 determination without supplementing the biological
2 assessment?

3 MS. SUTTON: Currently, the staff is
4 preparing a biological assessment. We have not reached
5 our conclusion. So let's say if our determination is
6 a no effect, we still have to submit that determination
7 to the Service so they can compare our action and any
8 impacts onto the species and see if they concur with that
9 determination. So as of to date, we are still working
10 on our biological assessment determination.

11 COMMISSIONER SVINICKI: Well, perhaps
12 I'll ask the applicant, then. Were you -- this is to
13 the applicant's witness. Are you suggesting a
14 different procedural path forward wherein, based on the
15 survey information, the staff, you would suggest, could
16 move directly to a no effects determination for the
17 long-eared bat and, as the staff has outlined, the --
18 that would either be concurred in or disputed, and then
19 you would move to this biological opinion stuff?

20 MR. PETER SMITH: I think the piece that we
21 disagree on is the need for the consultation.

22 COMMISSIONER SVINICKI: And to avoid that,
23 you propose what? That right now the staff can simply
24 conclude that there is no effect based on the survey
25 information that you have provided?

26 MR. PETER SMITH: Yes.

1 COMMISSIONER SVINICKI: Okay. I'm just
2 trying to understand the point of departure, because it
3 seems to me that the staff, following its process, would
4 reach a determination of some kind. We don't know what
5 that would be yet, but you would procedurally basically
6 advance immediately to a no effects determination. So
7 that sounds like that's the point of departure between
8 the two answers.

9 Did the staff want to add anything to that?

10 MS. DIXON-HERRITY: I think I can add
11 something. At this point, we have not looked at the
12 surveys that the applicant provided. My understanding
13 at this point is they do not include summer roosting
14 information. Based on guidance that the Fish and
15 Wildlife Service posted for the northern long-eared bat
16 on January 6, 2014, they indicate that to reach a no
17 effect determination you would have to actually have two
18 summer surveys showing that you have no bats in the area
19 to be able to reach a no effect determination.

20 COMMISSIONER SVINICKI: Does that mean
21 that the staff, in order to complete a biological
22 assessment should this species be listed, will have to
23 wait two summers to do a survey?

24 MS. DIXON-HERRITY: Actually, they give
25 other options. And I think that that is what Mallecia
26 was talking about when she talked about doing the

1 biological assessment. They allow you to look back at
2 how you handled the Indiana bat and look at the
3 mitigation that you took for that bat and compare it to
4 guidance that they have in their document to add
5 information to your biological assessment to come to
6 your determination.

7 COMMISSIONER SVINICKI: Okay. And I
8 realize that this is speculative, because although the
9 staff has some perhaps forecasts that the species will
10 be listed, it has not happened yet. So we --

11 MS. DIXON-HERRITY: Yes.

12 COMMISSIONER SVINICKI: -- don't know.
13 So we -- you really can't -- I don't expect you to be
14 able to testify with finality as to how this is going
15 to proceed for you, so I appreciate you engaging and
16 indulging some of the speculation of how you might
17 proceed.

18 My next question, and I think the only other
19 area I wanted to cover, was for the applicant. Going
20 back to the applicant's overview panel this morning,
21 reference was made to the fact that the original site
22 plan had a layout for four units at the Fermi location,
23 and that historical information was studied in terms of
24 determining the footprint of what you have proposed in
25 your application.

26 Can you talk about -- did you end up

1 adopting that layout, or did you make some sort of
2 modification based on contemporary considerations and
3 information and requirements?

4 MR. PETER SMITH: No. My reference to the
5 1968 artist's rendering was anecdotal, and really
6 didn't influence the decision. It was just after we had
7 got done out site layout for the location of the new unit
8 and came across that photo, it was kind of remarkable
9 that we had independently selected a very similar
10 location.

11 COMMISSIONER SVINICKI: I would just note
12 that that is actually not -- that is not all that unusual
13 in the United States. I have visited sites that have
14 three units that have layouts for six. So it's --
15 anyways, but I just wondered if you were indicating that
16 you simply hadn't been able to utilize that. It sounds
17 like that was just something that was a historic aside.

18 So thank you, Mr. Chairman. I have nothing
19 else.

20 CHAIRMAN BURNS: Commissioner Ostendorff?

21 COMMISSIONER OSTENDORFF: Thank you,
22 Chairman. Thank you for your presentations. I'm
23 going to start out with the licensee here, or the
24 applicant for a license. On Slide 2, Mr. Smith, of your
25 presentation --

26 MR. PETER SMITH: Yes.

1 COMMISSIONER OSTENDORFF: -- you indicate
2 that there is strong state and local support for
3 Fermi 3. Can you real quick, at a high level, talk
4 about some of the key factors behind that strong
5 support?

6 MR. PETER SMITH: Well, I think in the
7 local community we have really good relations with all
8 of our local officials, and really good relations with
9 all of the state legislators as well, and we spend a
10 considerable amount of time educating them about our
11 company.

12 We have -- in the community, we are a major
13 employer, both with Monroe Power Plant and with Fermi,
14 and the area is used to having the plant there. And I
15 interface with the Monroe Economic Development
16 Corporation as -- in an outreach program we have, and
17 they have asked for two. So --

18 COMMISSIONER OSTENDORFF: Okay.

19 MR. PETER SMITH: -- but we -- we work very
20 hard with the relationships and the presence in the
21 community.

22 COMMISSIONER OSTENDORFF: How would you --
23 let me boil down to one specific aspect of the community
24 relationship, and that is the perspective of the people
25 that live around Fermi 2 as to the operating experience.
26 To what extent did their experience with your safety

1 record one way or the other characterize the support?

2 MR. PETER SMITH: I would -- I guess one of
3 the measures I would use is the amount of interest we
4 have at the -- what used to be the annual assessment
5 meeting of licensee performance, and how many people
6 would show up for that, and what kind of press coverage
7 we got for that. And it has generally been pretty
8 benign at the ones I used to attend when I was on the
9 plant staff.

10 COMMISSIONER OSTENDORFF: Okay. I'll
11 give the staff an opportunity, if you wanted to, to
12 comment on anything the applicant had to say on the
13 support, if you have anything that's --

14 MS. SUTTON: I have nothing to speak on.

15 COMMISSIONER OSTENDORFF: Okay. That's
16 fine. Okay. Andrew, I want to go to you for a minute
17 on a question -- you were talking about the alternative
18 sites that were considered. Now, this is my third
19 mandatory hearing as Commissioner. We did the Vogtle
20 site, the Summer site, and now Fermi 3.

21 And, you know, it's -- all of these are
22 adding a plant or plants to existing sites for reactor
23 plants, and I'm just recognizing some of the factors
24 about the existing infrastructure and already have
25 experience with a given site. I'm trying to just -- and
26 this is not really specific to Fermi, but just on an

1 overall NEPA-type analysis, how significant is the fact
2 that we are talking about adding a plant to an existing
3 site as opposed to looking at "a greenfield" or a new
4 site?

5 MR. KUGLER: Well, a lot of the factors
6 you're mentioning really don't play too much into the
7 analysis we are performing, because the first thing we
8 are looking at is whether the proposed site or whether
9 an alternative site is environmentally preferable to an
10 alternative. So things such as existing programs'
11 acceptance are not significant players in that sort of
12 an evaluation.

13 Now, certainly, where you have an existing
14 plant, there is a lot of information on how the plant
15 interacts with the environment there, which certainly
16 aids us in our evaluating how a new plant might affect
17 it. And a greenfield site, typically you are going to
18 have greater impacts in at least some areas, because
19 you're going to have to clear a site in order to put it
20 to use.

21 But there were always the possibility --
22 you know, if you have a plant -- an existing site, which
23 maybe is using the water resource that's available to
24 the maximum extent possible, I could see a situation
25 where adding a plant there might not be environmentally
26 preferable to putting it at some other location. So

1 it's going to be very case-specific, but some of the
2 factors would not come into play for environmentally
3 preferable.

4 Now, if we ever found a situation where
5 there was an environmentally preferable alternative, we
6 move into the next step of trying to determine whether
7 there is an obviously superior alternative, and there
8 we would consider other factors including costs,
9 institutional factors, things of that nature, and there
10 some of those other factors would come into play.

11 COMMISSIONER OSTENDORFF: Thank you.
12 Thank you, Chairman.

13 CHAIRMAN BURNS: Commissioner Baran?
14 Wait, I'm sorry. We've gone through with this panel.

15 COMMISSIONER BARAN: I went for 14
16 minutes, but I can keep --

17 CHAIRMAN BURNS: Yes, yes, I know. I want
18 to use up all your time.

19 COMMISSIONER BARAN: I already did.

20 CHAIRMAN BURNS: We are going now to the
21 second environmental panel. Essentially, we are going
22 to have the same witnesses. And what I might ask the
23 staff to do is, if you could move maybe to the side, so
24 we have a good eye contact with the applicant panel.

25 Before the -- we begin with this panel, I
26 want to note for the -- to the parties that the

1 Commission is aware that DTE and the staff are prepared
2 to discuss the implementation of the continued storage
3 rule as part of this panel discussion. The Commission
4 has received a petition in eight reactor licensing
5 dockets, including this one, with respect to that issue.

6 The fundamental issue raised by the
7 Petitioners is whether, under the National
8 Environmental Policy Act, the NRC must supplement the
9 final environmental impact statements in each of those
10 proceedings, each of those eight proceedings, to
11 reflect the recently promulgated continued storage rule
12 and generic environmental impact statement.

13 We have requested briefs on the petition
14 from the Petitioners, the staff, the applicant, and we
15 will act on the petition in time for our final decision
16 on license issuance. In the meantime, we would ask both
17 panels not to address the topic of implementation of the
18 continued storage rule today.

19 So, again, we will proceed with our
20 discussion of, and testimony on, environmental issues
21 with the second half of this panel. Again, the
22 witnesses are the same and you remain under oath. You
23 have already introduced yourselves, so you may proceed
24 for the applicant.

25 MR. PETER SMITH: Okay. So Slide 2, we are
26 going to cover really two areas of interest from our

1 perspective, and one is the historical preservation and
2 the work we did with Fermi 1, and then also some
3 perspective on international interactions at our site,
4 given our proximity to Canada.

5 Go to Slide 3, please. So as we have talked
6 about a couple of times today, Fermi 1, we had planned
7 to remove the remaining structures of Fermi 1 to make
8 area to support construction of Fermi 3. And in so
9 doing, that would help us from having to impact other
10 areas of the site.

11 And so Fermi 1 is eligible for listing on
12 the National Historic Register -- or National Register
13 of Historic Places, and so we entered into a mitigation
14 plan for that, which resulted in archiving of artifacts
15 and materials associated with Fermi 1, as well as
16 creating a public exhibit, which is located at the
17 Monroe County Community College in Monroe. And so that
18 exhibit opened a year ago August, and it is really quite
19 an interesting place.

20 I think a lot of people were surprised by
21 the kinds of things that were presented in the display,
22 but we have a relationship with Monroe County Community
23 College through Nuclear Education Program that we
24 participate in, as well as we're a supporter of the
25 college and the college opened a new technology center,
26 of which this exhibit is part of.

1 And so it got a lot of good press in the
2 local area. We had a lot of dignitaries attend the
3 opening, and it's a pretty interesting exhibit, if you
4 ever get out that way.

5 So, anyways, we fully have met all of the
6 stipulations of the memorandum of agreement that we have
7 with State Historical Preservation Office, Monroe
8 County Community College, and NRC for the mitigation of
9 Fermi 1 historical significance.

10 So moving on to international
11 interactions, you know, as we have talked about, we're
12 within seven miles of the border. We do have a lot of
13 opportunities for interaction, and we do have
14 participation from Canadians, primarily in the
15 emergency planning area, but that's our primary points
16 of contact.

17 We also reach out through our governmental
18 affairs organization, and when we do, you know, their
19 -- I wouldn't say their annual, but they seem to be on
20 an annual basis where we have -- we'll host a meeting
21 for all of the elected officials, and we do get people
22 coming from Ontario, as well as we've had a number of
23 contacts from the Canadian Consulate in Detroit with
24 questions, as they have received questions about our
25 project over time.

26 So, and we have been doing this for many

1 years, since Fermi 2 has had the same kinds of
2 relationships in its entire existence. And in our
3 environmental report we address the potential
4 trans-boundary impacts of Fermi 3, and we didn't
5 document anything unique or unusual. And we continue
6 to do our ongoing outreach.

7 And I have nothing further to offer on this.
8 Thank you.

9 CHAIRMAN BURNS: Okay. The staff can
10 rejoin us. And, again, the staff witnesses are the same
11 as for the first environmental panel. And as I said
12 before, you're still under oath, but you may proceed.

13 MS. SUTTON: This presentation will
14 discuss two novel environmental issues. The first I
15 will be discussing is the historic preservation related
16 to Fermi 1 and the second international interactions
17 that took place during the Fermi 3 environmental review.

18 Next slide, please. Can you go back one?
19 Yes, thank you.

20 The Fermi 1 is a prototype fast breeder
21 reactor with a generating capacity of 94 megawatts
22 electric that began commercial operation in 1957. It
23 was deactivated in 1972, and decommission is expected
24 to be completed prior to initiation of building Fermi 3.
25 Fermi 3 will be located adjacent to and generally west
26 of Fermi 1.

1 Fermi 1 was designated a nuclear historic
2 landmark by the American Nuclear Society in October
3 1986, and has been formally determined eligible for
4 listing on the National Register of Historic Places for
5 NRC, in consultation with Michigan State Historic
6 Preservation officer.

7 The NRC participated in consultation with
8 the Michigan State Historic Preservation Officer, DTE
9 Electric Company, and the Monroe County Community
10 College, and considered information provided in the
11 application regarding Fermi 1. For the purpose of the
12 National Historic Preservation Act, Section 106
13 compliance, the NRC review team consulted with Michigan
14 State Historic Preservation Officer, federally
15 recognized Indian tribes, and additional consulting
16 parties regarding the potential effects of the proposed
17 Fermi Unit 3 project on historic properties.

18 Based on this consultation, the NRC staff
19 determined that if demolition of Fermi 1 is required to
20 build Fermi 3, this will result in a finding of adverse
21 effect under applicable National Historic Preservation
22 Act criteria 36 CFR 800.5.

23 Next slide, please. As a result of this
24 finding, the NRC and the Michigan State Historic
25 Preservation Officer and the applicant developed and
26 executed a memorandum of agreement stipulating measures

1 to mitigate this finding of adverse effects on historic
2 properties. Under the memorandum of agreement, the
3 applicant stipulated to recordation of Fermi 1,
4 consisting of documentation of the structure in the
5 report.

6 The report included a descriptive and
7 historical narrative, maps, drawings, and photographs
8 of Fermi 1, and establishing a permanent exhibit
9 regarding the history of Fermi 1, in consultation with
10 Monroe County Community College. In summary, DTE
11 Electric Company documented the completion of the
12 stipulations by letter dated January 31, 2014, and
13 developed and established a permanent public exhibit
14 regarding the history of the Fermi Unit 1 plant at Monroe
15 County Community College within two years of the date
16 of the memorandum of agreement.

17 The stipulations of the memorandum of
18 agreement were met, and mitigation of the adverse
19 effects of the project on Fermi 1 can be considered
20 complete.

21 Next slide, please. Now I'm going to
22 discuss international interactions. The Fermi 3 site
23 is located just over seven miles from the international
24 boundary between the United States and Canada. Because
25 of this close proximity, international interactions has
26 been -- have been an important consideration during the

1 Fermi 3 environmental review.

2 While 10 CFR 51.10 states that the NRC's
3 requirements for implementing the National
4 Environmental Policy Act do not extend to environmental
5 effects which NRC's domestic licensing and regulatory
6 functions may have on the environment of foreign
7 nations, the staff has undertaken appropriate outreach
8 to inform its analysis of the potential environmental
9 impacts of the Fermi 1 project.

10 As part of its outreach, staff contacted
11 the International Joint Commission, Great Lakes Water
12 Quality Board, and the Great Lakes Fisheries
13 Commission. These two organizations are federally
14 recognized bilateral commissions that have important
15 roles in the resource and environmental protection
16 issues of the Great Lakes.

17 In addition, the staff contacted the U.S.
18 Fish and Wildlife Service, which manages the Detroit
19 River International Wildlife Refuge jointly with
20 Canadian governmental counterparts, including
21 Environment Canada and the Ontario Ministry of National
22 Resources -- Natural Resources.

23 The interactions with these three
24 organizations help staff gather relevant information
25 concerning potential trans-boundary impacts. The
26 staff also gathered information in Canada through

1 internet and other literal sources.

2 Next slide, please. In addition to these
3 interactions, prior to the public meetings for scoping,
4 the environmental impact statement -- for presenting
5 the staff's analysis in a draft environmental impact
6 statement, the staff placed advertisements about the
7 meetings in numerous papers, including the Windsor
8 Star, a newspaper in the city of Windsor, Canada.

9 The staff also invited emergency
10 management personnel from Essex County, Ontario, to
11 participate in a meeting to address Fermi's emergency
12 planning zone.

13 Next slide, please. During the scoping
14 process for Fermi 3, the staff received comments from
15 the city of Windsor, the Fish and Wildlife Service, and
16 the Canadian Coalition for Nuclear Responsibility.
17 Comments ranged from highlighting the need to include
18 contacting different Canadian government entities as
19 part of the review process, details on species on the
20 site, identification of information to be considered in
21 the review, and concerns that should be addressed as
22 part of the review. Comments on the draft impact
23 statement were received from two different
24 international organizations -- Great Lakes United and
25 the Wildlife Habitat Council.

26 Right before publishing the final

1 environmental impact statement, staff received a letter
2 from the Walpole Island First Nation requesting an
3 opportunity to comment on the final environmental
4 impact statement. This was received via the U.S.
5 Embassy in Canada. The staff responded to the
6 Trans-Boundary Affairs Division of Foreign Affairs and
7 International Trade Canada in a letter.

8 The response described NRC's environmental
9 review process, provided a copy of the final
10 environmental impact statement, offered to add the
11 organization to the mailing list, explained that
12 although the final environmental impact statement was
13 published, the environmental review would continue
14 until the safety review was also complete, and provided
15 contact information for questions and comments.

16 In summary, the staff took appropriate
17 steps to ensure that a proposed facility's proximity to
18 the U.S. and Canada border was properly considered in
19 its environmental review of the Fermi 3 application.

20 And this concludes this panel
21 presentation. Thank you.

22 CHAIRMAN BURNS: Okay. Thank you to both
23 panels, again, for your testimony. I'll start off the
24 questioning.

25 Let's start off with the international
26 interaction. Ms. Sutton, you described, I think it may

1 have been on Slide 4, that there were two bilateral
2 commissions that were consulted or contacted under
3 consultation. Are there any particular -- what were
4 they again? One was a bilateral -- maybe it would just
5 be easier to tell me what they are again.

6 MS. SUTTON: Give me a second. Give me one
7 second, please. So you want -- you have the Joint
8 Commission and --

9 CHAIRMAN BURNS: Well, it's the Joint
10 Commission of what? Joint Commission between whom?

11 MS. SUTTON: Okay. So the Joint
12 Commission and the Water Quality Board is a -- has both
13 the U.S. and Canadian entities on this particular
14 committee or board. And per my read, what they do is
15 they discuss the international -- any impacts that
16 affect both countries.

17 CHAIRMAN BURNS: Okay. Are there any
18 obligations that derive from that agreement with
19 respect -- other than consultation with respect to the
20 obligations of the United States, say, versus Canada,
21 and vice versa?

22 MS. SUTTON: I'm not quite sure what
23 obligations there is.

24 MS. DIXON-HERRITY: There were no
25 obligations. We contacted them prior to scope -- prior
26 to our scoping process to ask them if they were aware

1 of any environmental concerns in that area we should be
2 aware of as we decided what the scope of the project was
3 and then provided them with a copy of the DEIS to allow
4 them to comment.

5 During the scoping period, they provided
6 reports on, for example, radiation that they had
7 identified in the Great Lakes. It's a Water Quality
8 Board. They had a number of reports that they provided
9 us with with information on the lakes.

10 CHAIRMAN BURNS: So it's -- essentially, I
11 think what I hear you saying is it's a consultative
12 board. It's a board -- it has basic consultative powers.
13 I have to have --

14 MR. DELLIGATTI: Yes. This is Mark
15 Delligatti. I'm still under oath. Yes. It is our
16 understanding that the Great Lakes Water Quality Board
17 -- this is the International Joint Commission. The
18 Great Lakes Water Quality is a consultative board.

19 CHAIRMAN BURNS: Okay. And what was the
20 other bilateral commission?

21 MS. SUTTON: There was Great Lakes Fishery
22 Commission.

23 CHAIRMAN BURNS: It's a similar type of
24 board?

25 MS. SUTTON: Yes.

26 MS. DIXON-HERRITY: It's a similar

1 organization, yes.

2 CHAIRMAN BURNS: All right. Thank you.
3 There was a discussion during the staff presentation of
4 the inclusion of Canadian emergency management
5 personnel. I found it interesting that that discussion
6 is part of the environmental analysis, since the
7 emergency planning requirements are in fact safety
8 requirements.

9 But, again, what was the nature of that
10 consultation? Was this -- that basically to reinforce
11 either current planning or potential future planning
12 obligations or arrangement? Maybe not --
13 "obligations" is the wrong word, but arrangements with
14 the Canadian authorities?

15 MS. DIXON-HERRITY: It was a meeting to
16 discuss planning for the emergency planning --
17 emergency planning zones.

18 CHAIRMAN BURNS: Okay. But, as I said,
19 how does that relate to the environmental review? My
20 disconnect is that's really a safety matter, not so much
21 an environmental impact matter.

22 MR. DELLIGATTI: Mr. Chairman, if I can --
23 this is Mark Delligatti again. I believe we still have
24 our representative from NSIR here, and perhaps he can
25 come down and shed some light on this.

26 CHAIRMAN BURNS: Okay.

1 MR. BARSS: Thank you. Dan Barss, and I am
2 still under oath. There is an international agreement
3 between the U.S. and Canada. It is titled, if I can read
4 it here correctly, Arrangement Between the U.S. NRC and
5 the CNSC for the Exchange of Technical Information in
6 Cooperation in Nuclear Matters. And in that regard
7 there is agreements that we will notify them of events,
8 they will notify us of events and planning and things
9 like that.

10 I think as was mentioned, the scope of our
11 review -- and we mentioned this in our prehearing
12 questions -- didn't really include Canada because of --
13 kind of our regulations don't extend beyond that.
14 However, that does not mean we did not consider it or
15 they're not considered.

16 And, in fact, as has been mentioned, there
17 is -- existing Fermi 2 has a very well-established
18 emergency response program, which has been in place
19 30-some years. And the Canadians are very active and
20 involved in that. They have the notifications and get
21 information through the State of Michigan. Generally,
22 those things -- so they are included in the emergency
23 planning process to ensure the safety and protection of
24 everyone, no matter which side of the border they live
25 on. Does that help?

26 CHAIRMAN BURNS: Well, yes, it does. It

1 explains the emergency planning construct. Again, the
2 issue is, why is --

3 MR. BARSS: Tying the two together was --
4 it was in regards to the environmental meetings that we
5 tagged along and were there as part of those meetings.
6 That is kind of where the two marry together. We didn't
7 have an independent meeting with them or establish it.
8 It was part of those meetings, government-to-government
9 meetings, and the public meetings that are held that
10 they were invited and participated in those meetings.

11 CHAIRMAN BURNS: Okay.

12 MS. DIXON-HERRITY: And we were trying to
13 give you a full perspective of the international
14 interactions that did occur.

15 CHAIRMAN BURNS: Okay.

16 MS. DIXON-HERRITY: Those are what we're
17 aware of.

18 CHAIRMAN BURNS: Yes. I appreciate that.
19 I'm just trying to make sure, since we have safety
20 findings and environmental findings, to make sure I'm
21 looking at it appropriately.

22 If I could use the one and a half minutes
23 I think I had reserved. One question -- I find it
24 extraordinarily interesting, and some of my fellow
25 Commissioners may explore this as well, the designation
26 with respect to Fermi 1, which is a historic industrial

1 site. And I know, like many of us probably have seen
2 many of these around -- you know, around the country,
3 around the world, you know, things like the C&O Canal,
4 large factories, I know for my own family in Western
5 Massachusetts, the mills and dams that were built during
6 the industrial age.

7 But the interesting question here is -- for
8 me is I take it that the Fermi 1 site wasn't designated
9 as a national historic landmark. It could have been
10 designated as a national historic landmark, and my
11 question is, what is the difference I guess? If it had
12 been -- as I say, ANS honored it with the designation
13 as a nuclear history landmark. What if it had been
14 designated a national historic landmark? Because I
15 find it very interesting in the context in which the
16 Commission is considering decommissioning of certain
17 facilities, here you have a particular facility that
18 would be taken apart and fully decommissioned, yet run
19 up against the requirements of the National Historic
20 Preservation Act. Any insight anyone can offer me on
21 that?

22 MS. SUTTON: It was listed eligible for
23 Section 106, and in doing so the applicant had certain
24 stipulations that it had to meet, which they met. And
25 one of the stipulations was to have some part of the
26 Fermi 1 presented in an exhibit at the Monroe County

1 Community College. So, and they have met the
2 stipulations.

3 CHAIRMAN BURNS: In other words, and maybe
4 the applicant can speak to this -- in other words, what
5 was deemed sufficient is providing something, a
6 meaningful historical record, as opposed to saying --
7 preserving the object itself. Is that -- do I
8 understand that correctly?

9 MR. PETER SMITH: Yes. I don't think we
10 understand the difference. What -- we found ourselves
11 in the situation that we had to do something and
12 associate it with our application, and that's the path
13 we took.

14 CHAIRMAN BURNS: Okay. Thank you. My
15 name has expired. Oh, yes.

16 MR. CUSHING: This is Jack Cushing, and I'm
17 under oath still. And I'm in the Office of New
18 Reactors, an Environmental Project Manager. And under
19 the National Historic Preservation Act, Section 106,
20 Consultation, if a property is consistent eligible for
21 listing, it is treated the same way as if it was listed.

22 CHAIRMAN BURNS: Okay.

23 MR. CUSHING: So that way that if you do
24 find something, and it obviously wouldn't have been
25 listed, you would -- you'd still have to take the
26 protective measures.

1 CHAIRMAN BURNS: Okay. Thank you.
2 Commissioner Svinicki.

3 COMMISSIONER SVINICKI: To remark upon the
4 Chairman's confusion over whether some issues were
5 binned into one panel or another, I note that there is
6 -- I observed some artificiality there as well in terms
7 of the international engagement. I would remark that
8 I felt that the response to the prehearing question
9 regarding the development of protective action
10 recommendations for some of the aquatic areas that fall
11 on the Canadian side of demarcation, I found that
12 response to be very fulsome, and I thought spoke to the
13 level of integration in terms of emergency issues that
14 are -- to me, that gave -- it shown a spotlight on the
15 coordination, the level of coordination that occurs in
16 order to have those sort of procedural preparations for
17 any kind of accident scenario.

18 So I just -- I refer to that being in the
19 record, whether that's an environmental issue, an
20 international issue, or a safety issue, I don't know,
21 but it's in the record, which is the important part of
22 it I guess.

23 On the National Historic Preservation Act,
24 I -- maybe not as anything to challenge the staff's
25 conclusion that all of the legal stipulations were met
26 in terms of mitigating the decommissioning of the

1 Fermi 1 site. I will remark that I have had the
2 opportunity to visit Fermi 1, and for anybody who, like
3 me, is kind of geeked up on our atomic heritage, it's
4 really very interesting.

5 So I appreciate -- again, many of our atomic
6 heritage sites face the same conundrum. They're very
7 interesting and unique and noteworthy historically, but
8 no one basically can have access to them. So, you know,
9 how does one mitigate and share the historic heritage
10 with the general population at the same time, respecting
11 the fact that there can't, for environmental and
12 security reasons, be public access to a lot of these
13 things.

14 In that vein, it struck me that the
15 mitigation that the State of Michigan Historic
16 Preservation Officer accepted and agreed to with the
17 applicant appears to be one way of mitigating and
18 addressing that.

19 I did have a question for the applicant.
20 You have -- or maybe it was the staff described that
21 there was documentation, a map, and other informational
22 things that are now in this display at Monroe County
23 Community College. I note also that the record
24 indicated that perhaps Argonne National Laboratory may
25 take this display, or perhaps other materials. I have
26 also visited the Argonne National Laboratory. I will

1 say, not a museum, but just they do have quite a
2 compilation of atomic heritage pieces from the United
3 States.

4 I don't know if there is -- so it's a
5 two-part question. Are there anything -- beyond
6 documentation information, is there -- was there an
7 opportunity to provide what I'll call artifacts? Any
8 kind of non-contaminated items or displays,
9 instrumentation panels, things like that, often are
10 part of what can be preserved and shared. And then, is
11 there any update on the enduring display of this at the
12 Monroe County Community College, or will it ultimately
13 be designated to go to Argonne, or is that still under
14 discussion?

15 MR. WESTMORELAND: As of now, the exhibit
16 at the Monroe College is a permanent part of the
17 facility. And Argonne is actually interested in a lot
18 of the records at Fermi 1. There is a library of
19 information that they are really interested in. We're
20 kind of in ongoing discussions with them on transfer of
21 that information.

22 In terms of the artifacts, we actually went
23 to the Henry Road Museum. Quite a number of interesting
24 artifacts were donated to them at the time that the
25 facility stopped operating. And so we had -- we went
26 and basically looked into their warehouses and found

1 that there was quite a few interesting artifacts there
2 that we were able to get back on loan, or the Monroe
3 College got back on loan and created specific
4 containment -- exhibit containments for them. So,
5 yeah, we had some pretty interesting artifacts there.

6 COMMISSIONER SVINICKI: Okay. Thank you.
7 I don't have anything else, Mr. Chairman. Thank you.

8 CHAIRMAN BURNS: Commissioner Ostendorff.

9 COMMISSIONER OSTENDORFF: Thank you,
10 Chairman. I want to make sure that I understand
11 something Mallecia -- and I guess your comment on
12 Slide 2 about the demolition being identified as an
13 adverse impact. My experience in Department of Energy
14 and with the Naval Reactors Program has been that those
15 sites that have been used as land-based reactor
16 prototypes, and the Nuclear Weapons Complex Buildings,
17 primarily at Oak Ridge, but also Los Alamos, demolition
18 is the normal end state for those.

19 If Fermi 3 is not built or were not going
20 to be built, would Fermi 1 stay in place as opposed to
21 being demolished? And the applicant needs to probably
22 also respond to this. I'm trying to just understand the
23 delta here.

24 MR. PETER SMITH: So I think our intention
25 is to demolish the buildings onsite.

26 COMMISSIONER OSTENDORFF: Irrespective of

1 the plan to build a new reactor?

2 MR. PETER SMITH: Correct.

3 COMMISSIONER OSTENDORFF: Okay.

4 MR. PETER SMITH: But the timing is where
5 it would show up. And the likely timing that we would
6 be thinking about is probably in association with
7 decommissioning of Fermi 2 when we -- sometime in the
8 future. We don't have any immediate plans for
9 demolition. But if we proceed with Fermi 3, we will
10 need to do that.

11 COMMISSIONER OSTENDORFF: Okay. Thank
12 you. I'm going to go back and revisit an issue that the
13 Chairman had previously mentioned. And I'm going to
14 ask Jennifer this question, but if Dan needs to come up
15 I'll let you do the nod here. I just want to make sure
16 that -- this concerns the role of the Canadian emergency
17 planning and emergency preparedness personnel.

18 Dan had talked at the podium here about
19 their engagement. But big picture, were there any
20 concerns raised by the Canadian emergency planning
21 personnel associated with Fermi 3?

22 MS. DIXON-HERRITY: I am not aware of any
23 concerns. I was not at the meeting, so --

24 COMMISSIONER OSTENDORFF: Okay. Well,
25 I'm going to let Dan -- because I think it's important
26 to have this on the record --

1 MS. DIXON-HERRITY: Okay.

2 COMMISSIONER OSTENDORFF: -- since it was
3 -- we kind of touched around this topic, but I think it
4 would be helpful to have a clear -- clear answer.

5 MR. BARSS: I was not at the meeting
6 either. I am Dan Barss, and I am still under oath. I
7 was not at the meeting either, but to my understanding
8 they had no concerns or issues that we discussed or that
9 needed to be discussed. There was nothing significant
10 at that meeting that came up.

11 And I would add that with Fermi 2 still
12 being there and operating and having a continuous
13 emergency preparedness program, when you add another
14 unit at a site, as far as emergency planning goes, once
15 you get beyond the site boundary or the fence, the impact
16 upon the public and the actions that the state and local
17 governments or provincial governments take -- in a case
18 would take don't vary much. It doesn't matter if it's
19 Unit 1, Unit 2, Unit 3, whatever. It's -- the actions
20 are about the same.

21 So the program that is in place now for
22 Fermi 2 is pretty much relied on offsite. It will be
23 the same program for Fermi 2 and 3, if they're operating
24 simultaneously, or Fermi 3 sometime in the future.

25 COMMISSIONER OSTENDORFF: Does anybody
26 else want to add anything on that? Licensee, anything?

1 Okay. Thank you, Dan. Thank you, Chairman.

2 CHAIRMAN BURNS: Commissioner Baran.

3 COMMISSIONER BARAN: Going back to the
4 Fermi 1 demolition question, just so I understand. So
5 the impacts there were found to be moderate. And I'm
6 just trying to understand a little bit, is the impact
7 not large because of the MOA and the establishment of
8 this exhibit at the Monroe County Community College?

9 MS. SUTTON: The impact is actually
10 moderate because of the MOA. And speaking --

11 COMMISSIONER BARAN: So in the absence of
12 the MOA, it would have been a large impact, but that has
13 been mitigated through the MOA.

14 MS. SUTTON: Well, for the SHPO,
15 Section 106, when they did the MOA, wanted the
16 stipulations for the impact to moderate. So I can't say
17 it would have been large if the MOA wasn't in place.

18 COMMISSIONER BARAN: Okay.

19 MS. SUTTON: But after looking at all of
20 the analysis and the impact, it became moderate with the
21 stipulation in place.

22 COMMISSIONER BARAN: Okay. And this is
23 probably a straggler question from the last panel, but
24 I'll ask it anyway. Mr. Smith, in DTE's alternative
25 site selection process, you weighed alternative sites
26 in part based on a factor called public receptivity. As

1 the EIS states, this is not a factor called for in any
2 of the applicable staff or industry guidance for
3 alternative site selection.

4 Can you describe the public receptivity
5 factor in more detail, both what it is meant to measure
6 and what its significance is in the process of
7 identifying the preferred site?

8 MR. PETER SMITH: I can generalize about
9 it. So that actually came from an earlier study that
10 we did in that same timeframe. Not only were we just
11 looking at a new nuclear unit, but we were looking to
12 cite any number of different technologies in the state.
13 And so one of the factors that our consultant used in
14 preparing that report was qualitative public
15 receptivity measure basically of community support.

16 COMMISSIONER BARAN: Okay. That's all I
17 had. Thank you.

18 CHAIRMAN BURNS: Okay. Thank you. That
19 concludes the environmental panel. Before we have sort
20 of closing statements from the applicant and from the
21 staff, and closing questions and statements from the
22 Commission, we will take, let's say, a 10-minute break.

23 (Whereupon, the above-entitled matter went
24 off the record at 2:56 p.m. and resumed at 3:09 p.m.)

25 CHAIRMAN BURNS: Come back to order.

26 As I say, this next and final session is for

1 closing statements from the parties as well as from --
2 final questions from the Commission and our own closing
3 remarks or statements.

4 So we will begin with the applicant, and I
5 believe Mr. Smith is going to give it on behalf of the
6 applicant.

7 MR. PETER SMITH: That's correct. First
8 of all, I would like to thank the Commission for holding
9 the mandatory hearing. For me personally, this is
10 pretty gratifying and pretty exciting, since I have been
11 involved with this project from the beginning. And
12 this really culminates for us a tremendous effort over
13 the last seven and a half years. I think when we were
14 talking about manhours, I never said how many I had, and
15 we've invested more than a quarter of a million manhours
16 in this project between us and our key contractors.

17 I think the questions were very thoughtful,
18 and really appreciated this and I think it demonstrates
19 the thoroughness of the staff's review and of your
20 review of our application. And we also believe that our
21 application and the staff's work provides the basis for
22 you making the statutory findings that you need to in
23 order to approve a license for us.

24 So like I had mentioned, I've been involved
25 in this intimately from -- well, late 2006 is when I
26 started working on this full-time. And we were able to

1 maintain a pretty intact team throughout this entire
2 duration, and we feel like we've done a really good job
3 of managing the project from our perspective and being
4 responsive to the staff's needs.

5 And as I had mentioned this morning,
6 despite the changes in the economy that, you know, have
7 some influence on, you know, when and timing of what the
8 ultimate need is, it always come out with the same
9 answer, that there is an ultimate need at some point.

10 And, you know, given the time it took, you
11 know, in the approval process and recognizing this was
12 kind of a first effort with the DCD and a COL going on
13 in parallel, it is really important to us to be able to
14 have the option to make a decision about building a new
15 nuclear plant if that's necessary, and taking away this
16 front end risk that we perceived in the last generation
17 of licensing activities.

18 So we being consistent right from the
19 beginning on our plan, we have been kind of a tortoise
20 in this whole thing of just taking one step forward every
21 day we started out as in S-COLA with anticipating being
22 in the second wave of COLs to be approved, and, you know,
23 through the circumstance we end here today.

24 But I think we have done -- we are very
25 committed to standardization, I think, and the standard
26 process, you know, as we've mentioned many, many times

1 today, and that's evidenced by the -- you know, the one
2 departure and one exemption we have associated with our
3 application. And I think we have created a pretty good
4 road map for the next one through this effort.

5 So I wanted to comment on one area that the
6 Commission noted a point of departure between us and the
7 staff, and that's related to the Endangered Species Act
8 issue and the timing of consultation. And that for us
9 has what we would call a significant schedule
10 implication based on the timing. And one of the
11 questions that I think remains for us in that is we do
12 these things a little bit serially at this point, and
13 what could happen in the next six months that I am now
14 engaged in yet another consultation or some other issue
15 that we have to address.

16 And the vehicles exist for us to address
17 those after we become a licensee. The license includes
18 an environmental protection plan that tells us exactly
19 how to act when a new endangered species is added to the
20 list of endangered or threatened species.

21 We did address in our response to the
22 questions, the prehearing questions, how we viewed the
23 legalities of the need for this consultation, and -- but
24 we'd be happy to provide supplemental filings if that
25 would be helpful, or in helping the Commission meet its
26 milestones.

1 And, again, I thank you for conducting this
2 hearing today.

3 CHAIRMAN BURNS: Okay. Thank you, Mr.
4 Smith. We have the staff -- I believe we will then have
5 the staff make its statement.

6 MR. TRACY: Thank you, Mr. Chairman and
7 Commissioners. Before I begin, we would like to, if you
8 don't mind, clarify one response in the area of the
9 assessment of the cumulative effects of new and
10 significant issues post-EIS. Frank, would you please?

11 MR. AKSTULEWICZ: Yes. We want to make
12 sure that the response to Commissioner Baran's question
13 is clear. I believe the question was, if you have more
14 than one of the issues -- more than one issue identified
15 that might be new and you're testing the significance,
16 is there an assessment of the cumulative effects of
17 multiples of these? And the answer is clearly yes.

18 Our process requires me, as the Director of
19 Division of New Reactor Licensing, to write a memorandum
20 to Glenn explaining the assessments that were done for
21 all of the issues that were identified as new with the
22 potential for significance, and the outcome of that
23 assessment prior to us making a decision to forward the
24 SECY paper requesting the mandatory hearing.

25 MR. TRACY: Thank you. So I will begin our
26 summary. Thank you again. In the mandatory hearing

1 SECY paper, the staff's final safety evaluation report,
2 the final environmental impact statement, and its
3 presentations during this hearing today, we have
4 provided an adequate basis for making the necessary
5 findings set forth in 10 CFR 52.97 and 51.107,
6 supporting the issuance of the combined license for
7 Fermi 3.

8 Subsequent to the prehearing filing, the
9 staff learned that a new species, the rufa red knot bird,
10 was federally listed as threatened. Because of this
11 listing, the NRC staff has initiated consultation with
12 the Fish and Wildlife Service. The staff will notify
13 the Commission upon completion of that consultation.

14 In this hearing, we have described why the
15 staff's review of the application has been adequate.
16 The review was appropriately focused by the finality
17 accorded to issues within the scope of the ESBWR design
18 certification. We explained the use of the
19 well-established design-centered review approach. We
20 discussed the relevant information incorporated by
21 reference from the ESBWR design.

22 The staff has demonstrated the
23 thoroughness of its review process through the use of
24 staff guidance and interactions with the ACRS,
25 including the ACRS's agreement with the staff's
26 conclusion regarding the Fermi 3 application. We

1 highlighted novel aspects of our safety review and our
2 environmental review. Specifically, we explained the
3 staff's conclusion that the applicant met all
4 applicable standards in its implementation of
5 post-Fukushima near-term task force recommendations,
6 its analysis of soil structure interaction, and its
7 seismic evaluation.

8 In addition, we highlighted our process for
9 compliance with NRC's NEPA regulations in Part 51 and
10 other applicable environmental statutes and
11 appropriate interactions with other governmental
12 agencies and the public. We are similarly confident
13 that using the Part 52 post-COL issuance activities,
14 including ITAAC, the construction of reactor oversight
15 process, the inspection of construction, the inspection
16 of operational programs, and the oversight of the
17 transition from construction to operation, we will be
18 able to confirm that the plant will be built and will
19 operate in conformance with the license, the Act, and
20 the Commission's regulation.

21 The applicant understands the necessity of
22 complying with requirements, and also understands what
23 needs to be done if it discovers any non-compliance,
24 including determining the safety significance,
25 determining operability, determining extent of
26 condition, and taking prompt and corrective action,

1 including restoring compliance.

2 In those instances in which we have relied
3 on commitments, we have done so in accordance with the
4 Commission's policies and practices. There exists
5 established approved processes by which licensees
6 maintain their commitments, implement changes, and of
7 course we oversee those changes.

8 I would note, finally, that the Commission
9 raised a few questions for the staff during the course
10 of this hearing for which we said we would provide
11 additional information for the record. We will provide
12 those supplemental responses in accordance with the
13 Commission's schedule order.

14 The staff certainly appreciates the time of
15 the Commission and this opportunity to present to the
16 Commission the results of our review. This concludes
17 our presentation.

18 Thank you.

19 CHAIRMAN BURNS: Thank you, Glenn. And
20 with that, we will proceed to any -- are there any final
21 questions that my fellow Commissioners have?
22 Commissioner Svinicki?

23 COMMISSIONER SVINICKI: Understanding,
24 Mr. Chairman, that you will recognize us separately and
25 momentarily for closing statements, I would state that
26 the only question that I was going to have at this point

1 was that upon reflecting on their previous responses to
2 any of my questions I was going to ask if there was anyone
3 who felt that they needed to add to, supplement, or
4 modify their responses. But it appears from both of the
5 closing statements that both the applicant witnesses,
6 representatives, and the staffs have already reflected
7 on the day's responses. So I'll just pause momentarily
8 to just have anyone interject, if that's not true, but
9 other than that I don't think I have any questions.

10 Thank you.

11 CHAIRMAN BURNS: Okay. Any --

12 MR. AKSTULEWICZ: I think we're fine with
13 our responses.

14 MR. PETER SMITH: Likewise, we're fine
15 with our responses.

16 CHAIRMAN BURNS: Okay. Thank you.
17 Commissioner Ostendorff.

18 COMMISSIONER OSTENDORFF: I have no
19 questions.

20 CHAIRMAN BURNS: No further questions?
21 Commissioner Baran.

22 I have one last question, and it goes to
23 what the -- the nature of the action that we have before
24 us for consideration, and that is a COL or combined
25 license, which under the Part 52 rubric, as opposed to
26 the early -- the two-part licensing rubric, has a

1 four-year life.

2 Under the construction program, I forget
3 what a construction permit was originally issued for,
4 but one of the questions -- I guess a question I would
5 pose to both the applicant and the staff is, the
6 applicant here has decided from the standpoint of its
7 business case and its future planning that it wanted to
8 proceed with a COL, and it may or -- you know, it may
9 or may not, which is their -- you know, their decision,
10 actually proceed with it.

11 But the question I would have, both to the
12 applicant and to the staff, is what particular -- what
13 special challenges do you see in terms of -- I'd almost
14 call it knowledge management in the longer term, if, for
15 example, a decision actually to proceed with
16 construction doesn't happen for a number of years, as
17 it would be permitted under the COL.

18 How do you -- what have you thought about
19 in terms of preserving knowledge, preserving your
20 readiness, should we grant a COL? I'll start with the
21 applicant.

22 MR. PETER SMITH: So we've been thinking
23 about that, and we also recognize that we are likely to
24 be in a status where we will be a holder with no immediate
25 plans. So for about the last two years, we have been
26 working a parallel project called the "holder project"

1 that is coming to fruition now on setting out all of the
2 infrastructure we need to comply in this status for an
3 indefinite period of time.

4 Plus, we have included in our long-term
5 planning budget to support the staff moving forward.
6 And I think in the past we have demonstrated the ability
7 to inculcate new people into our staff, and we have a
8 ready pool of resource within the organization with the
9 experience and continued operation of Fermi 2.

10 So we believe we are prepared to fill --
11 fulfill the obligations of being a holder when the time
12 comes.

13 CHAIRMAN BURNS: Okay. Thank you. Does
14 staff want to respond?

15 MR. TRACY: First, before I offer either
16 Mark or Frank, I would just state, Commissioner, that
17 -- Chairman, any action that we are taking with respect
18 to the new reactor program and its future keeps in mind
19 exactly the question that you have raised in order to
20 be able to retain the knowledge and awareness, both
21 within headquarters and in Region II, in order to be able
22 to effect a license and then ensure the proper
23 oversight.

24 And as you have seen from today's
25 incredibly diverse panel, and the diversity in age and
26 otherwise of the technical reviews and staff, the good

1 news is that there is this breadth of experience that
2 would allow us to hopefully retain and properly manage
3 our awareness and cognizance of the details of this
4 license.

5 Frank, would you like to add anything?

6 MR. AKSTULEWICZ: Just a couple of
7 thoughts, and I'm going to break down my answer into two
8 time periods, the what I'll call near term and then long
9 term. For the near term, I think I would not put that
10 in the five-year window maybe. We still have the North
11 Anna review, which is very active in front of us. It
12 will assist in the development of the design detail for
13 the ESBWR as they continue to work through the more
14 detailed elements that get to whether or not they can
15 procure things and make sure that they can be
16 constructed.

17 And so, you know, a decision to build prior
18 to the 2020 timeframe is probably going to involve the
19 staff in a lot of activities on the ESBWR itself. So
20 from a knowledge management situation, I still believe
21 we will be very active. This is the time we have seen
22 tremendous engagement with AP1000, as they have been
23 working through the design detail while they are in
24 construction. I see no reason to suspect that they are
25 not going to run into similar design detail types of
26 questions resulting in departures or future license

1 amendments or such.

2 All right. Longer term, I think we kicked
3 -- we touched on that as part of our discussion earlier
4 today. They have the FSAR updates. There is going to
5 be a skills -- skill area that we will have to make sure
6 that we keep our eyes on to make sure we have expertise
7 and staff to deal with potential challenging technical
8 matters if we see them evolving. And then, when they
9 engage in construction, the early parts of
10 construction, where we are dealing with foundation or
11 geologic issues because there is -- there is some ITAAC
12 associated with mapping of the soil once they start
13 digging or the foundation area. So we'll have to make
14 sure that we preserve that resource going forward.

15 CHAIRMAN BURNS: Okay. Thank you. I
16 have no further questions. With that, I'll turn to
17 Commissioner Svinicki for her final remarks.

18 COMMISSIONER SVINICKI: Well, again, I
19 thank all of the applicant and staff witnesses, but
20 also, and very significantly, those who were not
21 witnesses but whose work over the course of a number of
22 years now has contributed to the responses that we
23 received today.

24 Chairman Burns began by discussing kind of
25 what this mandatory hearing is, but also what it isn't,
26 the findings that we have to undertake. At the risk of

1 being a little bit of a broken record, I will state that
2 this mandatory hearing is but one element of a very, very
3 substantial and thorough process.

4 The purpose of today is to look at this
5 process for conducting these reviews over which the
6 Commission has day-to-day and week-to-week supervisory
7 oversight of the process. And so the question we ask
8 ourselves is, in this instance, was the process
9 sufficient, adequate, did it miss anything?

10 And so we have asked questions. There is
11 things we've asked about, things we haven't asked about.
12 That in no way speaks to the relevance or significance
13 of all of the issues that were looked at. Questions are
14 often asked in a way that you might say it leans one way
15 or another. My advice would be don't read too much into
16 that, because we will likely have post-hearing
17 questions. Speaking for myself, I will reflect on the
18 responses of today not only to my questions but to the
19 questions of my colleagues.

20 We will have perhaps followup questions.
21 We will review that record in its entirety and arrive
22 at this important decision that we have to make, which
23 is, again, not the beginning of a process but coming very
24 much towards the end of a very thorough agency look at
25 all of these issues.

26 So, again, I thank everyone for their

1 responses and their participation. Thank you, Mr.
2 Chairman.

3 CHAIRMAN BURNS: Commissioner Ostendorff.

4 COMMISSIONER OSTENDORFF: I also want to
5 thank the applicant for a professional presentation
6 today, in addition to your materials provided. My
7 heartfelt thanks to all of the NRC staff that worked on
8 this across many different offices and organizations.
9 I think you have served the Commission very well in
10 providing a very solid foundation for the Commission to
11 make a decision here going forward.

12 So I thank you all.

13 CHAIRMAN BURNS: Commissioner Baran.

14 COMMISSIONER BARAN: I just want to join my
15 colleagues in thanking the NRC staff, and today's
16 participants for their obvious hard work. I was very
17 impressed by the very high level of preparation for
18 today's hearing that was I think demonstrated
19 throughout the day.

20 I think today's hearing was very valuable,
21 has been very valuable, and I thank everyone again.

22 CHAIRMAN BURNS: Thank you. Madam
23 Secretary, you have something you'd like to --

24 MS. VIETTI-COOK: You had one item
25 earlier, a question that you had asked staff about,
26 first-of-a-kind ITAAC for the ESBWR, and the staff would

1 like to take that for the record.

2 CHAIRMAN BURNS: That's fine. We'll put
3 it probably in the post-hearing questions where -- I
4 think probably is the easiest thing to do.

5 Again, I will echo the remarks of my
6 colleagues and thank you all who have appeared here
7 today and all of those who have supported you either in
8 person or in their offices or elsewhere, for both the
9 applicant and for the staff. I think we had a
10 productive day and interesting exchanges on a number of
11 the issues that are before us in this -- on the question
12 of whether to grant this COL application.

13 Again, I would also thank particularly
14 those who have helped us with some of the logistical
15 things, Madam Secretary, and your -- you and your staff,
16 and Brooke Poole, the Director of OCAA, the Office of
17 Commission Appellate Adjudication, which is also near
18 and dear to my heart, but her and her staff for their
19 support and helping script me through. And I didn't do
20 too badly. I give myself a B minus on that.

21 (Laughter)

22 But, again, thank you all. And I also want
23 to thank and acknowledge, as Commissioner Svinicki
24 noted, this is one part of a process in the consideration
25 of the COL, and there are other parts of it. And we
26 thank those who have contributed, whether they are state

1 and local or foreign governments and agencies who have
2 provided comments and insights, either because they are
3 at our request or in carrying out their own statutory
4 obligations and duties, to members of the public who
5 have expressed an interest by commenting on the
6 environmental statement or participating in the
7 contested aspects of these proceedings.

8 I think we owe them thanks for raising the
9 questions that are addressed through the staff's SER,
10 the EIS, and through the hearing process, whether
11 contested or uncontested.

12 Just for the final procedural notes for
13 now, and there will be more to come on this, essentially,
14 we anticipate that there will be -- the deadline for
15 responses to post-hearing questions will be
16 February 19, 2015, unless the Commission directs
17 otherwise. I think we are shooting to have a post --
18 an order with post-hearing questions by about February
19 11th.

20 And then, you will be provided an
21 opportunity, both parties, to provide transcript
22 corrections, if you so choose, and I anticipate that
23 deadline will be February 18, 2015. And we -- again,
24 you should expect to see an order requesting proposed
25 transcript corrections on or about February 9th.

26 Again, what the Commission is -- in this

1 part of the proceeding will do is issue a decision. We
2 expect to do so promptly, with due regard to the
3 complexity of the issues before us and the other matters
4 that we may need to decide.

5 And with that, I, again, thank you all, and
6 we are adjourned.

7 (Whereupon, the above-entitled matter went
8 off the record at 3:32 p.m.)

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
DTE ELECTRIC COMPANY) Docket No. 52-033-COL
)
(Fermi Nuclear Power Plant, Unit 3))
Mandatory Hearing)

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **ORDER (Setting Deadline for Proposed Transcript Corrections)** have been served upon the following persons by Electronic Information Exchange.

U.S. Nuclear Regulatory Commission
Office of Commission Appellate Adjudication
Mail Stop: O-7H4
Washington, DC 20555-0001
ocaamail@nrc.gov

Detroit Edison Company
One Energy Plaza, 688 WCB
Detroit, Michigan 48226
Bruce R. Maters, Esq.
matersb@dteenergy.com

U.S. Nuclear Regulatory Commission
Office of the Secretary of the Commission
Mail Stop: O-16C1
Washington, DC 20555-0001
Hearing Docket
hearingdocket@nrc.gov

U.S. Nuclear Regulatory Commission
Office of the General Counsel
Mail Stop: O-15D21
Washington, DC 20555-0001
Marcia Carpentier, Esq.
marcia.carpentier@nrc.gov
Kevin Roach, Esq.
kevin.roach@nrc.gov
Anthony Wilson, Esq.
anthony.wilson@nrc.gov
Megan Wright, Esq.
megan.wright@nrc.gov
Patrick Moulding, Esq.
patrick.moulding@nrc.gov
Nicholas Koontz, Paralegal
nicholas.koontz@nrc.gov

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Fermi Nuclear Power Plant, Unit 3, Docket No. 52-033-COL (Mandatory Hearing)
ORDER (Setting Deadline for Proposed Transcript Corrections)

Winston & Strawn, LLP
1700 K Street, NW
Washington, DC 20006-3817
Counsel for the Applicant
Noelle Formosa, Esq.
nformosa@winston.com
David Repka, Esq.
drepka@winston.com
Tyson R. Smith, Esq.
trsmith@winston.com
Carlos L. Sisco, Senior Paralegal
CSisco@winston.com

[Original signed by Clara Sola _____]
Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 9th day of February, 2015