

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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In the Matter of )

DTE ELECTRIC CO. )

(Fermi Nuclear Power Plant, Unit 3) )

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Docket No. 52-033-COL

**ORDER**

**(Adopting Proposed Transcript Corrections and Admitting Post-Hearing Exhibits)**

On February 4, 2015, the Commission held an evidentiary hearing on the uncontested portion of the captioned proceeding. The parties have provided proposed transcript corrections, in accordance with the deadline previously set. The transcript corrections identified in Appendix A to this order are adopted. Appendix B to this order contains a revised hearing transcript that incorporates all of the adopted corrections.

In addition, the parties have submitted responses to post-hearing questions. As directed, these responses were filed as new exhibits, using the previously-established numbering scheme. Neither party objects to the new exhibits. DTE also has filed a number of new exhibits, without objection from the Staff, in support of its post-hearing responses. Therefore, exhibits NRC000017 and DTE000011 through DTE000023 are admitted into the evidentiary record.

This order is issued pursuant to my authority under 10 C.F.R. § 2.346(j).

IT IS SO ORDERED.

For the Commission

**NRC Seal**

*/RA/*

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Annette L. Vietti-Cook  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 9<sup>th</sup> day of March, 2015.

APPENDIX A: Changes to the Transcript for the Fermi Mandatory Hearing  
February 4, 2015

Page	Line	Correction
1	23	Add "Commission:"
1	24	Add "Marcia Carpentier"
1	25	Add "Counsel for NRC Staff"
1	26	Add "U.S. Nuclear Regulatory Commission"
1	4,5, and 6	Replace "HEARING ON COMBINED LICENSE FOR FERMI, UNIT 3: SECTION 189A OF THE ATOMIC ENERGY ACT PROCEEDING (PUBLIC)" with "IN THE MATTER OF DTE ELECTRIC CO. (FERMI NUCLEAR POWER PLANT, UNIT 3) Docket No. 52-033-COL"
2	1	Replace "ALSO PRESENT:" with "WITNESSES:", move "WITNESSES:" to line 7
2	2	Add "On Behalf of DTE Electric Company:"
2	3	Add "Tyson R. Smith"
2	4	Delete "MARCIA CARPENTIER, OGC"
2	4	Add "Counsel for DTE Electric Company"
2	5	Add "Winston & Strawn, LLP"
2	8	Delete "MARGARET M. DOANE, OGC"
2	18	Change "Scarborough" to "Scarbrough"
2	20	Delete "TYSON SMITH, DTE"
3	1	Move "GLENN TRACY, NRO" to end of list of Witnesses
3	2	Insert "MARGARET M. DOANE, General Counsel" above "ANNETTE L. VIETTI-COOK, Secretary of the Commission"
3	3	Move "RANDALL WESTMORELAND, DTE" to end of list of Witnesses
3	4	Move "ZUHAN XI, NRO" to end of list of Witnesses
4	1	Insert a new page, so the "AGENDA" begins on page 5
4	1	Add "EXHIBITS:"
4	2	Add "Party: DTE Electric Company"
4	3	Add "DTE000001 through DTE000010"
4	5	Add "Party: NRC Staff"
4	6	Add "NRC000001 through NRC000016"
4	25	Add: Manas Charkravorty, Senior Structural Engineer,
4	26	Add: Structural Engineering Branch 2, NRO
7	13	Change: "Environmental Impact" to "environmental impact"
8	21	Delete "And"
8	22	Replace "eliminate" with "illuminate"
8	26	Delete "But"
10	13	Add a comma after "10 CFR Section 52.97"
10	25	Change: "10 CFR 51.107, Subsection A" to read "10 CFR 51.107, Subsection a"
11	1	Change: "102.2(a) (c) and (e)" to read "102.2(A), (C), and (E)"
11	9	Add a comma after "reasonable alternatives"
12	15	Delete "And"

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Page	Line	Correction
13	8	Change "Barrs" to "Barss"
13	22	Change "Nolas" to "Nolan"
13	23	Change "Rosina" to "Rycyna"
13	24	Change "Scarborough" to "Scarbrough"
14	8	Change "Maleccia" to "Mallecia"
16	1	Change "their" to "there"
16	12	Replace "and" with "of"
17	1	Add " it's" after "Hearing no objection,"
17	9	Replace "going" with "go"
17	12	Replace "deal" with "dealing"
17	14	Replace "the witness and the panel" with "the witnesses on the panel,"
17	15	Add a comma after "I would also advise"
17	23	Replace "And at" with "At"
24	24	Change "Siamese" to "sited"
25	9	Change "as" to "over"
26	9	Change "work" to "worked"
28	25	Change "Power Cells" to "Grand Gulf"
32	1	Change "operating plan is it doesn't" to "operating plant doesn't"
33	2	Replace "Design Center" with "Design Centered"
33	3	Replace "touch" with "touched"
34	14	Replace "does" with "do"
35	21	Insert period and line break after "spot"; delete "so"; capitalize "this"
35	22	Delete "as" and replace "group" with "groups"
36	4	Delete "so"
36	17	Insert dash before "in"
36	18	Insert dash before "made"
37	2 to 3	Delete "And how --"; capitalize "which"
40	12	Replace "commitment" with "commitments"
40	13	Delete "So"
42	26	Change "insured" to "ensured"
47	13	Replace "NRC Overview Panel" with "NRC Staff Overview Panel"
52	13	Change "2006-06. That" to "2006-06 that"
61	15	Change "102(2)(a)" to "102(2)(A)"
62	3	Change "102(c)" to "102(2)(C)"
62	14	Change "102(c)" to "102(2)(C)"
62	22	Change "102(2)(e)" to "102(2)(E)"

APPENDIX A: Changes to the Transcript for the Fermi Mandatory Hearing  
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<b>Page</b>	<b>Line</b>	<b>Correction</b>
64	4, 5, & 6	Change "the assessment of Environmental Impacts Analysis of Alternatives included as recommendations in the FEIS." to "the assessment of environmental impacts, analysis of alternatives, included as recommendations in the FEIS."
66	9	Replace "becoming" with "becomes"
66	20	Change "Col" to "COL"
67	13	Replace "Applicant noting" with "the Applicant noted"
67	16	Replace "Designed Center" with "Design Centered"
68	8	Change "Scarborough" to "Scarbrough"
69	11	Replace "completeness" with "completion"
73	6	Change "your" to "you"
73	17	Change "it's significant," to "it is significant to"
76	9	Change "talks" to "talk"
78	7	delete the word "and"
79	7	Change "ready" to "readied"
79	11	Change "insure" to "ensure"
79	19	Change "insure" to "ensure"
79	26	Change "cull" to "call"
85	12	Delete "and"
87	10	Change ""plus" is" to "plots, as"
87	11	Change "size" to "site"
90	3	Change "set" to "shaded"
90	5	Change "prop-up" to "top of rock"
90	5	Change "grid" to "grade"
90	15	Change "first" to "FIRS"
91	17	Replace "either the panelists" with "either of the panelists"
91	20	Replace "so" with "and"
91	21	Delete first "the"; add period after "seismic" and delete following "--"
92	11	Replace "(2004, 2006)" with "2004/2006"
92	21	Replace "(2004, 2006)" with "2004/2006"
93	6	Replace "(2004, 2006)" with "2004/2006"
93	12	Delete "So -- and"; capitalize "this"
94	11	Add ", come" at the end of the line
96	20	Replace "?" with "."
98	1	Change "and" to "in"
98	1	Change "site" to "size"
98	23	Change "intercessing" to "inservice testing"
99	8	Change "licensing division" to "license condition"
99	13	Change "55(a)" to "55a"

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<b>Page</b>	<b>Line</b>	<b>Correction</b>
99	16	Change "50.55(a)" to "50.55a"
100	5	Change "some process there" to "or was in some process there."
102	21	Change "which acts" to "will transfer"
103	24 and 26	Change "Anegawa" to "Onagawa"
106	16	Change "hurricane" to "hurricanes"
108	7	Change "CAL" to "Callan"
108	9	Change "CAL" to "Callan"
112	18	Change "in that office" to "under oath"
112	21	Delete "a"
112	22	Change "it's except" to "it excepts"
113	8	Replace "may be still in" with "may still be in"
117	5	Change "conditionally" to "Commission"
117	13	Change "continuing the" to "containment"
117	23	Change "internal" to "interim"
118	5	Change "these" to "its"
119	4	Change "under" to "in the"
119	4	Change "a" to "the"
119	5	Change "a" to "the"
119	14	Change "the" to "a"
119	14	Change "cool" to "cooled"
119	24	Change "supplies" to "provides"
121	13	Change "ordered" to "Order"
121	24	Change "same" to "design"
125	26	Change "at the" to "active"
127	16	Delete "our"
127	24	Replace "?" with "."
128	20	Change "time" to "timed"
129	7	Change "a build" to "it available"
129	15	Change "that" to "than"
131	19	Replace "have" with "add"
131	24	Replace "?" with "."
134	12	Replace "?" with "."
134	22	Insert period after "recommendations"; delete "and"
135	8	Replace "request" with "requests"
135	9	Delete "endorsed,"
135	12 and 13	Delete "the Vogtle and Summer,"
136	10	Replace "through" with "with"
141	12	Replace "for Panel 1" with "for Environmental Panel 1"

APPENDIX A: Changes to the Transcript for the Fermi Mandatory Hearing  
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<b>Page</b>	<b>Line</b>	<b>Correction</b>
142	10	Change "IS" to "EIS"
154	11	Change "do" to "to"
154	20	Change "one" to "on"
157	19	Change "surface" to "Service's"
157	22	Change "wasn't" to "weren't"
162	5	Change "drafter" to "draft"
163	12	Change "asks" to "as"
166	18	Change "Commissioner Baran" to "Chairman Burns"
167	13	Replace "Commission" with "Commissioner"
167	19	Delete "or"
167	20	Replace "," with "- -"
167	21	Replace "termination" with "determination"
168	9	Change "to date" to "today"
168	17	Delete "the - -"
169	25	Delete one "that"
171	16	Replace "hadn't" with "had"
171	20	Replace "?" with "."
173	19	Change "as Commissioner" to "as a Commissioner"
174	10 and 11	Change "existing programs' acceptance" to "existing programs and plans"
175	13	Replace "?" with "."
175	14	Delete "with"
186	9	Delete one "with"
191	15	Replace "name" with "time"
191	20	Change "consistent" to "considered"
194	5	Replace "anything" with "any things"
194	6	Insert "or" after "documentation"
194	23	Replace "Road" with "Ford"
199	19	Delete "have sort"
199	20	Replace "of" with "hear"
200	1	Replace "from" with "for"
200	1	Delete "-- "
206	22	Replace "?" with "."
207	6	Replace "staffs" with "staff's witnesses"
208	1	Replace "four" with "forty"
209	26	Change "reviews" to "reviewers"
210	9	Delete "not"
211	13	Delete the word "or"
211	26	Replace "undertake" with "make"

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<b>Page</b>	<b>Line</b>	<b>Correction</b>
212	10	Replace "is" with "are"
214	4	Replace "think probably" with "think that probably"
214	6	Replace "thank you all" with "thank all of you"

APPENDIX B: Corrected Transcript  
February 4, 2015

1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

3 + + + + +

4 IN THE MATTER OF DTE ELECTRIC CO.

5 (FERMI NUCLEAR POWER PLANT, UNIT 3)

6 Docket No. 52-033-COL

7 + + + + +

8 WEDNESDAY

9 FEBRUARY 4, 2015

10 + + + + +

11 The Commission met in the Commissioners'

12 Conference Room, 1st Floor, One White Flint North, 11555

13 Rockville Pike, Rockville, Maryland, at 8:30 a.m.,

14 Stephen G. Burns, Chairman, presiding.

15 BEFORE:

16 STEPHEN G. BURNS, Chairman

17 JEFF BARAN, Commissioner

18 WILLIAM C. OSTENDORFF, Commissioner

19 KRISTINE L. SVINICKI, Commissioner

20  
21 APPEARANCES:

22 On Behalf of the United States Nuclear Regulatory

23 Commission:

24 Marcia Carpentier

25 Counsel for NRC Staff

26 U.S. Nuclear Regulatory Commission

1

2 On Behalf of DTE Electric Company:

3 Tyson R. Smith

4 Counsel for DTE Electric Company

5 Winston &amp; Strawn, LLP

6

7 WITNESSES:

8 FRANK AKSTULEWICZ, NRO

9 DAN BARSS, NSIR

10 MANAS CHAKRAVORTY, NRO

11 MARK DELLIGATTI, NRO

12 JENNIFER DIXON-HERRITY, NRO

13 RAUL HERNANDEZ, NRO

14 DAVID HINDS, GE-Hitachi

15 RONALDO JENKINS, NRO

16 HENRY JONES, NRO

17 ANDREW KUGLER, NRO

18 RON MAY, SR., DTE

19 JAVAD MOSLEMIAN, Sargent &amp; Lundy

20 ADRIAN MUNIZ, NRO

21 RYAN NOLAN, NRO

22 THOMAS SCARBROUGH, NRO

23 PETER SMITH, DTE

24 STANLEY STASEK, DTE

25 ANGELO STUBBS, NRO

26 MALLECIA SUTTON, NRO

1 SARAH TABATABAI, RES

2 STEVEN THOMAS, Black & Veatch

3 GLENN TRACY, NRO

4 RANDALL WESTMORELAND, DTE\_

5 ZUHAN XI, NRO

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7 ALSO PRESENT:

8 MARGARET M. DOANE, General Counsel

9 ANNETTE L. VIETTI-COOK, Secretary of the Commission

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EXHIBITS:

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Party: DTE Electric Company

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DTE000001 through DTE000010

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Party: NRC Staff

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NRC000001 through NRC000016

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Steven Thomas, Engineering Manager

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Adrian Muniz, Project Manager, NRO

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9	Angelo Stubbs, Senior Reactor Systems Engineer,	
10	Plant Systems Branch, NRO	
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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. I  
22      just want to note that, of course, we will illuminate  
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. 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 Staff Counsel, would you read the names of  
16 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 Barss, 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 Nolan, Judy Petrucelli, Sheila  
23 Ray, Aida Rivera-Varona, John Rycyna, Thomas  
24 Scarbrough, 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, Mallecia 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 of 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, it's  
2 so 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 go to our first  
10 panel.

11 The first panel will be an Overview,  
12 dealing with overview issues. The first panel will be  
13 witnesses from DTE Electric. Again, we remind the panel,  
14 the witnesses on the panel, that they are under oath.  
15 And I would also advise, you should assume that the  
16 Commission 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. At this point,  
24 you may proceed with your presentations. Thank you.

25 MR. MAY: We'll proceed with Peter  
26 conducting the first segment.

1 CHAIRMAN BURNS: That's fine, great.

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

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

8 MR. SMITH: Oh, okay.

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

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

13 CHAIRMAN BURNS: Yes.

14 MR. SMITH: Okay, thanks.

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

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

1 precursor to this license application.

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

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

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

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

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

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

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

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

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

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

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

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

25 So, it allowed us to do a number of things.  
26 And one of the strategies in using the Project

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

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

1 future project. And, actually, we've done very well in  
2 managing this project and most others that we take on.

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

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

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

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

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

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

26           One of the unique features is that the plant

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

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

25 Also on the site is Fermi 2, the operating  
26 plant. And that's shown --that's the brown-colored

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

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

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

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

1 buildings, engineering buildings, which would all have  
2 to be relocated to support that construction.

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

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

26           In September of 2008, we submitted our

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

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

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

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

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

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

1 containment boundary, is the theory and, therefore, you  
2 don't end up depositing energy and pressurizing the  
3 containment without having active heat removal systems.

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

19 And then the simplicity of the design, a  
20 great amount of effort went into simplifying the design  
21 and reducing the number of components in systems.  
22 There's about 25 percent fewer components in the ESBWR  
23 than in a comparable active BWR plant, and I feel really  
24 confident that everything that's woken me up over the  
25 last 30 years in the middle of the night to address some  
26 problem with, our operating plant doesn't exist in the

1       ESBWR. So, it's a much simpler plant both in design and  
2       operation.

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

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

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

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

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

24              CHAIRMAN BURNS: Thank you. Well, we'll  
25      proceed with questioning for this overview panel from  
26      DTE. I'll lead off the questioning.

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

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

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

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

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

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

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

9 CHAIRMAN BURNS: Thank you. Commissioner  
10 Svinicki.

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

14 As the swearing in of the witnesses  
15 demonstrated, we have a lot of presenters over the  
16 course of today in the room right now, so I want to offer  
17 this bit of operational experience that I have about the  
18 microphones in use today. They work very well but they  
19 have what I would call a very well defined and specific  
20 sweet spot.

21 This is being remotely broadcast as well to  
22 public interest groups and members of the public over  
23 the internet, so to be sure that everyone can hear you  
24 with clarity, once you find that sweet spot, if you don't  
25 sit back in your chair, I think it's helpful. People  
26 won't have to tune their volume up and down who are

1 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, you've got to find the spot and kind of stay in  
5 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. -Which  
3 of those factors played a large contribution, if any,  
4 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 commitments during that  
13 time. 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 ensured 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 seeing that the site is ready. So, those are the kinds  
2 of things we've been worried about.

3 COMMISSIONER BARAN: Thanks. I'll stop  
4 there.

5 CHAIRMAN BURNS: Thank you, Commissioner.  
6 And I thank the witnesses for your testimony. We're  
7 going to call the Staff Overview Panel up first. I think  
8 in case there might be questions of you, perhaps if you  
9 just stay there through the Staff Panel. We'll go ahead  
10 and have the Staff, initial Staff Overview Panel come  
11 forward and take their seats.

12 Okay. Gentlemen, again, welcome, and again  
13 this is the NRC Staff Overview Panel. I'll remind the  
14 witnesses again that they remain under oath. And as I  
15 said before for our first panel, that you should assume  
16 that the Commission is familiar with the pre-hearing  
17 filings made on behalf of the Staff. And with that, I  
18 would ask the panelists to introduce themselves.

19 MR. TRACY: Good morning, Mr. Chairman,  
20 Commissioners. My name is Glenn Tracy, Director of the  
21 Office of New Reactors.

22 MR. DELLIGATTI: Mark Delligatti, Deputy  
23 Director, Division of New Reactor Licensing.

24 MR. AKSTULEWICZ: Frank Akstulewicz,  
25 Director in the Division of New Reactor Licensing.

26 CHAIRMAN BURNS: Okay, you may proceed.

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(2)(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(2)(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 becomes 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, the Applicant noted that a  
14 piping design completed for the first ESBWR would be  
15 available to the subsequent ESBWR plants under the  
16 Design Control, or Design Centered approached. So,  
17 again, if they weren't, in effect, first, that would  
18 just go --North Anna might be first, but again that --I  
19 think what you're saying, as long as we've made the  
20 conclusions that DAC is acceptable, it just, in effect,  
21 if you will the 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 Scarbrough.

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 completion 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 you 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 is significant to 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 call

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 talk 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 position, or the potential for risk from the design as  
8 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 readied 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 ensure 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 ensure 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  
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 "plots, as" is a  
11 function of frequency, the level of site amplification  
12 resulting from the upper 397 feet of rock at the FERMI  
13 site.

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

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

24 We performed additional confirmatory  
25 calculations after completion of our Final Safety  
26 Evaluation Report. We repeated our PSHA calculation

1 using the CEUS SSC model along with the newly released  
2 EPRI 2013 Ground-Motion Model and subsequently  
3 developed a new confirmatory GMRS which is shown by the  
4 green curve in this slide.

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

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

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

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

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

1 addressed to demonstrate acceptability of the ESBWR  
2 standard design at the Fermi 3 site.

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

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

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

26 This slide shows the excavation

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

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

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

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

1 also checked the referenced ESBWR DCD and conducted  
2 additional audits of the site-specific seismic analysis  
3 and calculations.

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

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

14 This concludes our presentation on this  
15 Safety Panel.

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

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

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

1 things. You looked at sensitivity analysis,  
2 confirmatory analyses that you undertook.

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

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

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

1 produce lower hazard levels for the site.

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

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

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

12 COMMISSIONER SVINICKI: Okay, thank you.

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

20 But this has to do with the Commission's  
21 policy on the regulatory treatment of non-safety  
22 systems, and I am not certain what staff witness or  
23 applicant witness would address this, but both the staff  
24 and the applicant were asked pre-hearing questions.  
25 For the applicant, their response is found basically in  
26 the response to question 17, and for the staff, there's

1 a different number here -- no, it is 17 for them as well,  
2 part (b).

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

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

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

18 CHAIRMAN BURNS: Okay, proceed.

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

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

1 MR. NOLAN: Okay. So with respect to  
2 external missiles, I think that's what the question was  
3 asking --

4 COMMISSIONER SVINICKI: Yes, it was.

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

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

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

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

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

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

26 MR. NOLAN: That's correct.

1 COMMISSIONER SVINICKI: Okay, thank you.

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

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

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

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

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

17 MR. NOLAN: That's correct.

18 COMMISSIONER SVINICKI: Okay, thank you.

19 Thank you, Mr. Chairman.

20 CHAIRMAN BURNS: Thank you. Commissioner  
21 Ostendorff.

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

24 I am going to start out with questions that  
25 are not represented, I think, by this group here,  
26 no -- please take no offense at that, but Adrian, you'll

1 need to probably put on your project manager hat.

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

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

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

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

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

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

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

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

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

1 critical systems. There's a more wide range of squib  
2 valves in ESBWR, larger size, you know, different sizes  
3 and such.

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

9 COMMISSIONER OSTENDORFF: And just tell  
10 me --

11 MR. SCARBROUGH: Yes.

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

17 MR. SCARBROUGH: Yes sir.

18 COMMISSIONER OSTENDORFF: Okay.

19 MR. SCARBROUGH: Yes sir.

20 COMMISSIONER OSTENDORFF: All right.

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

1           And so for the smaller ones, which are very  
2 similar to the standby liquid control system in  
3 operating BWRs, we were going to let the OM Code deal  
4 with those, but they still have to deal with that.

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

13           So -- and we're currently in the process of  
14 preparing a 55a rulemaking to incorporate by reference  
15 that 2012 edition of the OM Code, so in the future, Fermi  
16 or any other new plant would be required by 50.55a to  
17 use the latest version of the Code. So we're going to  
18 be capturing it in two ways -- when we have a license  
19 condition, and also down the road, there will be -- the  
20 OM Code actually will capture the same 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, or was in 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 will transfer  
22 into 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 Onagawa, okay, when  
25 I was in Japan. It's the same earthquake, Fukushima,  
26 it also hit Onagawa. 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 hurricanes, 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 Callan memo  
8 we referred to in the pre-hearing question is, that was  
9 the guidance we used at the time, and the Callan memo  
10 was very clear in that these are non-safety-related  
11 systems, they do not need to be protected to the  
12 safety-related level, but the staff believes some level  
13 of protection would be good to have, and we focused the  
14 attention on the external events that would broadly  
15 affect a 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 under oath.

19 CHAIRMAN BURNS: Okay.

20 MR. XI: Yeah, there is a site-specific  
21 ITAAC for the backfill, yes. It's required according  
22 to the DCD requirement for that. But it excepts 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 still be 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 Commission  
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 containment 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 interim  
23 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 its 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 in  
4 the containment by removing heat from the containment  
5 and transferring it to the 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 a submerged and cooled 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 provides 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 Order 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 design  
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 active 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 reference to the DCD, but I don't know  
17 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, timed 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 it available  
8       and implement it prior to fuel load, and this is similar  
9       to the approach that was taken with the Summer  
10       applications when the Commissioner prescribed the  
11       license condition 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 than 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 add 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. 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 requests for information, relevant and  
9 appropriate NRC-endorsed guidance that has guided their  
10 review.

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

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

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

6 MR. MUNIZ: Yes, we have.

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

13 MR. PETER SMITH: Yes, we have.

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

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

25 COMMISSIONER SVINICKI: Okay, thank you.

26 Thank you, Mr. Chairman.

1 CHAIRMAN BURNS: Thank you, Commissioner.

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

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

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

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1 (1:29 p.m.)

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

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

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

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

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

18 CHAIRMAN BURNS: Thank you, and proceed.

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

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

26 MR. PETER SMITH: Oh, I'm sorry. I've got

1 to get back to my --

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

4 MR. PETER SMITH: Sorry.

5 CHAIRMAN BURNS: Thank you.

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

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

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

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

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

26          However, when we did a walkdown with the

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

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

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

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

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

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

21 CHAIRMAN BURNS: Okay. Staff can  
22 proceed.

23 MS. DIXON-HERRITY: Good afternoon.

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

26 MS. DIXON-HERRITY: Good afternoon. Next

1 slide, please, Slide 2. Let's go to Slide 3, please.  
2 With that, I can take out several sentences in my  
3 presentation.

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

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

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

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

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

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

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

1 and other methods.

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

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

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

22 Slide 6, please. To guide its assessment  
23 of the environmental impacts of the proposed action or  
24 alternative actions, the NRC has established a standard  
25 of significance for impacts based on the Council of  
26 Environmental Quality guidance in 40 CFR 1508.

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

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

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

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

26          The potential for moderate terrestrial

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

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

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

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

1 building and operating Fermi 3 would have only a small  
2 incremental contribution to these impacts.

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

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

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

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

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

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

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

26 The potential sites were screened to

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

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

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

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

24 MS. SUTTON: The Fermi 3 final EIS was  
25 published on January 18, 2013. At the time the EIS was  
26 completed, the staff's safety review of the application

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

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

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

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

25 Next slide, please. As part of our  
26 environmental review beginning in 2008, we engaged with

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

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

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

23 Likewise, the staff intends to proactively  
24 prepare a supplement to the biological assessment for  
25 the bat, so that it can be submitted promptly to the Fish  
26 and Wildlife Service if the species is listed as

1 anticipated on April 2nd and action has not been taken.

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

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

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

25 And this concludes the staff's  
26 presentation. Thank you.

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

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

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

22                   The transmission lines are not part of our  
23 licensing action, and, in fact, the company that would  
24 build and operate the transmission lines is a completely  
25 separate company, and we would not be able to obtain any  
26 further information, nor would we have any control over

1 their activities. So we believe the approach we took  
2 using the best information that was available was proper  
3 and complied with NEPA.

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

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

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

24 But if we took the position that we had to  
25 gather detailed information, say surveys, we have no  
26 mechanism in which we could actually do that. We can't

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

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

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

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

1 something that is beyond our action really does not make  
2 sense, I don't think, under NEPA.

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

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

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

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

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

24 COMMISSIONER BARAN: Okay. And would you  
25 have done that analysis if the Army Corps of Engineers  
26 was not a cooperated agency here?

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

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

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

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

23 So, and I asked them what information would  
24 they need us to provide and they said, "We would like  
25 for you to provide a biological assessment." So -- and  
26 so we had to engage with consultation. So I did -- we

1 did our due diligence by reaching out to the Service and  
2 making sure that we was going to meet the Service  
3 requirement.

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

7 MS. SUTTON: Yes, sir.

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

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

24 COMMISSIONER BARAN: Okay. And will the  
25 consultation include potential impacts from  
26 preconstruction activity, such as clearing and grading

1 the site and building the transmission corridor?

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

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

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

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

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

24 MR. MUSSATTI: Dan Mussatti.

25 CHAIRMAN BURNS: Okay. Again, identify  
26 yourself for the record, including your position and

1 confirm whether you have already taken the oath.

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

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

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

9 CHAIRMAN BURNS: Okay.

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

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

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

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

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

15 MR. MUSSATTI: That's correct.

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

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

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

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

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

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

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

26           I have couple minutes left. Mallecia, in

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

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

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

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

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

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

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

12           COMMISSIONER BARAN: Yes. Thank you.

13           MS. SUTTON: You're welcome.

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

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

23           MR. PETER SMITH: No. There weren't any  
24 particular challenges associated with that. We have a  
25 cooperative agreement with the Fish and Wildlife  
26 Service, and we made them well aware of what our plans

1 were. So --

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

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

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

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

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

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

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

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

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

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

17 CHAIRMAN BURNS: But which is it?

18 MS. SUTTON: Threatened.

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

23 MS. SUTTON: Well, the applicant provided  
24 some surveys on both species, the bird and the bat, and  
25 that aided the staff in preparing the biological  
26 assessment. The staff also looked at any other

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

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

11 MS. SUTTON: You're welcome.

12 CHAIRMAN BURNS: Commissioner Svinicki.

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

21 Is that the same as the no effects  
22 determination that the applicant is talking about, or  
23 is the applicant suggesting a different process where,  
24 based on the survey information they provided, the staff  
25 could, if it chose to, move directly to a no effects  
26 determination without supplementing the biological

1 assessment?

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

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

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

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

25 MR. PETER SMITH: Yes.

26 COMMISSIONER SVINICKI: Okay. I'm just

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

8 Did the staff want to add anything to that?

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

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

23 MS. DIXON-HERRITY: Actually, they give  
24 other options. And I think that is what Mallecia was  
25 talking about when she talked about doing the biological  
26 assessment. They allow you to look back at how you

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

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

9 MS. DIXON-HERRITY: Yes.

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

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

24 Can you talk about -- did you end up  
25 adopting that layout, or did you make some sort of  
26 modification based on contemporary considerations and

1 information and requirements?

2 MR. PETER SMITH: No. My reference to the  
3 1968 artist's rendering was anecdotal, and really  
4 didn't influence the decision. It was just after we had  
5 got done out site layout for the location of the new unit  
6 and came across that photo, it was kind of remarkable  
7 that we had independently selected a very similar  
8 location.

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

16 So thank you, Mr. Chairman. I have nothing  
17 else.

18 CHAIRMAN BURNS: Commissioner Ostendorff.

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

24 MR. PETER SMITH: Yes.

25 COMMISSIONER OSTENDORFF: -- you indicate  
26 that there is strong state and local support for

1 Fermi 3. Can you real quick, at a high level, talk  
2 about some of the key factors behind that strong  
3 support?

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

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

16 COMMISSIONER OSTENDORFF: Okay.

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

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

26 MR. PETER SMITH: I would -- I guess one of

1 the measures I would use is the amount of interest we  
2 have at the -- what used to be the annual assessment  
3 meeting of licensee performance, and how many people  
4 would show up for that, and what kind of press coverage  
5 we got for that. And it has generally been pretty  
6 benign at the ones I used to attend when I was on the  
7 plant staff.

8 COMMISSIONER OSTENDORFF: Okay. I'll  
9 give the staff an opportunity, if you wanted to, to  
10 comment on anything the applicant had to say on the  
11 support, if you have anything that's --

12 MS. SUTTON: I have nothing to speak on.

13 COMMISSIONER OSTENDORFF: Okay. That's  
14 fine. Okay. Andrew, I want to go to you for a minute  
15 on a question -- you were talking about the alternative  
16 sites that were considered. Now, this is my third  
17 mandatory hearing as a Commissioner. We did the Vogtle  
18 site, the Summer site, and now Fermi 3.

19 And, you know, it's -- all of these are  
20 adding a plant or plants to existing sites for reactor  
21 plants, and I'm just recognizing some of the factors  
22 about the existing infrastructure and already have  
23 experience with a given site. I'm trying to just -- and  
24 this is not really specific to Fermi, but just on an  
25 overall NEPA-type analysis, how significant is the fact  
26 that we are talking about adding a plant to an existing

1 site as opposed to looking at "a greenfield" or a new  
2 site?

3 MR. KUGLER: Well, a lot of the factors  
4 you're mentioning really don't play too much into the  
5 analysis we are performing, because the first thing we  
6 are looking at is whether the proposed site or whether  
7 an alternative site is environmentally preferable to an  
8 alternative. So things such as existing programs and  
9 plans are not significant players in that sort of an  
10 evaluation.

11 Now, certainly, where you have an existing  
12 plant, there is a lot of information on how the plant  
13 interacts with the environment there, which certainly  
14 aids us in our evaluating how a new plant might affect  
15 it. And a greenfield site, typically you are going to  
16 have greater impacts in at least some areas, because  
17 you're going to have to clear a site in order to put it  
18 to use.

19 But there were always the possibility --  
20 you know, if you have a plant -- an existing site, which  
21 maybe is using the water resource that's available to  
22 the maximum extent possible, I could see a situation  
23 where adding a plant there might not be environmentally  
24 preferable to putting it at some other location. So  
25 it's going to be very case-specific, but some of the  
26 factors would not come into play for environmentally

1       preferable.

2                   Now, if we ever found a situation where  
3       there was an environmentally preferable alternative, we  
4       move into the next step of trying to determine whether  
5       there is an obviously superior alternative, and there  
6       we would consider other factors including costs,  
7       institutional factors, things of that nature, and there  
8       some of those other factors would come into play.

9                   COMMISSIONER OSTENDORFF:     Thank you.  
10       Thank you, Chairman.

11                   CHAIRMAN BURNS:     Commissioner Baran.  
12       Wait, I'm sorry. We've gone through this panel.

13                   COMMISSIONER BARAN:     I went for 14  
14       minutes, but I can keep --

15                   CHAIRMAN BURNS:     Yes, yes, I know. I want  
16       to use up all your time.

17                   COMMISSIONER BARAN:     I already did.

18                   CHAIRMAN BURNS:     We are going now to the  
19       second environmental panel. Essentially, we are going  
20       to have the same witnesses. And what I might ask the  
21       staff to do is, if you could move maybe to the side, so  
22       we have a good eye contact with the applicant panel.

23                   Before the -- we begin with this panel, I  
24       want to note for the -- to the parties that the  
25       Commission is aware that DTE and the staff are prepared  
26       to discuss the implementation of the continued storage

1 rule as part of this panel discussion. The Commission  
2 has received a petition in eight reactor licensing  
3 dockets, including this one, with respect to that issue.

4 The fundamental issue raised by the  
5 Petitioners is whether, under the National  
6 Environmental Policy Act, the NRC must supplement the  
7 final environmental impact statements in each of those  
8 proceedings, each of those eight proceedings, to  
9 reflect the recently promulgated continued storage rule  
10 and generic environmental impact statement.

11 We have requested briefs on the petition  
12 from the Petitioners, the staff, the applicant, and we  
13 will act on the petition in time for our final decision  
14 on license issuance. In the meantime, we would ask both  
15 panels not to address the topic of implementation of the  
16 continued storage rule today.

17 So, again, we will proceed with our  
18 discussion of, and testimony on, environmental issues  
19 with the second half of this panel. Again, the  
20 witnesses are the same and you remain under oath. You  
21 have already introduced yourselves, so you may proceed  
22 for the applicant.

23 MR. PETER SMITH: Okay. So Slide 2, we are  
24 going to cover really two areas of interest from our  
25 perspective, and one is the historical preservation and  
26 the work we did with Fermi 1, and then also some

1 perspective on international interactions at our site,  
2 given our proximity to Canada.

3 Go to Slide 3, please. So as we have talked  
4 about a couple of times today, Fermi 1, we had planned  
5 to remove the remaining structures of Fermi 1 to make  
6 area to support construction of Fermi 3. And in so  
7 doing, that would help us from having to impact other  
8 areas of the site.

9 And so Fermi 1 is eligible for listing on  
10 the National Historic Register -- or National Register  
11 of Historic Places, and so we entered into a mitigation  
12 plan for that, which resulted in archiving of artifacts  
13 and materials associated with Fermi 1, as well as  
14 creating a public exhibit, which is located at the  
15 Monroe County Community College in Monroe. And so that  
16 exhibit opened a year ago August, and it is really quite  
17 an interesting place.

18 I think a lot of people were surprised by  
19 the kinds of things that were presented in the display,  
20 but we have a relationship with Monroe County Community  
21 College through Nuclear Education Program that we  
22 participate in, as well as we're a supporter of the  
23 college and the college opened a new technology center,  
24 of which this exhibit is part of.

25 And so it got a lot of good press in the  
26 local area. We had a lot of dignitaries attend the

1 opening, and it's a pretty interesting exhibit, if you  
2 ever get out that way.

3 So, anyways, we fully have met all of the  
4 stipulations of the memorandum of agreement that we have  
5 with State Historical Preservation Office, Monroe  
6 County Community College, and NRC for the mitigation of  
7 Fermi 1 historical significance.

8 So moving on to international  
9 interactions, you know, as we have talked about, we're  
10 within seven miles of the border. We do have a lot of  
11 opportunities for interaction, and we do have  
12 participation from Canadians, primarily in the  
13 emergency planning area, but that's our primary points  
14 of contact.

15 We also reach out through our governmental  
16 affairs organization, and when we do, you know, their  
17 -- I wouldn't say their annual, but they seem to be on  
18 an annual basis where we have -- we'll host a meeting  
19 for all of the elected officials, and we do get people  
20 coming from Ontario, as well as we've had a number of  
21 contacts from the Canadian Consulate in Detroit with  
22 questions, as they have received questions about our  
23 project over time.

24 So, and we have been doing this for many  
25 years, since Fermi 2 has had the same kinds of  
26 relationships in its entire existence. And in our

1 environmental report we address the potential  
2 trans-boundary impacts of Fermi 3, and we didn't  
3 document anything unique or unusual. And we continue  
4 to do our ongoing outreach.

5 And I have nothing further to offer on this.  
6 Thank you.

7 CHAIRMAN BURNS: Okay. The staff can  
8 rejoin us. And, again, the staff witnesses are the same  
9 as for the first environmental panel. And as I said  
10 before, you're still under oath, but you may proceed.

11 MS. SUTTON: This presentation will  
12 discuss two novel environmental issues. The first I  
13 will be discussing is the historic preservation related  
14 to Fermi 1 and the second international interactions  
15 that took place during the Fermi 3 environmental review.

16 Next slide, please. Can you go back one?  
17 Yes, thank you.

18 The Fermi 1 is a prototype fast breeder  
19 reactor with a generating capacity of 94 megawatts  
20 electric that began commercial operation in 1957. It  
21 was deactivated in 1972, and decommission is expected  
22 to be completed prior to initiation of building Fermi 3.  
23 Fermi 3 will be located adjacent to and generally west  
24 of Fermi 1.

25 Fermi 1 was designated a nuclear historic  
26 landmark by the American Nuclear Society in October

1 1986, and has been formally determined eligible for  
2 listing on the National Register of Historic Places for  
3 NRC, in consultation with Michigan State Historic  
4 Preservation officer.

5 The NRC participated in consultation with  
6 the Michigan State Historic Preservation Officer, DTE  
7 Electric Company, and the Monroe County Community  
8 College, and considered information provided in the  
9 application regarding Fermi 1. For the purpose of the  
10 National Historic Preservation Act, Section 106  
11 compliance, the NRC review team consulted with Michigan  
12 State Historic Preservation Officer, federally  
13 recognized Indian tribes, and additional consulting  
14 parties regarding the potential effects of the proposed  
15 Fermi Unit 3 project on historic properties.

16 Based on this consultation, the NRC staff  
17 determined that if demolition of Fermi 1 is required to  
18 build Fermi 3, this will result in a finding of adverse  
19 effect under applicable National Historic Preservation  
20 Act criteria 36 CFR 800.5.

21 Next slide, please. As a result of this  
22 finding, the NRC and the Michigan State Historic  
23 Preservation Officer and the applicant developed and  
24 executed a memorandum of agreement stipulating measures  
25 to mitigate this finding of adverse effects on historic  
26 properties. Under the memorandum of agreement, the

1 applicant stipulated to recordation of Fermi 1,  
2 consisting of documentation of the structure in the  
3 report.

4 The report included a descriptive and  
5 historical narrative, maps, drawings, and photographs  
6 of Fermi 1, and establishing a permanent exhibit  
7 regarding the history of Fermi 1, in consultation with  
8 Monroe County Community College. In summary, DTE  
9 Electric Company documented the completion of the  
10 stipulations by letter dated January 31, 2014, and  
11 developed and established a permanent public exhibit  
12 regarding the history of the Fermi Unit 1 plant at Monroe  
13 County Community College within two years of the date  
14 of the memorandum of agreement.

15 The stipulations of the memorandum of  
16 agreement were met, and mitigation of the adverse  
17 effects of the project on Fermi 1 can be considered  
18 complete.

19 Next slide, please. Now I'm going to  
20 discuss international interactions. The Fermi 3 site  
21 is located just over seven miles from the international  
22 boundary between the United States and Canada. Because  
23 of this close proximity, international interactions has  
24 been -- have been an important consideration during the  
25 Fermi 3 environmental review.

26 While 10 CFR 51.10 states that the NRC's

1 requirements for implementing the National  
2 Environmental Policy Act do not extend to environmental  
3 effects which NRC's domestic licensing and regulatory  
4 functions may have on the environment of foreign  
5 nations, the staff has undertaken appropriate outreach  
6 to inform its analysis of the potential environmental  
7 impacts of the Fermi 1 project.

8 As part of its outreach, staff contacted  
9 the International Joint Commission, Great Lakes Water  
10 Quality Board, and the Great Lakes Fisheries  
11 Commission. These two organizations are federally  
12 recognized bilateral commissions that have important  
13 roles in the resource and environmental protection  
14 issues of the Great Lakes.

15 In addition, the staff contacted the U.S.  
16 Fish and Wildlife Service, which manages the Detroit  
17 River International Wildlife Refuge jointly with  
18 Canadian governmental counterparts, including  
19 Environment Canada and the Ontario Ministry of National  
20 Resources -- Natural Resources.

21 The interactions with these three  
22 organizations help staff gather relevant information  
23 concerning potential trans-boundary impacts. The  
24 staff also gathered information in Canada through  
25 internet and other literal sources.

26 Next slide, please. In addition to these

1 interactions, prior to the public meetings for scoping,  
2 the environmental impact statement -- for presenting  
3 the staff's analysis in a draft environmental impact  
4 statement, the staff placed advertisements about the  
5 meetings in numerous papers, including the Windsor  
6 Star, a newspaper in the city of Windsor, Canada.

7 The staff also invited emergency  
8 management personnel from Essex County, Ontario, to  
9 participate in a meeting to address Fermi's emergency  
10 planning zone.

11 Next slide, please. During the scoping  
12 process for Fermi 3, the staff received comments from  
13 the city of Windsor, the Fish and Wildlife Service, and  
14 the Canadian Coalition for Nuclear Responsibility.  
15 Comments ranged from highlighting the need to include  
16 contacting different Canadian government entities as  
17 part of the review process, details on species on the  
18 site, identification of information to be considered in  
19 the review, and concerns that should be addressed as  
20 part of the review. Comments on the draft impact  
21 statement were received from two different  
22 international organizations -- Great Lakes United and  
23 the Wildlife Habitat Council.

24 Right before publishing the final  
25 environmental impact statement, staff received a letter  
26 from the Walpole Island First Nation requesting an

1 opportunity to comment on the final environmental  
2 impact statement. This was received via the U.S.  
3 Embassy in Canada. The staff responded to the  
4 Trans-Boundary Affairs Division of Foreign Affairs and  
5 International Trade Canada in a letter.

6 The response described NRC's environmental  
7 review process, provided a copy of the final  
8 environmental impact statement, offered to add the  
9 organization to the mailing list, explained that  
10 although the final environmental impact statement was  
11 published, the environmental review would continue  
12 until the safety review was also complete, and provided  
13 contact information for questions and comments.

14 In summary, the staff took appropriate  
15 steps to ensure that a proposed facility's proximity to  
16 the U.S. and Canada border was properly considered in  
17 its environmental review of the Fermi 3 application.

18 And this concludes this panel  
19 presentation. Thank you.

20 CHAIRMAN BURNS: Okay. Thank you to both  
21 panels, again, for your testimony. I'll start off the  
22 questioning.

23 Let's start off with the international  
24 interaction. Ms. Sutton, you described, I think it may  
25 have been on Slide 4, that there were two bilateral  
26 commissions that were consulted or contacted under

1 consultation. Are there any particular -- what were  
2 they again? One was a bilateral -- maybe it would just  
3 be easier to tell me what they are again.

4 MS. SUTTON: Give me a second. Give me one  
5 second, please. So you want -- you have the Joint  
6 Commission and --

7 CHAIRMAN BURNS: Well, it's the Joint  
8 Commission of what? Joint Commission between whom?

9 MS. SUTTON: Okay. So the Joint  
10 Commission and the Water Quality Board is a -- has both  
11 the U.S. and Canadian entities on this particular  
12 committee or board. And per my read, what they do is  
13 they discuss the international -- any impacts that  
14 affect both countries.

15 CHAIRMAN BURNS: Okay. Are there any  
16 obligations that derive from that agreement with  
17 respect -- other than consultation with respect to the  
18 obligations of the United States, say, versus Canada,  
19 and vice versa?

20 MS. SUTTON: I'm not quite sure what  
21 obligations there is.

22 MS. DIXON-HERRITY: There were no  
23 obligations. We contacted them prior to scope -- prior  
24 to our scoping process to ask them if they were aware  
25 of any environmental concerns in that area we should be  
26 aware of as we decided what the scope of the project was

1 and then provided them with a copy of the DEIS to allow  
2 them to comment.

3 During the scoping period, they provided  
4 reports on, for example, radiation that they had  
5 identified in the Great Lakes. It's a Water Quality  
6 Board. They had a number of reports that they provided  
7 us with information on the lakes.

8 CHAIRMAN BURNS: So it's -- essentially, I  
9 think what I hear you saying is it's a consultative  
10 board. It's a board -- it has basic consultative powers.  
11 I have to have --

12 MR. DELLIGATTI: Yes. This is Mark  
13 Delligatti. I'm still under oath. Yes. It is our  
14 understanding that the Great Lakes Water Quality Board  
15 -- this is the International Joint Commission. The  
16 Great Lakes Water Quality is a consultative board.

17 CHAIRMAN BURNS: Okay. And what was the  
18 other bilateral commission?

19 MS. SUTTON: There was Great Lakes Fishery  
20 Commission.

21 CHAIRMAN BURNS: It's a similar type of  
22 board?

23 MS. SUTTON: Yes.

24 MS. DIXON-HERRITY: It's a similar  
25 organization, yes.

26 CHAIRMAN BURNS: All right. Thank you.

1 There was a discussion during the staff presentation of  
2 the inclusion of Canadian emergency management  
3 personnel. I found it interesting that that discussion  
4 is part of the environmental analysis, since the  
5 emergency planning requirements are in fact safety  
6 requirements.

7 But, again, what was the nature of that  
8 consultation? Was this -- that basically to reinforce  
9 either current planning or potential future planning  
10 obligations or arrangement? Maybe not --  
11 "obligations" is the wrong word, but arrangements with  
12 the Canadian authorities?

13 MS. DIXON-HERRITY: It was a meeting to  
14 discuss planning for the emergency planning --  
15 emergency planning zones.

16 CHAIRMAN BURNS: Okay. But, as I said,  
17 how does that relate to the environmental review? My  
18 disconnect is that's really a safety matter, not so much  
19 an environmental impact matter.

20 MR. DELLIGATTI: Mr. Chairman, if I can --  
21 this is Mark Delligatti again. I believe we still have  
22 our representative from NSIR here, and perhaps he can  
23 come down and shed some light on this.

24 CHAIRMAN BURNS: Okay.

25 MR. BARSS: Thank you. Dan Barss, and I am  
26 still under oath. There is an international agreement

1 between the U.S. and Canada. It is titled, if I can read  
2 it here correctly, Arrangement Between the U.S. NRC and  
3 the CNSC for the Exchange of Technical Information in  
4 Cooperation in Nuclear Matters. And in that regard  
5 there is agreements that we will notify them of events,  
6 they will notify us of events and planning and things  
7 like that.

8 I think as was mentioned, the scope of our  
9 review -- and we mentioned this in our prehearing  
10 questions -- didn't really include Canada because of --  
11 kind of our regulations don't extend beyond that.  
12 However, that does not mean we did not consider it or  
13 they're not considered.

14 And, in fact, as has been mentioned, there  
15 is -- existing Fermi 2 has a very well-established  
16 emergency response program, which has been in place  
17 30-some years. And the Canadians are very active and  
18 involved in that. They have the notifications and get  
19 information through the State of Michigan. Generally,  
20 those things -- so they are included in the emergency  
21 planning process to ensure the safety and protection of  
22 everyone, no matter which side of the border they live  
23 on. Does that help?

24 CHAIRMAN BURNS: Well, yes, it does. It  
25 explains the emergency planning construct. Again, the  
26 issue is, why is --

1           MR. BARSS: Tying the two together was --  
2           it was in regards to the environmental meetings that we  
3           tagged along and were there as part of those meetings.  
4           That is kind of where the two marry together. We didn't  
5           have an independent meeting with them or establish it.  
6           It was part of those meetings, government-to-government  
7           meetings, and the public meetings that are held that  
8           they were invited and participated in those meetings.

9           CHAIRMAN BURNS: Okay.

10          MS. DIXON-HERRITY: And we were trying to  
11          give you a full perspective of the international  
12          interactions that did occur.

13          CHAIRMAN BURNS: Okay.

14          MS. DIXON-HERRITY: Those are what we're  
15          aware of.

16          CHAIRMAN BURNS: Yes. I appreciate that.  
17          I'm just trying to make sure, since we have safety  
18          findings and environmental findings, to make sure I'm  
19          looking at it appropriately.

20                 If I could use the one and a half minutes  
21          I think I had reserved. One question -- I find it  
22          extraordinarily interesting, and some of my fellow  
23          Commissioners may explore this as well, the designation  
24          with respect to Fermi 1, which is a historic industrial  
25          site. And I know, like many of us probably have seen  
26          many of these around -- you know, around the country,

1 around the world, you know, things like the C&O Canal,  
2 large factories, I know for my own family in Western  
3 Massachusetts, the mills and dams that were built during  
4 the industrial age.

5 But the interesting question here is -- for  
6 me is I take it that the Fermi 1 site wasn't designated  
7 as a national historic landmark. It could have been  
8 designated as a national historic landmark, and my  
9 question is, what is the difference I guess? If it had  
10 been -- as I say, ANS honored it with the designation  
11 as a nuclear history landmark. What if it had been  
12 designated a national historic landmark? Because I  
13 find it very interesting in the context in which the  
14 Commission is considering decommissioning of certain  
15 facilities, here you have a particular facility that  
16 would be taken apart and fully decommissioned, yet run  
17 up against the requirements of the National Historic  
18 Preservation Act. Any insight anyone can offer me on  
19 that?

20 MS. SUTTON: It was listed eligible for  
21 Section 106, and in doing so the applicant had certain  
22 stipulations that it had to meet, which they met. And  
23 one of the stipulations was to have some part of the  
24 Fermi 1 presented in an exhibit at the Monroe County  
25 Community College. So, and they have met the  
26 stipulations.

1           CHAIRMAN BURNS: In other words, and maybe  
2 the applicant can speak to this -- in other words, what  
3 was deemed sufficient is providing something, a  
4 meaningful historical record, as opposed to saying --  
5 preserving the object itself. Is that -- do I  
6 understand that correctly?

7           MR. PETER SMITH: Yes. I don't think we  
8 understand the difference. What -- we found ourselves  
9 in the situation that we had to do something and  
10 associate it with our application, and that's the path  
11 we took.

12           CHAIRMAN BURNS: Okay. Thank you. My  
13 time has expired. Oh, yes.

14           MR. CUSHING: This is Jack Cushing, and I'm  
15 under oath still. And I'm in the Office of New  
16 Reactors, an Environmental Project Manager. And under  
17 the National Historic Preservation Act, Section 106,  
18 Consultation, if a property is considered eligible for  
19 listing, it is treated the same way as if it was listed.

20           CHAIRMAN BURNS: Okay.

21           MR. CUSHING: So that way that if you do  
22 find something, and it obviously wouldn't have been  
23 listed, you would -- you'd still have to take the  
24 protective measures.

25           CHAIRMAN BURNS: Okay. Thank you.  
26 Commissioner Svinicki.

1                   COMMISSIONER SVINICKI: To remark upon the  
2 Chairman's confusion over whether some issues were  
3 binned into one panel or another, I note that there is  
4 -- I observed some artificiality there as well in terms  
5 of the international engagement. I would remark that  
6 I felt that the response to the prehearing question  
7 regarding the development of protective action  
8 recommendations for some of the aquatic areas that fall  
9 on the Canadian side of demarcation, I found that  
10 response to be very fulsome, and I thought spoke to the  
11 level of integration in terms of emergency issues that  
12 are -- to me, that gave -- it shown a spotlight on the  
13 coordination, the level of coordination that occurs in  
14 order to have those sort of procedural preparations for  
15 any kind of accident scenario.

16                   So I just -- I refer to that being in the  
17 record, whether that's an environmental issue, an  
18 international issue, or a safety issue, I don't know,  
19 but it's in the record, which is the important part of  
20 it I guess.

21                   On the National Historic Preservation Act,  
22 I -- maybe not as anything to challenge the staff's  
23 conclusion that all of the legal stipulations were met  
24 in terms of mitigating the decommissioning of the  
25 Fermi 1 site. I will remark that I have had the  
26 opportunity to visit Fermi 1, and for anybody who, like

1 me, is kind of geeked up on our atomic heritage, it's  
2 really very interesting.

3 So I appreciate -- again, many of our atomic  
4 heritage sites face the same conundrum. They're very  
5 interesting and unique and noteworthy historically, but  
6 no one basically can have access to them. So, you know,  
7 how does one mitigate and share the historic heritage  
8 with the general population at the same time, respecting  
9 the fact that there can't, for environmental and  
10 security reasons, be public access to a lot of these  
11 things.

12 In that vein, it struck me that the  
13 mitigation that the State of Michigan Historic  
14 Preservation Officer accepted and agreed to with the  
15 applicant appears to be one way of mitigating and  
16 addressing that.

17 I did have a question for the applicant.  
18 You have -- or maybe it was the staff described that  
19 there was documentation, a map, and other informational  
20 things that are now in this display at Monroe County  
21 Community College. I note also that the record  
22 indicated that perhaps Argonne National Laboratory may  
23 take this display, or perhaps other materials. I have  
24 also visited the Argonne National Laboratory. I will  
25 say, not a museum, but just they do have quite a  
26 compilation of atomic heritage pieces from the United

1 States.

2 I don't know if there is -- so it's a  
3 two-part question. Are there any things -- beyond  
4 documentation or information, is there -- was there an  
5 opportunity to provide what I'll call artifacts? Any  
6 kind of non-contaminated items or displays,  
7 instrumentation panels, things like that, often are  
8 part of what can be preserved and shared. And then, is  
9 there any update on the enduring display of this at the  
10 Monroe County Community College, or will it ultimately  
11 be designated to go to Argonne, or is that still under  
12 discussion?

13 MR. WESTMORELAND: As of now, the exhibit  
14 at the Monroe College is a permanent part of the  
15 facility. And Argonne is actually interested in a lot  
16 of the records at Fermi 1. There is a library of  
17 information that they are really interested in. We're  
18 kind of in ongoing discussions with them on transfer of  
19 that information.

20 In terms of the artifacts, we actually went  
21 to the Henry Ford Museum. Quite a number of interesting  
22 artifacts were donated to them at the time that the  
23 facility stopped operating. And so we had -- we went  
24 and basically looked into their warehouses and found  
25 that there was quite a few interesting artifacts there  
26 that we were able to get back on loan, or the Monroe

1 College got back on loan and created specific  
2 containment -- exhibit containments for them. So,  
3 yeah, we had some pretty interesting artifacts there.

4 COMMISSIONER SVINICKI: Okay. Thank you.  
5 I don't have anything else, Mr. Chairman. Thank you.

6 CHAIRMAN BURNS: Commissioner Ostendorff.

7 COMMISSIONER OSTENDORFF: Thank you,  
8 Chairman. I want to make sure that I understand  
9 something Mallecia -- and I guess your comment on  
10 Slide 2 about the demolition being identified as an  
11 adverse impact. My experience in Department of Energy  
12 and with the Naval Reactors Program has been that those  
13 sites that have been used as land-based reactor  
14 prototypes, and the Nuclear Weapons Complex Buildings,  
15 primarily at Oak Ridge, but also Los Alamos, demolition  
16 is the normal end state for those.

17 If Fermi 3 is not built or were not going  
18 to be built, would Fermi 1 stay in place as opposed to  
19 being demolished? And the applicant needs to probably  
20 also respond to this. I'm trying to just understand the  
21 delta here.

22 MR. PETER SMITH: So I think our intention  
23 is to demolish the buildings onsite.

24 COMMISSIONER OSTENDORFF: Irrespective of  
25 the plan to build a new reactor?

26 MR. PETER SMITH: Correct.

1 COMMISSIONER OSTENDORFF: Okay.

2 MR. PETER SMITH: But the timing is where  
3 it would show up. And the likely timing that we would  
4 be thinking about is probably in association with  
5 decommissioning of Fermi 2 when we -- sometime in the  
6 future. We don't have any immediate plans for  
7 demolition. But if we proceed with Fermi 3, we will  
8 need to do that.

9 COMMISSIONER OSTENDORFF: Okay. Thank  
10 you. I'm going to go back and revisit an issue that the  
11 Chairman had previously mentioned. And I'm going to  
12 ask Jennifer this question, but if Dan needs to come up  
13 I'll let you do the nod here. I just want to make sure  
14 that -- this concerns the role of the Canadian emergency  
15 planning and emergency preparedness personnel.

16 Dan had talked at the podium here about  
17 their engagement. But big picture, were there any  
18 concerns raised by the Canadian emergency planning  
19 personnel associated with Fermi 3?

20 MS. DIXON-HERRITY: I am not aware of any  
21 concerns. I was not at the meeting, so --

22 COMMISSIONER OSTENDORFF: Okay. Well,  
23 I'm going to let Dan -- because I think it's important  
24 to have this on the record --

25 MS. DIXON-HERRITY: Okay.

26 COMMISSIONER OSTENDORFF: -- since it was

1 -- we kind of touched around this topic, but I think it  
2 would be helpful to have a clear -- clear answer.

3 MR. BARSS: I was not at the meeting  
4 either. I am Dan Barss, and I am still under oath. I  
5 was not at the meeting either, but to my understanding  
6 they had no concerns or issues that we discussed or that  
7 needed to be discussed. There was nothing significant  
8 at that meeting that came up.

9 And I would add that with Fermi 2 still  
10 being there and operating and having a continuous  
11 emergency preparedness program, when you add another  
12 unit at a site, as far as emergency planning goes, once  
13 you get beyond the site boundary or the fence, the impact  
14 upon the public and the actions that the state and local  
15 governments or provincial governments take -- in a case  
16 would take don't vary much. It doesn't matter if it's  
17 Unit 1, Unit 2, Unit 3, whatever. It's -- the actions  
18 are about the same.

19 So the program that is in place now for  
20 Fermi 2 is pretty much relied on offsite. It will be  
21 the same program for Fermi 2 and 3, if they're operating  
22 simultaneously, or Fermi 3 sometime in the future.

23 COMMISSIONER OSTENDORFF: Does anybody  
24 else want to add anything on that? Licensee, anything?  
25 Okay. Thank you, Dan. Thank you, Chairman.

26 CHAIRMAN BURNS: Commissioner Baran.

1                   COMMISSIONER BARAN:   Going back to the  
2                   Fermi 1 demolition question, just so I understand.  So  
3                   the impacts there were found to be moderate.  And I'm  
4                   just trying to understand a little bit, is the impact  
5                   not large because of the MOA and the establishment of  
6                   this exhibit at the Monroe County Community College?

7                   MS. SUTTON:       The impact is actually  
8                   moderate because of the MOA.  And speaking --

9                   COMMISSIONER BARAN:  So in the absence of  
10                  the MOA, it would have been a large impact, but that has  
11                  been mitigated through the MOA.

12                  MS. SUTTON:       Well, for the SHPO,  
13                  Section 106, when they did the MOA, wanted the  
14                  stipulations for the impact to moderate.  So I can't say  
15                  it would have been large if the MOA wasn't in place.

16                  COMMISSIONER BARAN:  Okay.

17                  MS. SUTTON:  But after looking at all of  
18                  the analysis and the impact, it became moderate with the  
19                  stipulation in place.

20                  COMMISSIONER BARAN:  Okay.  And this is  
21                  probably a straggler question from the last panel, but  
22                  I'll ask it anyway.  Mr. Smith, in DTE's alternative  
23                  site selection process, you weighed alternative sites  
24                  in part based on a factor called public receptivity.  As  
25                  the EIS states, this is not a factor called for in any  
26                  of the applicable staff or industry guidance for

1 alternative site selection.

2 Can you describe the public receptivity  
3 factor in more detail, both what it is meant to measure  
4 and what its significance is in the process of  
5 identifying the preferred site?

6 MR. PETER SMITH: I can generalize about  
7 it. So that actually came from an earlier study that  
8 we did in that same timeframe. Not only were we just  
9 looking at a new nuclear unit, but we were looking to  
10 cite any number of different technologies in the state.  
11 And so one of the factors that our consultant used in  
12 preparing that report was qualitative public  
13 receptivity measure basically of community support.

14 COMMISSIONER BARAN: Okay. That's all I  
15 had. Thank you.

16 CHAIRMAN BURNS: Okay. Thank you. That  
17 concludes the environmental panel. Before we hear  
18 closing statements from the applicant and from the  
19 staff, and closing questions and statements from the  
20 Commission, we will take, let's say, a 10-minute break.

21 (Whereupon, the above-entitled matter went  
22 off the record at 2:56 p.m. and resumed at 3:09 p.m.)

23 CHAIRMAN BURNS: Come back to order.

24 As I say, this next and final session is for  
25 closing statements from the parties as well as for  
26 final questions from the Commission and our own closing

1 remarks or statements.

2 So we will begin with the applicant, and I  
3 believe Mr. Smith is going to give it on behalf of the  
4 applicant.

5 MR. PETER SMITH: That's correct. First  
6 of all, I would like to thank the Commission for holding  
7 the mandatory hearing. For me personally, this is  
8 pretty gratifying and pretty exciting, since I have been  
9 involved with this project from the beginning. And  
10 this really culminates for us a tremendous effort over  
11 the last seven and a half years. I think when we were  
12 talking about manhours, I never said how many I had, and  
13 we've invested more than a quarter of a million manhours  
14 in this project between us and our key contractors.

15 I think the questions were very thoughtful,  
16 and really appreciated this and I think it demonstrates  
17 the thoroughness of the staff's review and of your  
18 review of our application. And we also believe that our  
19 application and the staff's work provides the basis for  
20 you making the statutory findings that you need to in  
21 order to approve a license for us.

22 So like I had mentioned, I've been involved  
23 in this intimately from -- well, late 2006 is when I  
24 started working on this full-time. And we were able to  
25 maintain a pretty intact team throughout this entire  
26 duration, and we feel like we've done a really good job

1 of managing the project from our perspective and being  
2 responsive to the staff's needs.

3 And as I had mentioned this morning,  
4 despite the changes in the economy that, you know, have  
5 some influence on, you know, when and timing of what the  
6 ultimate need is, it always come out with the same  
7 answer, that there is an ultimate need at some point.

8 And, you know, given the time it took, you  
9 know, in the approval process and recognizing this was  
10 kind of a first effort with the DCD and a COL going on  
11 in parallel, it is really important to us to be able to  
12 have the option to make a decision about building a new  
13 nuclear plant if that's necessary, and taking away this  
14 front end risk that we perceived in the last generation  
15 of licensing activities.

16 So we being consistent right from the  
17 beginning on our plan, we have been kind of a tortoise  
18 in this whole thing of just taking one step forward every  
19 day we started out as in S-COLA with anticipating being  
20 in the second wave of COLs to be approved, and, you know,  
21 through the circumstance we end here today.

22 But I think we have done -- we are very  
23 committed to standardization, I think, and the standard  
24 process, you know, as we've mentioned many, many times  
25 today, and that's evidenced by the -- you know, the one  
26 departure and one exemption we have associated with our

1 application. And I think we have created a pretty good  
2 road map for the next one through this effort.

3 So I wanted to comment on one area that the  
4 Commission noted a point of departure between us and the  
5 staff, and that's related to the Endangered Species Act  
6 issue and the timing of consultation. And that for us  
7 has what we would call a significant schedule  
8 implication based on the timing. And one of the  
9 questions that I think remains for us in that is we do  
10 these things a little bit serially at this point, and  
11 what could happen in the next six months that I am now  
12 engaged in yet another consultation or some other issue  
13 that we have to address.

14 And the vehicles exist for us to address  
15 those after we become a licensee. The license includes  
16 an environmental protection plan that tells us exactly  
17 how to act when a new endangered species is added to the  
18 list of endangered or threatened species.

19 We did address in our response to the  
20 questions, the prehearing questions, how we viewed the  
21 legalities of the need for this consultation, and -- but  
22 we'd be happy to provide supplemental filings if that  
23 would be helpful, or in helping the Commission meet its  
24 milestones.

25 And, again, I thank you for conducting this  
26 hearing today.

1                   CHAIRMAN BURNS:   Okay.   Thank you, Mr.  
2                   Smith.   We have the staff -- I believe we will then have  
3                   the staff make its statement.

4                   MR. TRACY:    Thank you, Mr. Chairman and  
5                   Commissioners.   Before I begin, we would like to, if you  
6                   don't mind, clarify one response in the area of the  
7                   assessment of the cumulative effects of new and  
8                   significant issues post-EIS.   Frank, would you please?

9                   MR. AKSTULEWICZ:   Yes.   We want to make  
10                  sure that the response to Commissioner Baran's question  
11                  is clear.   I believe the question was, if you have more  
12                  than one of the issues -- more than one issue identified  
13                  that might be new and you're testing the significance,  
14                  is there an assessment of the cumulative effects of  
15                  multiples of these?   And the answer is clearly yes.

16                  Our process requires me, as the Director of  
17                  Division of New Reactor Licensing, to write a memorandum  
18                  to Glenn explaining the assessments that were done for  
19                  all of the issues that were identified as new with the  
20                  potential for significance, and the outcome of that  
21                  assessment prior to us making a decision to forward the  
22                  SECY paper requesting the mandatory hearing.

23                  MR. TRACY:    Thank you.   So I will begin our  
24                  summary.   Thank you again.   In the mandatory hearing  
25                  SECY paper, the staff's final safety evaluation report,  
26                  the final environmental impact statement, and its

1 presentations during this hearing today, we have  
2 provided an adequate basis for making the necessary  
3 findings set forth in 10 CFR 52.97 and 51.107,  
4 supporting the issuance of the combined license for  
5 Fermi 3.

6 Subsequent to the prehearing filing, the  
7 staff learned that a new species, the rufa red knot bird,  
8 was federally listed as threatened. Because of this  
9 listing, the NRC staff has initiated consultation with  
10 the Fish and Wildlife Service. The staff will notify  
11 the Commission upon completion of that consultation.

12 In this hearing, we have described why the  
13 staff's review of the application has been adequate.  
14 The review was appropriately focused by the finality  
15 accorded to issues within the scope of the ESBWR design  
16 certification. We explained the use of the  
17 well-established design-centered review approach. We  
18 discussed the relevant information incorporated by  
19 reference from the ESBWR design.

20 The staff has demonstrated the  
21 thoroughness of its review process through the use of  
22 staff guidance and interactions with the ACRS,  
23 including the ACRS's agreement with the staff's  
24 conclusion regarding the Fermi 3 application. We  
25 highlighted novel aspects of our safety review and our  
26 environmental review. Specifically, we explained the

1 staff's conclusion that the applicant met all  
2 applicable standards in its implementation of  
3 post-Fukushima near-term task force recommendations,  
4 its analysis of soil structure interaction, and its  
5 seismic evaluation.

6 In addition, we highlighted our process for  
7 compliance with NRC's NEPA regulations in Part 51 and  
8 other applicable environmental statutes and  
9 appropriate interactions with other governmental  
10 agencies and the public. We are similarly confident  
11 that using the Part 52 post-COL issuance activities,  
12 including ITAAC, the construction of reactor oversight  
13 process, the inspection of construction, the inspection  
14 of operational programs, and the oversight of the  
15 transition from construction to operation, we will be  
16 able to confirm that the plant will be built and will  
17 operate in conformance with the license, the Act, and  
18 the Commission's regulation.

19 The applicant understands the necessity of  
20 complying with requirements, and also understands what  
21 needs to be done if it discovers any non-compliance,  
22 including determining the safety significance,  
23 determining operability, determining extent of  
24 condition, and taking prompt and corrective action,  
25 including restoring compliance.

26 In those instances in which we have relied

1 on commitments, we have done so in accordance with the  
2 Commission's policies and practices. There exists  
3 established approved processes by which licensees  
4 maintain their commitments, implement changes, and of  
5 course we oversee those changes.

6 I would note, finally, that the Commission  
7 raised a few questions for the staff during the course  
8 of this hearing for which we said we would provide  
9 additional information for the record. We will provide  
10 those supplemental responses in accordance with the  
11 Commission's schedule order.

12 The staff certainly appreciates the time of  
13 the Commission and this opportunity to present to the  
14 Commission the results of our review. This concludes  
15 our presentation.

16 Thank you.

17 CHAIRMAN BURNS: Thank you, Glenn. And  
18 with that, we will proceed to any -- are there any final  
19 questions that my fellow Commissioners have?  
20 Commissioner Svinicki.

21 COMMISSIONER SVINICKI: Understanding,  
22 Mr. Chairman, that you will recognize us separately and  
23 momentarily for closing statements, I would state that  
24 the only question that I was going to have at this point  
25 was that upon reflecting on their previous responses to  
26 any of my questions I was going to ask if there was anyone

1 who felt that they needed to add to, supplement, or  
2 modify their responses. But it appears from both of the  
3 closing statements that both the applicant witnesses,  
4 representatives, and the staff's witnesses have already  
5 reflected on the day's responses. So I'll just pause  
6 momentarily to just have anyone interject, if that's not  
7 true, but other than that I don't think I have any  
8 questions.

9 Thank you.

10 CHAIRMAN BURNS: Okay. Any --

11 MR. AKSTULEWICZ: I think we're fine with  
12 our responses.

13 MR. PETER SMITH: Likewise, we're fine  
14 with our responses.

15 CHAIRMAN BURNS: Okay. Thank you.  
16 Commissioner Ostendorff.

17 COMMISSIONER OSTENDORFF: I have no  
18 questions.

19 CHAIRMAN BURNS: No further questions?  
20 Commissioner Baran.

21 I have one last question, and it goes to  
22 what the -- the nature of the action that we have before  
23 us for consideration, and that is a COL or combined  
24 license, which under the Part 52 rubric, as opposed to  
25 the early -- the two-part licensing rubric, has a  
26 forty-year life.

1 Under the construction program, I forget  
2 what a construction permit was originally issued for,  
3 but one of the questions -- I guess a question I would  
4 pose to both the applicant and the staff is, the  
5 applicant here has decided from the standpoint of its  
6 business case and its future planning that it wanted to  
7 proceed with a COL, and it may or -- you know, it may  
8 or may not, which is their -- you know, their decision,  
9 actually proceed with it.

10 But the question I would have, both to the  
11 applicant and to the staff, is what particular -- what  
12 special challenges do you see in terms of -- I'd almost  
13 call it knowledge management in the longer term, if, for  
14 example, a decision actually to proceed with  
15 construction doesn't happen for a number of years, as  
16 it would be permitted under the COL.

17 How do you -- what have you thought about  
18 in terms of preserving knowledge, preserving your  
19 readiness, should we grant a COL? I'll start with the  
20 applicant.

21 MR. PETER SMITH: So we've been thinking  
22 about that, and we also recognize that we are likely to  
23 be in a status where we will be a holder with no immediate  
24 plans. So for about the last two years, we have been  
25 working a parallel project called the "holder project"  
26 that is coming to fruition now on setting out all of the

1 infrastructure we need to comply in this status for an  
2 indefinite period of time.

3 Plus, we have included in our long-term  
4 planning budget to support the staff moving forward.  
5 And I think in the past we have demonstrated the ability  
6 to inculcate new people into our staff, and we have a  
7 ready pool of resource within the organization with the  
8 experience and continued operation of Fermi 2.

9 So we believe we are prepared to fill --  
10 fulfill the obligations of being a holder when the time  
11 comes.

12 CHAIRMAN BURNS: Okay. Thank you. Does  
13 staff want to respond?

14 MR. TRACY: First, before I offer either  
15 Mark or Frank, I would just state, Commissioner, that  
16 -- Chairman, any action that we are taking with respect  
17 to the new reactor program and its future keeps in mind  
18 exactly the question that you have raised in order to  
19 be able to retain the knowledge and awareness, both  
20 within headquarters and in Region II, in order to be able  
21 to effect a license and then ensure the proper  
22 oversight.

23 And as you have seen from today's  
24 incredibly diverse panel, and the diversity in age and  
25 otherwise of the technical reviewers and staff, the good  
26 news is that there is this breadth of experience that

1 would allow us to hopefully retain and properly manage  
2 our awareness and cognizance of the details of this  
3 license.

4 Frank, would you like to add anything?

5 MR. AKSTULEWICZ: Just a couple of  
6 thoughts, and I'm going to break down my answer into two  
7 time periods, the what I'll call near term and then long  
8 term. For the near term, I think I would put that in  
9 the five-year window maybe. We still have the North  
10 Anna review, which is very active in front of us. It  
11 will assist in the development of the design detail for  
12 the ESBWR as they continue to work through the more  
13 detailed elements that get to whether or not they can  
14 procure things and make sure that they can be  
15 constructed.

16 And so, you know, a decision to build prior  
17 to the 2020 timeframe is probably going to involve the  
18 staff in a lot of activities on the ESBWR itself. So  
19 from a knowledge management situation, I still believe  
20 we will be very active. This is the time we have seen  
21 tremendous engagement with AP1000, as they have been  
22 working through the design detail while they are in  
23 construction. I see no reason to suspect that they are  
24 not going to run into similar design detail types of  
25 questions resulting in departures or future license  
26 amendments or such.

1 All right. Longer term, I think we kicked  
2 -- we touched on that as part of our discussion earlier  
3 today. They have the FSAR updates. There is going to  
4 be a skills -- skill area that we will have to make sure  
5 that we keep our eyes on to make sure we have expertise  
6 and staff to deal with potential challenging technical  
7 matters if we see them evolving. And then, when they  
8 engage in construction, the early parts of  
9 construction, where we are dealing with foundation or  
10 geologic issues because there is -- there is some ITAAC  
11 associated with mapping of the soil once they start  
12 digging the foundation area. So we'll have to make sure  
13 that we preserve that resource going forward.

14 CHAIRMAN BURNS: Okay. Thank you. I  
15 have no further questions. With that, I'll turn to  
16 Commissioner Svinicki for her final remarks.

17 COMMISSIONER SVINICKI: Well, again, I  
18 thank all of the applicant and staff witnesses, but  
19 also, and very significantly, those who were not  
20 witnesses but whose work over the course of a number of  
21 years now has contributed to the responses that we  
22 received today.

23 Chairman Burns began by discussing kind of  
24 what this mandatory hearing is, but also what it isn't,  
25 the findings that we have to make. At the risk of being  
26 a little bit of a broken record, I will state that this

1 mandatory hearing is but one element of a very, very  
2 substantial and thorough process.

3 The purpose of today is to look at this  
4 process for conducting these reviews over which the  
5 Commission has day-to-day and week-to-week supervisory  
6 oversight of the process. And so the question we ask  
7 ourselves is, in this instance, was the process  
8 sufficient, adequate, did it miss anything?

9 And so we have asked questions. There are  
10 things we've asked about, things we haven't asked about.  
11 That in no way speaks to the relevance or significance  
12 of all of the issues that were looked at. Questions are  
13 often asked in a way that you might say it leans one way  
14 or another. My advice would be don't read too much into  
15 that, because we will likely have post-hearing  
16 questions. Speaking for myself, I will reflect on the  
17 responses of today not only to my questions but to the  
18 questions of my colleagues.

19 We will have perhaps followup questions.  
20 We will review that record in its entirety and arrive  
21 at this important decision that we have to make, which  
22 is, again, not the beginning of a process but coming very  
23 much towards the end of a very thorough agency look at  
24 all of these issues.

25 So, again, I thank everyone for their  
26 responses and their participation. Thank you, Mr.

1 Chairman.

2 CHAIRMAN BURNS: Commissioner Ostendorff.

3 COMMISSIONER OSTENDORFF: I also want to  
4 thank the applicant for a professional presentation  
5 today, in addition to your materials provided. My  
6 heartfelt thanks to all of the NRC staff that worked on  
7 this across many different offices and organizations.  
8 I think you have served the Commission very well in  
9 providing a very solid foundation for the Commission to  
10 make a decision here going forward.

11 So I thank you all.

12 CHAIRMAN BURNS: Commissioner Baran.

13 COMMISSIONER BARAN: I just want to join my  
14 colleagues in thanking the NRC staff, and today's  
15 participants for their obvious hard work. I was very  
16 impressed by the very high level of preparation for  
17 today's hearing that was I think demonstrated  
18 throughout the day.

19 I think today's hearing was very valuable,  
20 has been very valuable, and I thank everyone again.

21 CHAIRMAN BURNS: Thank you. Madam  
22 Secretary, you have something you'd like to --

23 MS. VIETTI-COOK: You had one item  
24 earlier, a question that you had asked staff about,  
25 first-of-a-kind ITAAC for the ESBWR, and the staff would  
26 like to take that for the record.

1                   CHAIRMAN BURNS: That's fine. We'll put  
2 it probably in the post-hearing questions where -- I  
3 think that probably is the easiest thing to do.

4                   Again, I will echo the remarks of my  
5 colleagues and thank all of you who have appeared here  
6 today and all of those who have supported you either in  
7 person or in their offices or elsewhere, for both the  
8 applicant and for the staff. I think we had a  
9 productive day and interesting exchanges on a number of  
10 the issues that are before us in this -- on the question  
11 of whether to grant this COL application.

12                   Again, I would also thank particularly  
13 those who have helped us with some of the logistical  
14 things, Madam Secretary, and your -- you and your staff,  
15 and Brooke Poole, the Director of OCAA, the Office of  
16 Commission Appellate Adjudication, which is also near  
17 and dear to my heart, but her and her staff for their  
18 support and helping script me through. And I didn't do  
19 too badly. I give myself a B minus on that.

20                   (Laughter)

21                   But, again, thank you all. And I also want  
22 to thank and acknowledge, as Commissioner Svinicki  
23 noted, this is one part of a process in the consideration  
24 of the COL, and there are other parts of it. And we  
25 thank those who have contributed, whether they are state  
26 and local or foreign governments and agencies who have

1 provided comments and insights, either because they are  
2 at our request or in carrying out their own statutory  
3 obligations and duties, to members of the public who  
4 have expressed an interest by commenting on the  
5 environmental statement or participating in the  
6 contested aspects of these proceedings.

7 I think we owe them thanks for raising the  
8 questions that are addressed through the staff's SER,  
9 the EIS, and through the hearing process, whether  
10 contested or uncontested.

11 Just for the final procedural notes for  
12 now, and there will be more to come on this, essentially,  
13 we anticipate that there will be -- the deadline for  
14 responses to post-hearing questions will be  
15 February 19, 2015, unless the Commission directs  
16 otherwise. I think we are shooting to have a post --  
17 an order with post-hearing questions by about February  
18 11th.

19 And then, you will be provided an  
20 opportunity, both parties, to provide transcript  
21 corrections, if you so choose, and I anticipate that  
22 deadline will be February 18, 2015. And we -- again,  
23 you should expect to see an order requesting proposed  
24 transcript corrections on or about February 9th.

25 Again, what the Commission is -- in this  
26 part of the proceeding will do is issue a decision. We

1 expect to do so promptly, with due regard to the  
2 complexity of the issues before us and the other matters  
3 that we may need to decide.

4 And with that, I, again, thank you all, and  
5 we are adjourned.

6 (Whereupon, the above-entitled matter went  
7 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 (Adopting Proposed Transcript Corrections and Admitting Post-Hearing Exhibits)** have been served upon the following persons by Electronic Information Exchange.

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**ORDER (Adopting Proposed Transcript Corrections and Admitting Post-Hearing Exhibits)**

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[Original signed by Clara Sola \_\_\_\_\_]  
Office of the Secretary of the Commission

Dated at Rockville, Maryland  
this 9<sup>th</sup> day of March, 2015