

## Davis-BesseNPEm Resource

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**From:** CuadradoDeJesus, Samuel  
**Sent:** Tuesday, February 07, 2012 7:40 PM  
**To:** 'dorts@firstenergycorp.com'  
**Cc:** 'custerc@firstenergycorp.com'; Davis-BesseHearingFile Resource  
**Subject:** 9/16/2011 teleconference call summary  
**Attachments:** 9 16 2011 DB NRC Telecon Summary.docx

**Importance:** High

Steve,

Let me know if FENOC has any comment.

Regards,

**Samuel Cuadrado de Jesús**

Project Manager

Projects Branch 1

Division of License Renewal

U.S. Nuclear Regulatory Commission

Phone: 301-415-2946

[Samuel.CuadradoDeJesus@nrc.gov](mailto:Samuel.CuadradoDeJesus@nrc.gov)

**Hearing Identifier:** Davis\_BesseLicenseRenewal\_Saf\_NonPublic  
**Email Number:** 3508

**Mail Envelope Properties** (377CB97DD54F0F4FAAC7E9FD88BCA6D08071E2505A)

**Subject:** 9/16/2011 teleconference call summary  
**Sent Date:** 2/7/2012 7:40:16 PM  
**Received Date:** 2/7/2012 7:40:18 PM  
**From:** CuadradoDeJesus, Samuel

**Created By:** Samuel.CuadradoDeJesus@nrc.gov

**Recipients:**

"custerc@firstenergycorp.com" <custerc@firstenergycorp.com>

Tracking Status: None

"Davis-BesseHearingFile Resource" <Davis-BesseHearingFile.Resource@nrc.gov>

Tracking Status: None

"dorts@firstenergycorp.com" <dorts@firstenergycorp.com>

Tracking Status: None

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MESSAGE	328	2/7/2012 7:40:18 PM
9 16 2011 DB NRC Telecon Summary.docx		32213

**Options**

**Priority:** High  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

LICENSEE: FirstEnergy Nuclear Operating Company

FACILITY: Davis-Besse

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON  
SEPTEMBER 16, 2011, BETWEEN THE U.S. NUCLEAR REGULATORY  
COMMISSION AND FIRSTENERGY NUCLEAR OPERATING COMPANY,  
CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING  
TO THE DAVIS-BESSE, LICENSE RENEWAL APPLICATION (TAC. NO.  
ME4640)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of FirstEnergy Nuclear Operating Company (FENOC or the applicant) held a telephone conference call on September 16, 2011, to discuss and clarify the applicant's responses to the staff's requests for additional information (RAIs) concerning the Davis-Besse license renewal application.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a description of the staff concerns discussed with the applicant. A brief description on the status of the items is also included.

The applicant had an opportunity to comment on this summary.

Samuel Cuadrado de Jesús, Project Manager  
Projects Branch 1  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket Number:50-346

Enclosures:

1. List of Participants
2. List of Requests for Additional  
Information

cc w/encls: See next page

LICENSEE: FirstEnergy Nuclear Operating Company

FACILITY: Davis-Besse

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON SEPTEMBER 16, 2011, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND FIRSTENERGY NUCLEAR OPERATING COMPANY, CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE DAVIS-BESSE, LICENSE RENEWAL APPLICATION (TAC. NO. ME4640)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of FirstEnergy Nuclear Operating Company (FENOC or the applicant) held a telephone conference call on September 16, 2011, to discuss and clarify the applicant's responses to the staff's requests for additional information (RAIs) concerning the Davis-Besse license renewal application.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a description of the staff concerns discussed with the applicant. A brief description on the status of the items is also included.

The applicant had an opportunity to comment on this summary.

Samuel Cuadrado de Jesús, Project Manager  
Projects Branch 1  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket Number: 50-346

Enclosures:

1. List of Participants
2. List of Requests for Additional Information

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SUMMARY OF TELEPHONE CONFERENCE CALL  
DAVIS-BESSE  
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS  
September 16, 2011

PARTICIPANTS

Samuel Cuadrado de Jesús  
Allen Hiser  
Ching Ng  
Omesh Chopra  
Allen McAllister  
Larry Hinkle  
John Hartigan  
Tony Giannuzzi

AFFILIATIONS

U.S. Nuclear Regulatory Commission (NRC)  
NRC  
NRC  
Argonne National Laboratory  
FirstEnergy Nuclear Operating Company (FENOC)  
FENOC  
FENOC  
Structural Integrity Associates

SUMMARY OF TELEPHONE CONFERENCE CALL  
DAVIS-BESSE  
LICENSE RENEWAL APPLICATION  
September 16, 2011

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of FirstEnergy Nuclear Operating Company (FENOC or the applicant) held a telephone conference call on September 16, 2011, to discuss and clarify the following response to requests for additional information (RAIs) concerning the Davis-Besse license renewal application (LRA).

**Response to RAI B.2.22-7**

**Discussion:**

The staff stated that during a telephone conference call held on September 13, 2011, the applicant agreed to submit a supplemental response to provide additional information related to examinations to monitor for cracking of the containment penetration sleeves, dissimilar metal welds, bellows, and steel components that are subject to cyclic loading. This supplemental response was to include frequency, sample size, basis for sample size, and to emphasize the use of Appendix J testing.

As a follow-up to the September 13, 2011, telephone conference call the staff requested the applicant to also address scheduling of the subject inspections. The applicant action item is updated as follows.

**Action:** The applicant to provide additional information related to containment penetration component cracking examination scheduling, frequency, sample size, basis for sample size, and to emphasize the use of Appendix J testing. In addition, the applicant to clarify that development of penetration fatigue analyses would remove the requirement to perform examinations for cracking. The applicant to provide a supplemental response to RAI B.2.22-7.

**Response to RAI 4.1-2**

**Discussion:**

In its response dated Aug 17, 2011, the applicant stated that the fracture toughness of the cast austenitic stainless steel is not time-dependent as the analysis used a lower bound fracture toughness of 139 ksi x in<sup>1/2</sup> that bounds the saturated fracture toughness of the Davis-Besse material. The staff's concern is that the applicant's basis may be predicated on charpy or thermal aging data that are not up-to-date or conservative when compared to the most recent data for the state of the industry.

It is not clear to the NRC staff whether the assumption that "the lower bound fracture toughness of 139 ksi x in<sup>1/2</sup> that bounds the saturated fracture toughness of the applicant's materials" remains valid.

To address the staff's concern that the applicant's basis may be predicated on charpy or thermal aging data that are not up-to-date or conservative when compared to the most recent

data for the state of the industry, the applicant agreed to compare the thermal aging data used in the ASME Code Case N-481 evaluation to the most recent industry data (i.e., NUREG/CR-4513, Revision 1, "Estimation of Fracture Toughness of Cast Stainless Steels During Thermal Aging in LWR Systems," and NUREG/CR-6428, "Effects of Thermal Aging on Fracture Toughness and Charpy-Impact Strength of Stainless Steel Pipe Welds"), and provide the results in a supplemental response to RAI 4.1-2.

**Action:** The applicant to provide a supplemental response to RAI 4.1-2.

#### **Other Follow-Up Items**

1) LRA Section 4.7.3 – The applicant determined that the fracture mechanics analysis that evaluated the integrity of the reactor vessel against pressurized thermal shock (PTS) for 52 effective full power years (EFPY) considering the 35°F minimum temperature for the borated water storage tank is not docketed. In addition, Section 5.2 of the Updated Safety Analysis Report (USAR) has not been updated at this time with the results of the analysis. The applicant stated that the results are included in approved USAR Change Notice 09-183.

**Action:** The applicant to provide the USAR changes from USAR Change Notice 09-183 in a supplemental response.

2) The staff requested the applicant to identify the location in the LRA of the USAR supplement (Appendix A) for LRA Section 4.7.5.1 – The applicant stated that the applicable LRA Appendix A section is A.2.6.1. The staff stated that no other information was needed.

3) The staff requested the applicant to identify the location in the LRA of the USAR supplement (Appendix A) for Section 4.7.5.2 – The applicant stated that applicable LRA Appendix A section is A.2.6.2. The staff stated that no other information was needed.

There was no further discussion, and the call was concluded.

SUBJECT: Summary of Telephone Conference Call conducted on September 16, 2011

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**E-MAIL:**

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RidsNrrDlrRpb2 Resource

RidsNrrDlrRarb Resource

RidsNrrDlrRapb Resource

RidsNrrDlrRasb Resource

RidsNrrDlrRerb Resource

RidsNrrDlrRpob Resource

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