

July 11, 2008

Mr. Jack M. Davis
Senior Vice President and
Chief Nuclear Officer
Detroit Edison Company
Fermi 2 - 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: ERRATA TO FERMI POWER PLANT, UNIT 2
NRC INITIAL LICENSE EXAMINATION REPORT 05000341/2008301

Dear Mr. Davis:

On March 25, 2008, the U.S. Nuclear Regulatory Commission (NRC) issued Initial License Examination Report 05000341/2008301 (ML080880166) for your Fermi Power Plant, Unit 2. A report enclosure for Post Examination Comments with NRC Resolution was omitted from the original report. In addition, the proposed vice administered RO and SRO written examinations were inadvertently identified as the administered examinations, uploaded to ADAMS and attached to the report. The enclosed errata contains the omitted enclosure and administered written examinations with answer key. The enclosure should be inserted as Enclosure 2A, the RO and SRO written examinations with answer key (ML081920353) should replace the RO and SRO written examinations with answer key in Enclosure 3 of Initial License Examination Report 05000341/2008301.

Sincerely,

/RA/

Hironori Peterson, Chief
Operations Branch
Division of Reactor Safety

Docket No. 50-341
License No. NPF-43

Enclosures:

- 2A. Errata to Inspection Report No. 05000341/2008301(DRS)
3. RO and SRO written examinations with answer key

See Attached Distribution

Mr. Jack M. Davis
 Senior Vice President and
 Chief Nuclear Officer
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 Fermi 2 - 210 NOC
 6400 North Dixie Highway
 Newport, MI 48166

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 NRC INITIAL LICENSE EXAMINATION REPORT 05000341/2008301

Dear Mr. Davis:

On March 25, 2008, the U.S. Nuclear Regulatory Commission (NRC) issued Initial License Examination Report 05000461/2008301 (ML080880166) for your Fermi Power Plant, Unit 2. A report enclosure for Post Examination Comments with NRC Resolution was omitted from the original report. In addition, the proposed vice administered RO and SRO written examinations were inadvertently identified as the administered examinations, uploaded to ADAMS and attached to the report. The enclosed errata contains the omitted enclosure and administered written examinations with answer key. The enclosure should be inserted as Enclosure 2A, the RO and SRO written examinations with answer key should replace the RO and SRO written examinations with answer key in Enclosure 3 of Initial License Examination Report 05000461/2008301.

Sincerely,
 /RA/

Hironori Peterson, Chief
 Operations Branch
 Division of Reactor Safety

Docket No. 50-341
 License No. NPF-43

Enclosures:

- 2A. Errata to Inspection Report No. 05000341/2008301(DRS)
- 3. RO and SRO written examinations with answer key

See Attached Distribution

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Letter to Jack M. Davis from Hironori Peterson dated July 11, 2008

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NRC INITIAL LICENSE EXAMINATION REPORT 05000341/2008301

cc w/encls: J. Plona, Vice President,
Nuclear Generation
K. Hlavaty, Plant Manager
R. Gaston, Manager, Nuclear Licensing
D. Pettinari, Legal Department
Michigan Department of Environmental Quality
M. Yudasz, Jr., Director, Monroe County
Emergency Management Division
Supervisor - Electric Operators
T. Strong, State Liaison Officer
Wayne County Emergency Management Division

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ERRATA TO NRC INTEGRATED INSPECTION REPORT 05000341/2008301

POST EXAMINATION COMMENTS AND RESOLUTIONS

RO Question Number 49

Which malfunction below, were it to occur during a Design Basis Loss of Coolant Accident (DBA-LOCA), would threaten Primary Containment Integrity?

Consider each malfunction, independently, as the **ONLY** malfunction.
Assume that **NO** operator action is taken in response to the malfunction.

- A. Safety Relief Valve B2104-F013H has a break in its Tailpipe located in the Drywell.
- B. SST 65 TRIPS and Emergency Diesel Generator 13 FAILS TO START.
- C. **ALL** Drywell Spray Valves FAIL TO OPEN when attempting to initiate Drywell Spray.
- D. **ALL** Torus to Drywell Vacuum Breaker Check Valves FAIL TO OPEN when Drywell Spray is in operation.

Answer: D

Applicant Comment:

An applicant commented that answer "C" should also be accepted as correct.

Fermi 2 is a Mark 1 Containment and is susceptible to the phenomenon of "chugging." (See Appendix B, Revision 2 of the Emergency Procedure Guidelines (EPG), page B-7-35, for additional information regarding the following.)

Following a DBA-LOCA (Design Basis Accident-Loss of Coolant Accident), Drywell Pressure (DW/P) would rapidly increase and force steam and non-condensable gasses from the Drywell (DW) into the Torus. Torus Pressure would rapidly rise and exceed the Suppression Chamber Spray Initiation Pressure (SCIP), which is 9 psig for Fermi 2. Once the Torus Pressure exceeds 9 psig, the EPGs assume that a large fraction (95%) of the non-condensable gases (nitrogen inerting the DW) in the DW have been transferred to the Torus. Once this occurs, chugging becomes a primary concern.

Chugging is defined as the repeated collapsing, and reformation, of steam bubbles at the Downcomer Vent opening. When the steam bubbles collapse at the exit of the Downcomers, the rush of water drawn into the Downcomer, to fill the void, induces severe stresses at the junction of the Downcomers and Vent Header in the Mark 1 Containment. Repeated application of such stresses could cause fatigue failure of these joints, thereby creating a direct path between the Drywell and Suppression Chamber. Steam discharged through the Downcomers could then bypass the Suppression Pool and directly pressurize the Primary Containment.

Initiating Drywell Sprays when Torus Pressure exceeds 9 psig will cause the non-condensable gasses to be drawn back into the Drywell atmosphere, thereby preventing “chugging.”

With Drywell Sprays not available (as stated in distractor “C”) chugging could not be prevented and containment integrity could be threatened as described in the EPGs.

Facility Proposed Resolution:

The question grading for the exam should be changed to accept both “C” and “D” as correct answers. This is due to the additional information identified during the post-exam review. This question is correct, as written, and does not require any changes prior to incorporation into the exam bank.

NRC Resolution:

Upon review of the question, the applicant comment, and the facility proposed resolution, it was decided to accept both “C” and “D” as correct answers.

The Fermi 2 UFSAR, Section 6.2.1.3.2, states that for a DBA-LOCA, [Drywell] Sprays are not needed to keep drywell pressure below the design limit which would imply the primary containment integrity was not threatened. However, the issue of chugging is not addressed. As identified by the applicant, the BWROG EPGs/SAGs, Appendix B, Section 7, states that Drywell Sprays are required to preclude chugging when the SCIP is exceeded. Chugging results in an application of cyclic stresses to the joint between the downcomer and vent pipe that could cause fatigue failure of these joints. A review of NUREG 0661, Mark 1 Containment Long-Term Program, states that chugging can occur for DBA-LOCA, Intermediate and Small Break LOCAs. The potential for chugging exists for a longer period of time in the Intermediate and Small Break LOCAs and thus has more potential to defeat the primary containment integrity.

The term “threat” used in the question stem is not quantitatively defined. Any loss of preventive measure to reduce containment pressure during a LOCA could be considered an increase in threat to the primary containment integrity. Both choices “C” and “D” could be considered a threat to primary containment integrity.

RO Question Number 63

Which **ONE** of the following is the reason for having the Main Steam Tunnel High Temperature Isolation?

The main Steam Tunnel High Temperature Isolation will:

- A. **LIMIT** the escape of radioactivity from the MSL Tunnel to the Reactor Building HVAC system.
- B. **PREVENT** exceeding the Environmental Qualification temperature limits on the MSIV control solenoids.

- C. **PROTECT** the integrity of the Secondary Containment **AND** ensure the continued operability of safe shutdown equipment.
- D. **MINIMIZE** radioactive releases to the environment **AND** limit the inventory loss from the reactor under all accident conditions.

Answer: D

Applicant Comment:

An applicant commented that answer “C” should also be accepted as correct.

The term **reason** [leads one] to not look for the basis of the Main Steam Tunnel High Temperature Auto Isolation. The stem should have stated the auto isolation and the basis per 10 CFR 100. This allowed Answer “C” to also be correct. Answer “C” is a reason to isolate MSIVs [Main Steamline Isolation Valves] manually. Since the stem doesn’t state an auto isolation.

The Secondary Containment and Radioactive Release EOP purpose is to protect equipment important to safety in the Secondary Containment, to protect the integrity of the Secondary Containment, and to limit radioactivity release to and from the Secondary Containment.

Facility Proposed Resolution:

The question grading for the exam should be changed to accept both “C” and “D” as correct answers. The question originally had “basis” instead of “reason” in the stem. It was changed upon NRC request.

NRC Resolution:

Upon review of the question, the applicant comment, and the facility proposed resolution, it was decided to accept only the original correct answer.

The semantics of the question stem, as written, is clear in asking for the reason for the isolation, vice not a reason to isolate the Main Steam Tunnel. The term “Main Steam Tunnel High Temperature Isolation” uses capitol letters to infer and identify a specific automatic feature, and is referenced as such in the Fermi Technical Specifications. The term “basis” as used by technical specifications, provides the explanation or justification of why the automatic Main Steam Tunnel Isolation is required. The term “reason” as used in the question stem, is defined in the Merriam-Webster Collegiate Dictionary as “a statement offered in explanation or justification.” The references supplied with the post examination comments for this question to support “C” as a correct answer were described as the “purpose” of the Secondary Containment Control and Radioactive Release EOP; however, the same reference for the question distractor described “C” as a “basis” type reference. Both references were used to address the “reason” for the Main Steam Tunnel High Temperature Isolation. As such, the terms “basis,” “reason,” and “purpose” have been interchangeably used by both the examiners and the licensee to ask and answer the question.

The post examination comment identified "C" as a correct answer and referenced the Secondary Containment Control and Radioactive Release EOP purpose as a reason to isolate the Main Steam Tunnel. However, the EOP incorporates the purpose of various systems and designs, and is not focused on a specific isolation. The reason (bases, or purpose) of isolating the Main Steam Tunnel on High Temperature was addressed by the licensee supplied documents ST-OP-315-0048 and Technical Specification Basis 3.3.6.1-1, Revision 38, which support only "D" as the only correct answer.

WRITTEN EXAMINATIONS AND ANSWER KEYS (RO/SRO)

RO/SRO Initial Examination ADAMS Accession # ML081920353.