



10 CFR 52.79

November 9, 2010
NRC3-10-0050

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

References: 1) Fermi 3
Docket No. 52-033
2) Letter from Jerry Hale (USNRC) to Jack M. Davis (Detroit Edison), "Request for Additional Information Letter No. 45 Related to the SRP Section 03.09.06 for the Fermi 3 Combined License Application," dated October 27, 2010

Subject: Detroit Edison Company Response to NRC Request for Additional Information Letter No. 45

In Reference 2, the NRC requested additional information to support the review of certain portions of the Fermi 3 Combined License Application (COLA). The response to the Request for Information (RAI) in Reference 2, RAI 03.09.06-1, concerning the in-service testing (IST) program for explosively actuated valves, is provided as Attachment 1 to this letter.

Information contained in this response will be incorporated into a future COLA submission as described in the RAI response.

If you have any questions, or need additional information, please contact me at (313) 235-3341.

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I state under penalty of perjury that the foregoing is true and correct. Executed on the 9th day of November 2010.

Sincerely,



Peter W. Smith, Director
Nuclear Development – Licensing and Engineering
Detroit Edison Company

Attachments: 1) Response to RAI Letter No. 45 (Question No. 03.09.06-1)

cc: Adrian Muniz, NRC Fermi 3 Project Manager
Jerry Hale, NRC Fermi 3 Project Manager
Bruce Olson, NRC Fermi 3 Environmental Project Manager (w/o attachments)
Fermi 2 Resident Inspector (w/o attachments)
NRC Region III Regional Administrator (w/o attachments)
NRC Region II Regional Administrator (w/o attachments)
Supervisor, Electric Operators, Michigan Public Service Commission
(w/o attachments)
Michigan Department of Natural Resources and Environment
Radiological Protection Section (w/o attachments)

**Attachment 1
NRC3-10-0050**

**Response to RAI Letter No. 45
(eRAI Tracking No. 5125)**

RAI Question No. 03.09.06-1

NRC RAI 03.09.06-1

Section C.IV.4 in Regulatory Guide 1.206 discusses the requirement in 10 CFR 52.79(a) for descriptions of operational programs that need to be included in the FSAR for a COL application to allow a reasonable assurance finding of acceptability. In particular, a COL applicant should fully describe the in-service testing (IST) program as defined in SECY 05-197 (accepted in an SRM dated February 22, 2006). Subsection ISTC-5260, "Explosively Actuated Valves," in the *ASME Code for Operation and Maintenance of Nuclear Power Plants* (OM Code) specifies that at least 20 percent of the charges in explosively actuated (squib) valves shall be fired and replaced at least once every 2 years. In light of the updated design and safety significance of squib valves in new reactors, the need for improved surveillance activities for squib valves is being considered by the nuclear industry, ASME, the United States, and international nuclear regulators. The NRC staff requests that Detroit Edison describe its plans for addressing the surveillance of squib valves that will provide reasonable assurance of the operational readiness of those valves to perform their safety functions in support of the Fermi 3 COL application.

Response

The ESBWR DCD, Revision 7, Section 3.9.6.1.4(4), "Special Tests," specifies that surveillance activities for Category D explosively actuated valves will be in accordance with ASME OM code ISTC-5260. Detroit Edison recognizes that improved surveillance activities for explosively actuated valves installed in new plants are being considered within the industry. Detroit Edison will add the following to FSAR Section 3.9.6.1.4 to provide additional information regarding development of the IST program for these valves.

(4) Special Tests

Add the following after the second paragraph under the second bullet.

Industry and regulatory guidance is considered in development of IST program for explosively actuated valves. In addition, the IST program for explosively actuated valves incorporates lessons learned from the design and qualification process for these valves such that surveillance activities provide reasonable assurance of the operational readiness of explosively actuated valves to perform their safety functions.

Proposed COLA Revision

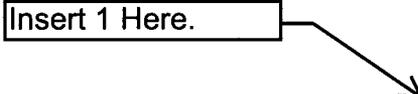
Proposed revision to FSAR Section 3.9.6.1.4 is shown on the attached markup.

Markup of Detroit Edison COLA
(following 2 pages)

The following markup represents how Detroit Edison intends to reflect this RAI response in the next submittal of the Fermi 3 COLA Revision 3. However, the same COLA content may be impacted by revisions to the ESBWR DCD, responses to other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be different than presented here.

Pre-conditioning of valves or their associated actuators or controls prior to IST undermines the purpose of IST and is prohibited. Pre-conditioning includes manipulation, pre-testing, maintenance, lubrication, cleaning, exercising, stroking, operating, or disturbing the valve to be tested in any way, except as may occur in an unscheduled, unplanned, and unanticipated manner during normal operation.

Insert 1 Here.



3.9.6.1.5 Specific Valve Test Requirements

(1) Power-Operated Valve Tests

Replace the last paragraph with the following

STD COL 3.9.9-3-A

Subsection 3.9.6.8 describes additional (non-Code) testing of power-operated valves as discussed in Regulatory Issue Summary 2000-03.

(3) Check Valve Exercise Tests

Add the following as the first sentence of the second paragraph.

STD COL 3.9.9-3-A

Check valve testing requires verification that obturator movement is in the direction required for the valve to perform its safety function.

Add the following before the last paragraph.

STD COL 3.9.9-3-A

Acceptance criteria for this testing consider the specific system design and valve application. For example, a valve's safety function may require obturator movement in both open and closed directions. A mechanical exerciser may be used to operate a check valve for testing. Where a mechanical exerciser is used, acceptance criteria are provided for the force or torque required to move the check valve's obturator. Exercise tests also detect missing, sticking, or binding obturators.

If these test methods are impractical for certain check valves, or if sufficient flow cannot be achieved or verified, a sample disassembly examination program verifies valve obturator movement. The sample disassembly examination program groups check valves by category of similar design, application, and service condition.

Insert 1

(4) Special Tests

Add the following after the second paragraph under the second bullet.

STD COL 3.9.9-3-A

Industry and regulatory guidance is considered in development of IST program for explosively actuated valves. In addition, the IST program for explosively actuated valves incorporates lessons learned from the design and qualification process for these valves such that surveillance activities provide reasonable assurance of the operational readiness of explosively actuated valves to perform their safety functions.