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

Subject: Davis-Besse Nuclear Power Station, Unit 1 Third Ten-Year Inservice Inspection Program, Relief Request RR-A18 – Response to Request for Additional Information

Ladies and Gentlemen:

The purpose of this letter is to respond to the NRC staff's request for additional information (RAI) concerning relief request RR-A18 for the Davis-Besse Nuclear Power Station, Unit 1 (DBNPS) Third Ten-Year Inservice Inspection Interval. This relief request was originally transmitted with the DBNPS Third Ten-Year Inservice Inspection Program by FirstEnergy Nuclear Operating Company (FENOC) letter Serial Number 2672, dated September 19, 2000. The RAI related to this relief request was discussed by the NRC and DBNPS staffs on January 24, 2002. Attachment 1 provides the response to the RAI, and Attachment 2 provides relief request RR-A18 that has been revised to incorporate changes cited in the response. This version of relief request RR-A18 should be used to replace that version as was transmitted by letter Serial Number 2672.

As stated previously, the DBNPS requests that this relief request, in conjunction with the other relief requests included in the DBNPS Third Ten-Year Inservice Inspection Program, be approved by February 16, 2002 (the start of the 13th Refueling Outage).

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If you have any questions or require additional information, please contact Mr. David H. Lockwood, Manager- Regulatory Affairs, at (419) 321-8450.

Very truly yours,

John Messina
for H.W. Bergendahl

RMC/s

Attachments

cc: J. E. Dyer, Regional Administrator, NRC Region III
S. P. Sands, DB-1 NRC/NRR Project Manager
C. S. Thomas, DB-1 Senior Resident Inspector
Utility Radiological Safety Board

Response to Request for Additional Information
Davis-Besse Nuclear Power Station, Unit 1 Third Ten-Year Inservice Inspection Program
Relief Request RR-A18

The following responds to the NRC staff's requests for additional information concerning relief request RR-A18 of the Davis-Besse Nuclear Power Station, Unit 1 (DBNPS) Third Ten-Year Inservice Inspection Program.

Request 1:

On Page 255 of the submittal, the licensee states "...If the cause of the failure can be determined and the failure is determined to be isolated, no further testing is required of the test group when using Subsection ISTD."

The licensee is requested to clarify the meaning of "no further testing is required of the test group," and verify the above quoted ISTD guidelines.

Response:

Subsection ISTD states:

- ISTD 7.7b
  The evaluation results shall be used, as applicable, to determine the FMGs [failure mode groups] to which snubbers shall be assigned. Additional justifying information shall be used to assign snubbers with failures previously identified as unexplained or isolated to an appropriate FMG.

- ISTD 7.7.1, FMGs.
  Snubbers found unacceptable according to operational readiness test requirements shall be assigned to FMGs unless the failure is isolated or unexplained. FMGs shall include unacceptable snubbers with the same failure mode and all other snubbers with similar potential for similar failures.

- ISTD 7.9.4, FMG Sample Composition.
  When samples from an FMG are required, they shall be selected randomly from untested snubbers in the FMG.

- ISTD 7.10.2, Isolated Failure.
  Additional tests are not required for an isolated failure.

Based on the above, an isolated failure does not require additional testing. Relief Request RR-A18 is revised by replacing the word "further" with the word "additional" such that

the revised statement of RR-A18 is "If the cause of the failure can be determined and the failure is determined to be isolated, no **additional** testing is required of the test group..." [emphasis added]

Request 2:

On Page 255 of the submittal, the licensee states that "...any failure, whether isolated or not, requires testing of an additional 10% of the snubbers within the failed snubber's group..."

The licensee is requested to clarify and/or justify what population of snubbers from which the "10% of the snubbers" is drawn.

Response:

DBNPS Technical Specifications state:

- Surveillance Requirement (SR) 4.7.7.2.d, Response to Failures:

  For each inoperable snubber per Specification 4.7.7.2.c:

  1. Perform the ACTIONS specified in 3.7.7a and 3.7.7b; and

  2. Within the specified inspection interval, functionally test an additional sample of at least 10 percent of the snubber units from the group that the inoperable snubber unit is in.

     The functional testing of an additional sample of at least 10 percent from the inoperable snubber's group is required for each snubber unit determined to be inoperable in subsequent functional tests, or until all snubbers in that group have been tested; and

  3. The cause of snubber failure will be evaluated and, if caused by a manufacturing or design deficiency, all snubbers of the same or similar design subject to the same defect shall be functionally tested within 90 days from determining snubber inoperability. This testing requirement shall be independent of the requirements in 4.7.7.2.d(2) above.

- SR 4.7.7.2.b, Inspection Interval and Sampling Criteria:

  The snubbers may be categorized into groups based on physical characteristics and accessibility. Each group may be tested independently from the standpoint of performing additional tests if failures are discovered...

The groupings at the DBNPS are based on snubber manufacturer and accessibility. Inaccessibility is defined in Technical Specifications SR 4.7.7.1.b as:

> ...Inaccessible snubbers are defined as those located: (a) inside containment, (b) in high radiation exposure zones, or (c) in areas where accessibility is limited by physical constraints such as the need for scaffolding.

Based on these definitions, the DBNPS has four groups of snubbers (i.e., Grinnell Accessible, Grinnell Inaccessible, Lisega Accessible, and Lisega Inaccessible). Most of the inaccessible snubbers are located inside containment.

Request 3:

On Page 255 of the submittal, the licensee states that "This is similar to Subsection ISTD 10% sampling plan except that the ISTD sampling plan is a random selection."

This is not a correct statement of the ISTD sampling requirement, since the ISTD 10% sampling plan is not a random selection. The licensee is requested to revise the above statement.

Response:

Subsection ISTD, Inservice Testing of Dynamic Restraints (Snubbers) In Light-Water Reactor Power Plants, states:

- ISTD 7.9.1, Initial Sample Size and Composition.
  The initial sample shall be 10% of the DTPG [design test plan group], composed according to either paragraph ISTD 7.9.1(a) or 7.9.1(b).
  a) ...Selection of the representative snubbers shall be random.
  b) The sample shall generally representative as specified in paragraph ISTD 7.9.1(a), but may also be selected from snubbers concurrently scheduled for seal replacement or similar activity related to service life monitoring. The snubbers shall be tested on a generally rotational basis to coincide with the service life monitoring activity.

Based on the above, the DBNPS agrees that the ISTD sampling process is not required to be random, but is an option. The relief request is revised to state "The sample selection process used per the Davis-Besse Unit #1 Technical Specifications is consistent with the Subsection ISTD 10% sampling plan."

Davis-Besse Nuclear Power Station, Unit 1 Third Ten-Year Inservice Inspection Program
Relief Request RR-A18

(4 pages follow)

FIRST ENERGY NUCLEAR OPERATING COMPANY
DAVIS-BESSE UNIT 1
THIRD 10-YEAR INTERVAL
RELIEF REQUEST RR-A18

System/Component(s) for Which Relief is Requested:

ASME Class 1, 2, and 3 Snubbers requiring examination and testing in accordance with IWF-5200(a) and (b) and IWF-5300(a) and (b).

Code Requirement:

IWF-5200(a) of the 1995 Edition, 1996 Addenda of ASME Section XI requires preservice examinations be performed in accordance with ASME/ANSI OM, Part 4, using the VT-3 visual examination method described in IWA-2213.

IWF-5200(b) of the 1995 Edition, 1996 Addenda of ASME Section XI requires preservice tests be performed in accordance with ASME/ANSI OM, Part 4.

IWF-5300(a) of the 1995 Edition, 1996 Addenda of ASME Section XI requires inservice examinations be performed in accordance with ASME/ANSI OM, Part 4, using the VT-3 visual examination method described in IWA-2213.

IWF-5300(b) of the 1995 Edition, 1996 Addenda of ASME Section XI requires inservice tests be performed in accordance with ASME/ANSI OM, Part 4.

Table IWA-1600-1 of the 1995 Edition, 1996 Addenda of ASME Section XI references the 1987 Edition with OMa-1988 of ASME/ANSI OM, Part 4. 10 CFR 50.55a(b)(3)(v) permits the use of the Subsection ISTD, Inservice Testing of Dynamic Restraints (Snubbers) In Light-Water Reactor Power Plants, of the ASME OM Code 1995 Edition up to and including the 1996 Addenda in lieu of the examination and testing requirements for snubbers contained in Section XI, IWF-5200(a) and (b) and IWF-5300(a) and (b).

Code Requirement from Which Relief is Requested:

Relief is requested from the provisions of IWF-5200(a) and (b) and IWF-5300(a) and (b) for the preservice and inservice examinations and tests of snubbers. Preservice and inservice examinations and tests of snubbers will be performed to the requirements of Davis-Besse Unit #1 Technical Specification 3/4.7.7.

Basis for Relief:

ASME Section XI, Subsection IWF-5200(a) and (b) and Subsection IWF-5300(a) and (b) of the 1995 Edition, 1996 Addenda specify that snubber examinations and tests be performed in accordance with the 1987 Edition with OMa-1988 of ASME/ANSI OM, Part 4. 10 CFR 50.55a(b)(3)(v) permits the use of the Subsection ISTD of the ASME OM Code 1995 Edition up to and including the 1996 Addenda in lieu of the 1987 Edition with OMa-1988 of ASME/ANSI OM, Part 4. Snubber examination and testing is currently performed in accordance with the Davis-Besse Unit #1 Technical Specifications. The Davis-Besse Unit #1 Technical Specifications meet the requirements of NRC Generic Letter 90-09, Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions.

The requirements for the examination and testing of snubbers are similar in the Davis-Besse Unit #1 Technical Specifications and the 1995 Edition, 1996 Addenda of ASME/ANSI OM Code, Subsection ISTD. However, the Davis-Besse Unit #1 Technical Specifications provide more thorough examinations and tests than required by ASME/ANSI OM Code, Subsection ISTD in the following areas.

- Davis-Besse Unit #1 Technical Specification 3/4.7.7 currently addresses requirements for the examination of safety related snubbers. Similar requirements are contained in both the Technical Specifications and Subsection ISTD. However, the examination boundary specified in Subsection ISTD 2.1 includes only the snubber assembly from pin to pin, inclusive. The Davis-Besse Unit #1 Technical Specifications require examination of the snubber for visible indication of damage or inoperability and includes verification that the attachments to the foundation or supporting structure are secure. Verification that the attachments to the foundation or supporting structure are secure exceeds the examination requirements of Subsection ISTD and provides a more thorough examination than would be achieved through the implementation of Subsection ISTD.

- The Davis-Besse Unit #1 Technical Specifications are more comprehensive than Subsection ISTD. The snubbers examined and tested in accordance with the Davis-Besse Unit #1 Technical Specifications includes snubbers which are installed on non-safety related systems when their failure or failure of the system on which they are installed would have an adverse effect on safety-related systems during a dynamic event. Testing conducted under IWF-5000 would not include these non-safety related snubbers as they would not be within the ASME Section XI Class 1, 2, or 3 boundaries.

- Davis-Besse Unit #1 Technical Specification 3/4.7.7 also addresses requirements for the functional testing of safety related snubbers. The Davis-Besse Unit #1 Technical Specifications require a 10% representative sample of the snubbers be tested each refueling outage with each snubber requiring testing at least once every ten refueling outages. The sample selection technique used per the Davis-Besse Unit #1 Technical Specifications is consistent with the Subsection ISTD 10% sampling plan. Application of the Davis-Besse Unit #1 Technical Specification requirements ensure that each snubber will be functionally tested once every ten refueling outages.

- Davis-Besse Unit #1 Technical Specification 3/4.7.7 permits the grouping of snubbers based on physical characteristics and accessibility. Subsection ISTD also permits the grouping of snubbers based on design, application, size, or type into a Design Test Plan Group. Subsection ISTD 7 further requires the establishment of failure mode groups when test failures occur within a Design Test Plan Group. If the cause of the failure can be determined and the failure is determined to be isolated, no additional testing is required of the test group when using Subsection ISTD. Per the Davis-Besse Unit #1 Technical Specifications, any failure, whether isolated or not, requires testing of an additional 10% of the snubbers within the failed snubber's group to ensure the acceptability of the snubber group. This testing continues in 10% increments until that additional 10% sample is acceptable. Using the Davis-Besse Unit #1 Technical Specifications, the acceptability of a snubber group is established through testing.

Relief is requested in accordance with 10 CFR 50.55a(a)(3)(i). Implementation of Davis-Besse Unit #1 Technical Specification 3/4.7.7 for the examination and functional testing of snubbers will provide an acceptable level of quality and safety comparable or greater than that which would be attained by using Subsection ISTD of the 1995 Edition, 1996 Addenda of the ASME OM Code.

Alternative Examination:

Snubber examinations and tests required by IWF-5200 (a) and (b) and IWF-5300 (a) and (b) of the 1995 Edition, 1996 Addenda of ASME Section XI will be performed in accordance with the Davis-Besse Unit #1 Technical Specifications.

Justification for the Granting of Relief:

The Davis-Besse Unit #1 Technical Specifications for snubber examinations and tests meet the requirements of NRC Generic Letter 90-09. The examinations required by

the Technical Specifications will identify any snubbers that are damaged, degraded, or inoperable due to physical damage, leakage, corrosion, or environmental exposure. The functional tests required by the Technical Specifications provide confidence that the snubbers will operate within their design parameters. The Technical Specification examinations complemented by the functional testing requirements provide an acceptable level of quality and safety comparable or greater than that which would be attained by using Subsection ISTD of the 1995 Edition, 1996 Addenda of the ASME OM Code.

Implementation Schedule:

The examination and testing of snubbers will be performed in accordance with the schedule requirements contained within the Davis-Besse Unit #1 Technical Specifications.

COMMITMENT LIST

The following list identifies those actions committed to by the Davis-Besse Nuclear Power Station (DBNPS) in this document. Any other actions discussed in the submittal represent intended or planned actions by the DBNPS. They are described only for information and are not regulatory commitments. Please notify the Manager - Regulatory Affairs (419-321-8450) at the DBNPS of any questions regarding this document or associated regulatory commitments.

COMMITMENTS	DUE DATE
None	