



FirstEnergy Nuclear Operating Company

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March 18, 2011
L-11-078

10 CFR 54

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

SUBJECT:

Davis-Besse Nuclear Power Station, Unit No. 1
Docket No. 50-346, License No. NPF-3
Reply to Request for Additional Information for the Review of the Davis-Besse Nuclear Power Station, Unit No. 1, License Renewal Application (TAC No. ME4640) and License Renewal Application Amendment No. 1

By letter dated August 27, 2010, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102450565), FirstEnergy Nuclear Operating Company (FENOC) submitted an application pursuant to Title 10 of the *Code of Federal Regulations*, Part 54 for renewal of Operating License NPF-3 for the Davis-Besse Nuclear Power Station (DBNPS), Unit Number 1. By letter dated February 17, 2011 (ADAMS Accession No. ML110450046), the Nuclear Regulatory Commission (NRC) requested additional information to complete its review of the License Renewal Application (LRA).

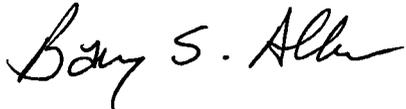
The Attachment provides the FENOC reply to the NRC request for additional information. The NRC request is shown in bold text followed by the FENOC response. The Enclosure provides Amendment No. 1 to the DBNPS LRA.

There are no regulatory commitments contained in this letter. If there are any questions or if additional information is required, please contact Mr. Clifford I. Custer, Fleet License Renewal Project Manager, at (724) 682-7139.

AD35
NRR

I declare under penalty of perjury that the foregoing is true and correct. Executed on
March 18, 2011.

Sincerely,



Barry S. Allen

Attachment:

Reply to Request for Additional Information for the Review of the Davis-Besse
Nuclear Power Station, Unit No. 1, License Renewal Application

Enclosure:

Amendment No. 1 to the DBNPS License Renewal Application

cc: NRC DLR Project Manager
NRC Region III Administrator

cc: w/o Attachment or Enclosure
NRC DLR Director
NRR DORL Project Manager
NRC Resident Inspector
Utility Radiological Safety Board

Reply to Request for Additional Information for the Review of the
Davis-Besse Nuclear Power Station, Unit No. 1, License Renewal Application,
Section 2.3.3.14
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Section 2.3.3.14

RAI 2.3.3.14-1

License renewal application (LRA) drawing LR-M016A shows that several yard fire hydrants and post indicator valves are out of scope (i.e., not colored in green). The staff believes that yard fire hydrants and post indicator valves have the fire protection intended functions required to be compliant with 10 CFR 50.48 as stated in 10 CFR 54.4. The fire hydrants and post indicator valves also serve as the pressure boundary for the fire protection water supply system.

The staff requests that the applicant verify whether the yard hydrants and post indicator valves are in the scope of license renewal in accordance with 10 CFR 54.4(a) and whether they are subject to an aging management review (AMR) in accordance with 10 CFR 54.21(a)(1). If they are excluded from the scope of license renewal and are not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RESPONSE RAI 2.3.3.14-1

The fire hydrants and post indicator valves (and other components) highlighted in green on license renewal (LR) drawing LR-M016A provide for protection of Davis-Besse Nuclear Power Station Fire Hazards Analysis Report (FHAR) fire areas that are defined as Branch Technical Position (BTP) APCS 9.5-1, Appendix A areas. Therefore, these hydrants and post indicator valves are within the scope of license renewal for Fire Protection (10 CFR 50.48) and are subject to aging management review in accordance with 10 CFR 54.21(a)(1). The yard hydrants and post indicator valves that are not highlighted in green on license renewal drawing LR-M016A are not credited in the FHAR and are, therefore, out of scope for license renewal.

The yard hydrants and post indicator valves (and other components) that are not highlighted in green also do not serve as part of the license renewal pressure boundary for the fire protection water supply system components that are in scope for license renewal. The license renewal pressure boundary function is fulfilled by the hydrants, post indicator valves, other valves and other components that are highlighted in green on license renewal drawing LR-M016A.

The bases for the scoping determinations are described below.

The manual fire suppression system components such as hose stations, connections, hydrants and hydrant hose houses that are necessary to meet BTP APCS 9.5-1, Appendix A, commitments are addressed in Section 8.2 of the Davis-Besse FHAR. The

hydrants highlighted on license renewal drawing LR-M016A are within the scope of license renewal for Fire Protection (10 CFR 50.48) and are subject to aging management review in accordance with 10 CFR 54.21(a)(1). Those in-scope hydrants, listed below, were identified by an evaluation of the information provided in the FHAR.

<u>Hydrant Number</u>	<u>LR-M016A Coordinate</u>	<u>Location in Plant</u>
H-1	E-7	Northwest of Water Treatment Building (provides coverage for Water Treatment Building, Intake Structure, Pump House, Turbine Building, Transformer, etc.)
H-2	E-10	East of Office Building (provides coverage for Water Treatment Building, Intake Structure, Pump House, Turbine Building, etc.)
H-3	F-11	Southeast Corner of Maintenance Shop (provides coverage for Water Treatment Building, Intake Structure, Pump House, Turbine Building, etc.)
H-13	K-7	West of Number 2 Startup Transformer (provides coverage for Auxiliary Building, Transformers, etc.)
H-15	J-6	North of Number 2 Startup Transformer (provides coverage for Auxiliary Building, Transformers, Diesel Fuel Oil Week Tanks, etc.)
H-16	F-6	North of Turbine Train Bay (provides coverage for Pump House, Turbine Building, Transformers, etc.)

The hydrants listed above were determined to be within the scope of license renewal for Fire Protection (10 CFR 50.48) by evaluating Section 8.2.4 and Table 8-6 of the FHAR, which specifically identify hydrants required to be operable for protection of the FHAR fire areas defined as BTP APCSB 9.5-1, Appendix A areas.

Fire water branch lines to yard hydrants not identified above are highlighted up to the first accessible valve capable of providing isolation of the branch line from the fire water fire main loop. While the majority of these yard hydrants have a post indicator valve which provides isolation capability from the fire main loop, not all the branch lines to these out-of-scope yard hydrants are provided with a post indicator valve. In such cases, a non-post indicator valve (i.e., curb valve) is relied upon to provide isolation and provides the pressure boundary integrity of the fire main loop.

RAI 2.3.3.14-2

LRA drawing LR-M016B shows that the automatic sprinkler system for the No. 1 Diesel Generator Room is in the scope of license renewal and subject to an AMR. However, the automatic sprinkler system for the No. 2 Diesel Generator Room does not appear in the LRA drawings as being in the scope of license renewal and subject to an AMR.

The staff requests that the applicant verify whether the automatic sprinkler system for the No. 2 Diesel Generator Room is in the scope of license renewal in accordance with 10 CFR 54.4(a) and subject to an AMR in accordance with 10 CFR 54.21(a)(1). If the sprinkler system is excluded from the scope of license renewal and not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RESPONSE RAI 2.3.3.14-2

As shown on LRA drawing LR-M016B (coordinate F-4), the automatic sprinkler system for the No. 1 Diesel Generator Room is within the scope of license renewal. As shown on LRA drawing LR-M016B (coordinate G-4), the automatic sprinkler system for the No. 2 Diesel Generator Room is within the scope of license renewal. Both automatic sprinkler systems are within the scope of license renewal in accordance with 10 CFR 54.4(a) and subject to aging management review in accordance with 10 CFR 54.21(a)(1).

RAI 2.3.3.14-3

Tables 2.3.3-14 and 3.3.2-14 of the LRA do not include the following fire protection components:

**fire hose stations, fire hose connections, and hose racks
sprinkler heads
floor drains for the fire water
dikes and curbs for the oil spill confinement
components in reactor coolant pump oil collection system**

The staff Requests that the applicant verify whether the fire protection components listed above are in the scope of license renewal in accordance with 10 CFR 54.4(a) and whether they are subject to an AMR in accordance with 10 CFR 54.21(a)(1). If they are excluded from the scope of license renewal and are not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RESPONSE RAI 2.3.3.14-3

The fire protection components (i.e., fire hose stations, fire hose connections, and hose racks, sprinkler heads, floor drains for fire water, dikes and curbs for oil spill confinement, and components in the reactor coolant pump oil collection system) identified in the NRC request are in the scope of license renewal in accordance with 10 CFR 54.4(a) and the passive, long-lived components are subject to aging management review (AMR) in accordance with 10 CFR 54.21(a)(1), as clarified below:

- Fire hose stations, fire hose connections, and hose racks that are in the scope of license renewal and subject to AMR are comprised of piping and piping components, valve bodies, and equipment structural supports. At Davis-Besse, there are five types of fire hose stations: hose reels, hose racks, hose cabinets (surface-mounted and recessed), and hose connections. Each station type is comprised of piping (including a standpipe riser) with a normally-closed angle valve to which the hose is connected, and a normally-open isolation valve to the building header. Fire Protection System component types "Piping" and "Valve Body" are listed in LRA Tables 2.3.3-14 and 3.3.2-14, and include those types of fire protection hose station components required for compliance with 10 CFR 50.48. License renewal drawings LR-M016A and LR-M016B depict the evaluation boundaries for the subject piping and piping components and valve bodies within the scope of license renewal.

Component type "Equipment Component Supports" is listed with the Bulk Commodities in LRA Tables 2.4-13 and 3.5.2-13, and includes the cabinets and racks associated with hose stations required for compliance with 10 CFR 50.48.

Fire hoses (and their integral connections) are in the scope of license renewal, but are periodically replaced. Therefore, the fire hoses are not subject to AMR, as outlined in 10 CFR 54.21(a)(1)(i) and (ii).

- Sprinkler heads are included in Fire Protection System LRA Tables 2.3.3-14 and 3.3.2-14 as component type “Spray Nozzle.”
- Floor drains for fire water (i.e., floor drains located in areas with in-scope fire protection sprinkler systems or hose stations) were included with other floor drain components as component type “Piping” within the evaluation boundaries of the Station Plumbing, Drains, and Sumps System (SPDSS), and are listed in LRA Tables 2.3.3-31 and 3.3.2-31. License renewal drawing LR-M090 depicts the evaluation boundaries for the subject piping and piping components within the scope of license renewal.

For Davis-Besse, the in-scope floor drains have been included in the scope of license renewal in accordance with 10 CFR 54.4(a)(2) because they are located in buildings or areas where their failure could prevent the satisfactory accomplishment of a safety function as defined in 10 CFR 54.4(a)(1), and were assigned a “Structural integrity” component intended function.

- Dikes and curbs for oil spill confinement are included with Yard Structures as component type “Diesel Oil Storage Tank Retaining Area and Dike” in LRA Tables 2.4-12 and 3.5.2-12, and with Bulk Commodities as concrete component type “Flood Curbs” in LRA Tables 2.4-13 and 3.5.2-13.

During the development of the response for this NRC request, FENOC identified that the concrete component type Flood Curbs incorrectly excluded the intended function “SRE” (support for criterion (a)(3) equipment), and instead included only the FLB (flood barrier) and SNS (support for criterion (a)(2) equipment) intended functions. LRA Tables 2.4-13 and 3.5.2-13 are revised to include SRE (support for criterion (a)(3) equipment) as an intended function for concrete component type Flood Curbs.

See the Enclosure to this letter for the revision to the Davis-Besse LRA.

- Components in reactor coolant pump oil collection system are included within the non-Class 1 evaluation boundaries of the Reactor Coolant System and are listed in LRA Tables 2.3.1-3 and 3.1.2-3 as component types “Drain Pan”, “Flexible Connection”, “Piping”, “Tank (DB-T156-1 and DB-T156-2)”, and “Valve Body”. License renewal drawing LR-M040D depicts the evaluation boundaries for the subject drain pans, piping, flexible connections, tanks, and valves within the scope of license renewal.

Enclosure

Davis-Besse Nuclear Power Station (DBNPS), Unit No. 1

Letter L-11-078

Amendment No. 1 to the DBNPS License Renewal Application

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License Renewal Application Sections Affected

Table 2.4-13

Table 3.5.2-13

The Enclosure identifies the change to the License Renewal Application (LRA) by Affected LRA Section, LRA Page No., and Affected Paragraph and Sentence. The count for the affected paragraph, sentence, bullet, etc. starts at the beginning of the affected Section or at the top of the affected page, as appropriate. Below each section the reason for the change is identified, and the sentence affected is printed in *italics* with deleted text ~~*ined-out*~~ and added text *underlined*.

<u>Affected LRA Section</u>	<u>LRA Page No.</u>	<u>Affected Paragraph and Sentence</u>
Table 2.4-13	Page 2.4-51	Concrete Flood Curbs row

The License Renewal Application is amended as follows to include SRE (support for criterion (a)(3) equipment) as an intended function for concrete flood curbs:

**Table 2.4-13
 Bulk Commodities
 Components Subject to Aging Management Review**

Component Type	Intended Function (as defined in Table 2.0-1)
Concrete Components	
<i>Flood Curbs</i>	<i>FLB, SNS, <u>SRE</u></i>

Table 3.5.2-13	Page 3.5-158	Row 173, Flood Curbs
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The License Renewal Application is amended as follows to include SRE (support for criterion (a)(3) equipment) as an intended function for concrete flood curbs:

Table 3.5.2-13 Aging Management Review Results – Bulk Commodities

Row No.	Component / Commodity	Intended Function ¹
Concrete		
173	<i>Flood Curbs</i>	<i>FLB, SNS, <u>SRE</u></i>