FENOC
FirstEnergy Nuclear Operating Company

5501 North State Route 2
Oak Harbor, Ohio 43449

Barry S. Allen
Vice President - Nuclear

419-321-7676
Fax: 419-321-7582

August 9, 2012
L-12-262

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 Number NPF-3
License Renewal Application Amendment No. 30 – Annual Update (TAC No. ME4640)

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, Unit No. 1 (Davis-Besse). Each year following submittal of a license renewal application (LRA) and at least 3 months before scheduled completion of the NRC review, 10 CFR 54.21(b) requires an amendment to the renewal application to be submitted identifying any change to the current licensing basis (CLB) of the facility that materially affects the contents of the license renewal application, including the Final Safety Analysis Report (FSAR) supplement.

The Attachment provides a summary of the CLB changes that materially affect the LRA. Enclosure A provides Amendment No. 30 (Annual Update) to the DBNPS LRA as required by 10 CFR 54.21(b). Enclosure B provides new and revised LRA boundary drawings.

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.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 9, 2012.

Sincerely,

Barry S. Allen

Barry S. Allen

A145
NRR

Attachment:
Current Licensing Basis (CLB) Changes that Materially Affect the Davis-Besse Nuclear Power Station, Unit No. 1 (Davis-Besse), License Renewal Application (LRA)

Enclosures:
A. Amendment No. 30 (Annual Update) to the Davis-Besse License Renewal Application
B. New and Revised Davis-Besse License Renewal Application Boundary Drawings

cc: NRC DLR Project Manager
NRC Region III Administrator

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

Attachment
L-12-262

Current Licensing Basis (CLB) Changes that Materially Affect the Davis-Besse Nuclear Power Station, Unit No. 1 (Davis-Besse), License Renewal Application (LRA),

A review of Davis-Besse CLB document changes since submittal of the 2011 License Renewal Application Annual Update provided by FENOC letter dated September 30, 2011 (ML11276A078), identified two design changes that materially affect the contents of the Davis-Besse License Renewal Application, as follows:

1. The Chemical Addition System was modified in March of 2012 to install a zinc injection skid. The components of the zinc injection skid satisfy the scoping criteria of 10 CFR 54.4(a)(2), and are highlighted on new license renewal boundary drawing LR-M045, Sheet 1. The aging management review results for the zinc injection skid are included in LRA Table 3.3.2-5, "Aging Management Review Results – Chemical Addition System."

   LRA Section 2.3.3.5, "Chemical Addition System," Table 2.3.3-5, "Chemical Addition System Components Subject to Aging Management Review," Section 3.3.2.1.5, "Chemical Addition System," and Table 3.3.2-5, "Aging Management Review Results – Chemical Addition System," are revised to account for the addition of the zinc injection skid. New license renewal boundary drawing LR-M045, Sheet 1 is added to depict the evaluation boundary of the zinc injection skid. Plant modifications associated with the addition of the zinc injection skid also resulted in changes to license renewal boundary drawings LR-M010D Sheet 1, LR-M031A, LR-M037D and LR-M045.

2. An articulating boom crane, known as the Containment Auxiliary Crane, was installed as permanent plant equipment during the Cycle 17 refueling outage that ended on June 13, 2012. This crane is capable of handling heavy loads, and therefore is subject to the requirements set forth in NUREG-0612, "Control of Lifting and Handling of Heavy Loads." The license renewal "Cranes and Hoists Inspection Program" is credited with managing the aging effects applicable to the crane structural components.

   LRA Sections A.1.10 and B.2.10, both titled "Cranes and Hoists Inspection Program," and Section A.1.44, "References," are revised to include reference to American National Standards Institute (ANSI) B30.22, "Articulating Boom Cranes."

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

See Enclosure B to this letter for the new and revised LRA Boundary Drawings.

Enclosure A

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

Letter L-12-262

Amendment No. 30 (Annual Update) to the Davis-Besse License Renewal Application

License Renewal Application Sections Affected

Section 2.3.3.5

Table 2.3.3-5

Section 3.3.2.1.5

Table 3.3.2-5

Section A.1.10

Section A.1.44

Section B.2.10

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 ~~*lined-out*~~ and added text *underlined*.

Affected LRA Section	LRA Page No.	Affected Paragraph and Sentence
2.3.3.5	Pages 2.3-62 and 2.3-63	**Description, 2nd paragraph and new 5th paragraph;** **License Renewal Drawings, new drawing; and,** **Components Subject to AMR, 3rd paragraph, bulleted item**

Based on the installation of the new Zinc Injection System, the 2nd paragraph is revised and a new 5th paragraph is added to the "Description" of LRA Section 2.3.3.5, "Chemical Addition System." Additionally, a new license renewal boundary drawing number is added to the list of "License Renewal Drawings," and the bulleted item under the 3rd paragraph of "Components Subject to AMR," is revised. LRA Section 2.3.3.5 is revised to read as follows:

2nd Paragraph revision:

The Chemical Addition System provides a boric acid solution to the Boric Acid Addition System, and provides lithium hydroxide, hydrazine, ammonia, and other chemical amines to control pH and oxygen in the plant systems fed by the Reactor Coolant Chemical Addition System and Steam Generator Wet Layup Chemical Addition System. *In addition, the Chemical Addition System injects zinc acetate into the RCS to reduce the radiation source term and for mitigation of primary water stress corrosion cracking (PWSCC) of Alloy 600 components.*

New 5th Paragraph:

Zinc acetate is mixed into the Zinc Injection Mix Tank (DB-T99) with a mixer. Demineralized water is supplied from the Demineralized Water System. The solution is transferred from the Zinc Injection Mix Tank by one of two Zinc Injection Pumps (DB-P295-1 and DB-P295-2) that are capable of independent operation. The Chemical Addition System injects zinc acetate into the RCS to reduce the radiation source term and for mitigation of primary water stress corrosion cracking (PWSCC) of Alloy 600 components

License Renewal Drawings

The following license renewal drawings depict the evaluation boundaries for the system components within the scope of license renewal:

LR-M035, LR-M037D, LR-M039A, LR-M039B, LR-M045, LR-M045 Sheet 1

Components Subject to AMR

In addition to those components specifically excluded in 10 CFR 54.21(a)(1)(i), such as instruments, the following components are within the scope of license renewal but are not subject to AMR:

- *The internals (screens) for the lithium hydroxide mix tank discharge strainer (DB-S334), the ~~and~~ hydrazine pump suction strainer (DB-S335), the zinc injection pumps suction strainer (DB-S463) and the zinc injection pumps discharge strainer (DB-S464) are not subject to AMR because these strainers are in scope only for potential leakage and spray considerations in accordance with 10 CFR 54.4(a)(2), and serve only a structural integrity function.*

Affected LRA Section	LRA Page No.	Affected Paragraph and Sentence
Table 2.3.3-5	**Page 2.3-64**	**3 new rows**

Based on the installation of the new Zinc Injection System, LRA Table 2.3.3-5, "Chemical Addition System Components Subject to Aging Management Review," is revised to include 3 new rows, to read as follows:

Component Type	**Intended Function (as defined in Table 2.0-1)**
Pump Casing – Zinc injection pumps (DB-P295-1 & 2)	*Structural integrity*
Sight glass	*Structural integrity*
Tank – Zinc injection mix tank (DB-T99)	*Structural integrity*

Affected LRA Section	LRA Page No.	Affected Paragraph and Sentence
3.3.2.1.5	**Page 3.3-9**	**"Materials" subsection, new material;**

Based on the installation of the new Zinc Injection System, the "Materials" subsection of Section 3.3.2.1.5, "Chemical Addition System," is revised to read as follows:

Materials

The materials of construction for subject mechanical components of the Chemical Addition System are:

- *Glass*
- Stainless steel

Affected LRA Section **LRA Page No.** **Affected Paragraph and Sentence**

Table 3.3.2-5 **Page 3.3-230** **12 New Rows**

Based on the installation of the new Zinc Injection System, LRA Table 3.3.2-5, "Aging Management Review Results – Chemical Addition System," is revised to include 12 new rows as follows:

Table 3.3.2-5 Aging Management Review Results – Chemical Addition System

Row No.	Component Type	Intended Function(s)	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801, Volume 2 Item	Table 1 Item	Notes
--	*Pump Casing – Zinc Injection Pump (DB-P295-1 & 2)*	*Structural integrity*	*Stainless Steel*	*Air with borated water leakage (External)*	*None*	*None*	*VII.J-16*	*3.3.1-99*	*A*
--	*Pump Casing – Zinc Injection Pump (DB-P295-1 & 2)*	*Structural integrity*	*Stainless Steel*	*Air-indoor uncontrolled (External)*	*None*	*None*	*VII.J-15*	*3.3.1-94*	*A*
--	*Pump Casing – Zinc Injection Pump (DB-P295-1 & 2)*	*Structural integrity*	*Stainless Steel*	*Treated water (Internal)*	*Loss of material*	*One-Time Inspection*	*VII.E3-15*	*3.3.1-24*	*A*

Table 3.3.2-5 Aging Management Review Results – Chemical Addition System									
Row No.	**Component Type**	**Intended Function(s)**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801, Volume 2 Item**	**Table 1 Item**	**Notes**
--	*Pump Casing – Zinc Injection Pump (DB-P295-1 & 2)*	*Structural integrity*	*Stainless Steel*	*Treated water (Internal)*	*Loss of material*	*PWR Water Chemistry*	*VII.E3-15*	*3.3.1-24*	*A*
--	*Sight glass*	*Structural integrity*	*Glass*	*Moist air (Internal)*	*None*	*None*	*VII.J-13*	*3.3.1-93*	*A*
--	*Sight glass*	*Structural integrity*	*Glass*	*Treated water (Internal)*	*None*	*None*	*VII.J-13*	*3.3.1-93*	*A*
--	*Sight glass*	*Structural integrity*	*Glass*	*Air with borated water leakage (External)*	*None*	*None*	*N/A*	*N/A*	*G*
--	*Sight glass*	*Structural integrity*	*Glass*	*Air-indoor uncontrolled (External)*	*None*	*None*	*VII.J-8*	*3.3.1-93*	*A*

Table 3.3.2-5 Aging Management Review Results – Chemical Addition System									
Row No.	**Component Type**	**Intended Function(s)**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801, Volume 2 Item**	**Table 1 Item**	**Notes**
--	*Tank – Zinc Injection Mix Tank (DB-T99)*	*Structural integrity*	*Stainless Steel*	*Treated water (Internal)*	*Loss of material*	*One-Time Inspection*	*VII.E3-15*	*3.3.1-24*	*C*
--	*Tank – Zinc Injection Mix Tank (DB-T99)*	*Structural integrity*	*Stainless Steel*	*Treated water (Internal)*	*Loss of material*	*PWR Water Chemistry*	*VII.E3-15*	*3.3.1-24*	*C*
--	*Tank – Zinc Injection Mix Tank (DB-T99)*	*Structural integrity*	*Stainless Steel*	*Air with borated water leakage (External)*	*None*	*None*	*VII.J-16*	*3.3.1-99*	*C*
--	*Tank – Zinc Injection Mix Tank (DB-T99)*	*Structural integrity*	*Stainless Steel*	*Air-indoor uncontrolled (External)*	*None*	*None*	*VII.J-15*	*3.3.1-94*	*C*

Affected LRA Section	LRA Page No.	Affected Paragraph and Sentence
A.1.10	**Page A-12**	**2nd Paragraph**

Based on the installation of the new Containment Auxiliary Crane, the 2nd paragraph of LRA Section A.1.10, "Cranes and Hoists Inspection Program," previously revised by FENOC letter dated May 24, 2011 (ML11151A090), is revised to read as follows:

The Cranes and Hoists Inspection Program is based on guidance contained in ANSI B30.2 [Reference A.1-5] for overhead and gantry cranes, ANSI B30.11 [Reference A.1-6] for monorail systems and underhung cranes, ~~and~~ ANSI B30.16 [Reference A.1-7] for overhead hoists and ANSI B30.22 for articulating boom cranes [Reference A.1-22]. The program includes a review of the number and magnitude of lifts made by a crane, monorail or hoist.

Affected LRA Section	LRA Page No.	Affected Paragraph and Sentence
A.1.44	**Page A-27**	**New reference listing**

Based on the installation of the new Containment Auxiliary Crane, a new reference listing is added to LRA Section A.1.44, "References," previously renumbered from A.1.43 to A.1.44 by FENOC letter dated April 5, 2012 (ML12097A520), and the section is revised to read as follows:

A.1.44 REFERENCES

A.1-22 ANSI B30.22, "Articulating Boom Cranes," 2010

Affected LRA Section	LRA Page No.	Affected Paragraph and Sentence
B.2.10	**Page B-52**	**Description, 2nd Paragraph**

Based on the installation of the new Containment Auxiliary Crane, the 2nd paragraph of LRA Section B.2.10, "Cranes and Hoists Inspection Program," previously revised by FENOC letter dated May 24, 2011 (ML11151A090), is revised to read as follows:

The Cranes and Hoists Inspection Program is a condition monitoring program that is based on guidance contained in American National Standards Institute (ANSI) B30.2 for overhead and gantry cranes, ANSI B30.11 for monorail systems and underhung cranes, ~~and~~ ANSI B30.16 for overhead hoists and ANSI B30.22 for articulating boom cranes. The inspections monitor structural members for signs of corrosion and wear and bolted connections for loose bolts and missing or loose nuts. The inspections are performed periodically for installed cranes and hoists. The program includes a review of the number and magnitude of lifts made by a crane, monorail or hoist.

Enclosure B

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

Letter L-12-262

New and Revised Davis-Besse License Renewal Application Boundary Drawings

5 pages follow

The following License Renewal Application Boundary Drawing is new and is enclosed:

LR Drawing LR-M045 Sheet 1	**Revision 0**

The following License Renewal Application Boundary Drawings are revised and are enclosed:

LR Drawing LR-M010D Sheet 1	**Revision 4**
LR Drawing LR-M031A	**Revision 3**
LR Drawing LR-M037D	**Revision 5**
LR Drawing LR-M045	**Revision 3**

THE FOLLOWING 5 DRAWINGS

SPECIFICALLY

REFERENCED

ENCLOSURE B

DAVIS-BESSE NUCLEAR STATION, UNIT NO. 1

D01 TO D05X