



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

FIRSTENERGY NUCLEAR OPERATING COMPANY

AND

FIRSTENERGY NUCLEAR GENERATION, LLC

DOCKET NO. 50-346

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-3

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The application for renewed license filed by FirstEnergy Nuclear Operating Company (FENOC)¹, acting on its own behalf and as agent for FirstEnergy Nuclear Generation, LLC (licensees) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Davis-Besse Nuclear Power Station, Unit No. 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-80 and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

¹ FENOC is authorized to act as agent for FirstEnergy Nuclear Generation, LLC, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

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- 1.D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
 - E. The FirstEnergy Nuclear Operating Company is technically qualified and the licensees are financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. NPF-3 subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 50), of the Commission's regulations and all applicable requirements have been satisfied;
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Part 30, 40, and 70, including 10 CFR Sections 30.33, 40.32, 70.23, and 70.31; and
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Renewed Facility Operating License No. NPF-3 is hereby issued to FirstEnergy Nuclear Operating Company (FENOC), and FirstEnergy Nuclear Generation, LLC to read as follows:
 - A. This renewed license applies to the Davis-Besse Nuclear Power Station, Unit No. 1, a pressurized water nuclear reactor and associated equipment

(the facility), owned by FirstEnergy Nuclear Generation, LLC. The facility is located on the south-western shore of Lake Erie in Ottawa County, Ohio, approximately 21 miles east of Toledo, Ohio, and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 14 through 44) and the Environmental Report as supplemented and amended (Supplements 1 through 2).

- 2.B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
- (1) FENOC, pursuant to Section 103 of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility;
 - (2) FirstEnergy Nuclear Generation, LLC, to possess the facility at the designated location in Ottawa County, Ohio in accordance with the procedures and limitations set forth in this renewed license;
 - (3) FENOC, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
 - (4) FENOC, pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - (5) FENOC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 - (6) FENOC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

2.C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

FENOC is authorized to operate the facility at steady state reactor core power levels not in excess of 2817 megawatts (thermal). Prior to attaining the power level, Toledo Edison Company shall comply with the conditions identified in Paragraph (3) (o) below and complete the preoperational tests, startup tests and other items identified in Attachment 2 to this license in the sequence specified. Attachment 2 is an integral part of this renewed license.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 289, are hereby incorporated in the renewed license. FENOC shall operate the facility in accordance with the Technical Specifications.

(3) Additional Conditions

The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following the issuance of the renewed license or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the renewed license supported by a favorable evaluation by the Commission:

- (a) FENOC shall not operate the reactor in operational Modes 1 and 2 with less than three reactor coolant pumps in operation.
- (b) Deleted per Amendment 6
- (c) Deleted per Amendment 5

- 2.C(3)(d) Prior to operation beyond 32 Effective Full Power Years, FENOC shall provide to the NRC a reanalysis and proposed modifications, as necessary, to ensure continued means of protection against low temperature reactor coolant system overpressure events.
- (e) Deleted per Amendment 33
 - (f) Deleted per Amendment 33
 - (g) Deleted per Amendment 33
 - (h) Deleted per Amendment 24
 - (i) Deleted per Amendment 11
 - (j) Revised per Amendment 3
Deleted per Amendment 28
 - (k) Within 60 days of startup following the first (1st) regularly scheduled refueling outage, Toledo Edison Company shall complete tests and obtain test results as required by the Commission to verify that faults on non-Class IE circuits would not propagate to the Class IE circuits in the Reactor Protection System and the Engineered Safety Features Actuation System.
 - (l) Revised per Amendment 7
Deleted per Amendment 15
 - (m) Deleted per Amendment 7
 - (n) Deleted per Amendment 10
 - (o) Deleted per Amendment 2
 - (p) Deleted per Amendment 29
 - (q) Deleted per Amendment 7
 - (r) Deleted per Amendment 30
 - (s) Toledo Edison Company shall be exempted from the requirements of Technical Specification 3/4.7.8.1 for the two (2) Americium-Beryllium-Copper startup sources to be installed or already installed for use during the first refueling cycle until such time as the sources are replaced.
 - (t) Added per Amendment 83
Deleted per Amendment 122

2.C(4) Fire Protection

FENOC shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Updated Safety Analysis Report and as approved in the SERs dated July 26, 1979, and May 30, 1991, subject to the following provision:

FENOC may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(5) Deleted per Amendment No. 279.

(6) Antitrust Conditions

FENOC and FirstEnergy Nuclear Generation, LLC shall comply with the antitrust conditions delineated in Condition 2.E of this renewed license as if named therein. FENOC shall not market or broker power or energy from the Davis-Besse Nuclear Power Station, Unit No. 1. FirstEnergy Nuclear Generation, LLC is responsible and accountable for the actions of FENOC to the extent that said actions affect the marketing or brokering of power or energy from the Davis-Besse Nuclear Power Station, Unit No. 1, and in any way, contravene the antitrust license conditions contained in the renewed license.

2.C(7) Steam Generator Tube Circumferential Crack Report

Following each inservice inspection of steam generator tubes, the NRC shall be notified by FENOC of the following prior to returning the steam generators to service:

- a. Indications of circumferential cracking inboard of the roll repair.
- b. Indication of circumferential cracking in the original roll or heat affected zone adjacent to the tube-to-tubesheet seal weld if no reroll is present.
- c. Determination of the best-estimate total leakage that would result from an analysis of the limiting LBLOCA based on circumferential cracking in the original tube-to-tubesheet rolls, tube-to-tubesheet reroll repairs, and heat affected zones of seal welds as found during each inspection.

FENOC shall demonstrate by evaluation that the primary-to-secondary leakage following a LBLOCA, if any, as described in Appendix A to topic Report BAW-2374, July 2000, continues to be acceptable, based on the as-found condition of the steam generators. For the purpose of this evaluation, acceptable means that a best estimate of the leakage expected in the event of a LBLOCA would not result in a significant increase of radionuclide release (e.g., in excess of 10 CFR Part 100 limits). This is required to demonstrate that adequate margin and defense-in-depth continue to be maintained. A written summary of this evaluation shall be provided to the NRC within three months following completion of the steam generator tube inservice inspection.

2.C(8) Mitigation Strategy License Condition

The licensee shall develop and maintain strategies for addressing large fires and explosions that include the follow key area:

- (a) Fire fighting response strategy with the following elements:
 1. Predefined coordinated fire response strategy and guidance
 2. Assessment of mutual aid fire fighting assets
 3. Designated staging areas for equipment and materials
 4. Command and control
 5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following:
 1. Protection and use of personnel assets
 2. Communications
 3. Minimizing fire spread
 4. Procedures for implementing integrated fire response strategy
 5. Identification of readily-available pre-staged equipment
 6. Training on integrated fire response strategy
 7. Spent fuel pool mitigation measures
- (c) Actions to minimize release to include consideration of:
 1. Water spray scrubbing
 2. Dose to onsite responders

2.C(9) Implementation of New and Revised Surveillance Requirements

For SRs that are new in Amendment No. 279, the first performance is due at the end of the first surveillance interval, which begins on the date of implementation of this amendment.

For SRs that existed prior to Amendment No. 279, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of this amendment.

For SRs that existed prior to Amendment No. 279, that have modified acceptance criteria, the first performance is due at the end of the surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment.

For SRs that existed prior to Amendment No. 279, whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to the implementation of this amendment.

(10) Removed Details and Requirements Relocated to Other Controlled Documents

License Amendment No. 279 authorizes the relocation of certain technical specifications and operating license conditions, if applicable, to other licensee-controlled documents. Implementation of this amendment shall include relocation of these requirements to the specified documents.

(11) License Renewal License Conditions

- (a) The information in the Updated Final Safety Analysis Report (UFSAR) supplement, submitted pursuant to 10 CFR 54.21(d), as revised during the license renewal application review process, and as supplemented by the Commitments applicable to Davis-Besse Nuclear Power Station, Unit No. 1, in Appendix A of the "Supplemental Safety Evaluation Report Related to the License Renewal of Davis-Besse Nuclear Power Station" (SER) dated August 2015, is collectively the "License Renewal UFSAR Supplement." The License Renewal UFSAR Supplement is henceforth part of the UFSAR which will be updated in accordance with 10 CFR 50.71(e). As such, the licensee may make changes to the programs and activities applicable to Davis-Besse Nuclear Power Station, Unit No. 1, described in the License Renewal UFSAR Supplement provided the licensee evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

- (b) This License Renewal UFSAR Supplement, as revised per License Condition 11(a) above, describes certain programs to be implemented and activities to be completed prior to the period of extended operation.
1. The licensee shall implement those new programs and enhancements to existing programs no later than October 22, 2016.
 2. The licensee shall complete those activities as noted in the Commitments applicable to Davis-Besse Nuclear Power Station, Unit No. 1, in the License Renewal UFSAR Supplement no later than October 22, 2016 or the end of the last refueling outage prior to the period of extended operation, whichever occurs later.
 3. The licensee shall notify the NRC in writing within 30 days after having accomplished item (b)1 above and include the status of those activities that have been or remain to be completed in item (b)2 above.
- (c) This license condition requires testing of surveillance capsules for the period of extended operation to meet the test procedures and reporting requirements of American Society of Testing and Materials (ASTM) E 185-82 to the extent practicable for the configuration of the specimens in the capsule. All pulled capsules shall be properly maintained for testing, and any changes to storage requirements must be approved by the NRC. All pulled and tested capsules, unless discarded before August 31, 2000, shall be placed in storage to be saved for possible future reconstitution and use.

2.D. FENOC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Davis-Besse Nuclear Power Station Physical Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan Revision 4," submitted by letter dated May 18, 2006.

FENOC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The FENOC CSP was approved by License Amendment No. 283.

E. This renewed license is subject to the following antitrust conditions:

Definitions

Entity shall mean any electric generation and/or distribution system or municipality or cooperative with a statutory right or privilege to engage in either of these functions.

Wheeling shall mean transportation of electricity by a utility over its lines for another utility, including the receipt from and delivery to another system of like amounts but not necessarily the same energy. Federal Power Commission, The 1970 National Power Survey, Part 1, p. I-24-8.

License Conditions Approved By the Atomic Safety and Licensing Appeal Board*

- (1) Applicants shall not condition the sale or exchange of wholesale power or coordination services upon the condition that any other entity:
 - (a) enter into any agreement or understanding restricting the use of or alienation of such energy or services to any customers or territories;

* "Applicants" as used by the Appeal Board refers to the Toledo Edison Company, Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company and Pennsylvania Power Company although none of these entities are currently Licensees for this facility.

- 2.E(1)(b) enter into any agreement or understanding requiring the receiving entity to give up any other power supply alternatives or to deny itself any market opportunities;
- (c) withdraw any petition to intervene or forego participation in any proceeding before the Nuclear Regulatory Commission or refrain from instigating or prosecuting any antitrust action in any other forum.
- (2) Applicants, and each of them, shall offer interconnections upon reasonable terms and conditions at the request of any other electric entity(ies) in the CCCT, such interconnections to be available (with due regard for any necessary and applicable safety procedures) for operation in a closed-switch synchronous operating mode if requested by the interconnecting entity(ies). Ownership of transmission lines and switching stations associated with such interconnection shall remain in the hands of the party funding the interconnection subject, however, to any necessary safety procedures relating to disconnection facilities at the point of power delivery. Such limitations on ownership shall be the least necessary to achieve reasonable safety practices and shall not serve to deprive purchasing entities of a means to effect additional power supply options.
- (3) Applicants shall engage in wheeling for and at the request of other entities in the CCCT:
- (a) of electric energy from delivery points of Applicants to the entity(ies); and,
- (b) of power generated by or available to the other entity, as a result of its ownership or entitlements* in generating facilities, to delivery points of applicants designated by the other entity.
- (c) The Cleveland Electric Illuminating Company shall file with the FERC, within ten (10) days of the Order of the Director of Nuclear Reactor Regulation dated May 13, 1980, an amendment to its January 27, 1978 Transmission Service Schedule, FERC Docket ER78-194, in accordance with Appendix A to that Order and in conformity with the applicable filing requirements of the Federal Energy Regulatory Commission.

* "Entitlement" includes but is not limited to power made available to an entity pursuant to an exchange agreement.

2.E(3)(cont.) Such wheeling services shall be available with respect to any unused capacity on the transmission lines of Applicants, the use of which will not jeopardize Applicants' system. In the event Applicants must reduce wheeling services to other entities due to lack of capacity, such reduction shall not be effected until reductions of at least 5% have been made in transmission capacity allocations to other Applicants in these proceedings and thereafter shall be made in proportion to reductions* imposed upon other Applicants to this proceeding.

Applicants shall make reasonable provisions for disclosed transmission requirements of other entities in the CCCT in planning future transmission either individually or within the CAPCO grouping. By "disclosed" is meant the giving of reasonable advance notification of future requirements by entities utilizing wheeling services to be made available by Applicants.

- (4)(a) Applicants shall make available membership in CAPCO to any entity in the CCCT with a system capability of 10 MW or greater;
- (b) A group of entities with an aggregate system capability of 10 MW or greater may obtain a single membership in CAPCO on a collective basis.**

* The objective of this requirement is to prevent preemption of unused capacity on the lines of one Applicant by other Applicants or by entities the transmitting Applicant deems noncompetitive. Competitive entities are to be allowed opportunity to develop bulk power services options even if this results in reallocation of CAPCO transmission channels. This relief is required in order to avoid prolongation of the effects of Applicants' illegally sustained dominance.

** E.g., Wholesale Customer of Ohio Edison (WCOE).

- 2.E(4)(c) Entities applying for membership in CAPCO pursuant to License Condition 4 shall become members subject to the terms and conditions of the CAPCO Memorandum of Understanding of September 14, 1967, and its implementing agreements, except that new members may elect to participate on an equal percentage of reserve basis rather than a P/N allocation formula for a period of twelve years from date of entrance.* Following the twelfth year of entrance, new members shall be expected to adhere to such allocation methods as are then employed by CAPCO (subject to equal opportunity for waiver or special consideration granted to original CAPCO members which then are in effect).
- (d) New members joining CAPCO pursuant to this provision of relief shall not be entitled to exercise voting rights until such time as the system capability of the joining member equals or exceeds the system capability of the smallest member of CAPCO which enjoys voting rights.**

* The selection of the 12-year period reflects our determination that an adjustment period is necessary since the P/N formula has a recognized effect of discriminating against small systems and forcing them to forego economies of scale in generation in order to avoid carrying excessive levels of reserves. We also found that P/N is not entirely irrational as a method of reserve allocation. We have observed that Applicants themselves provided adjustment periods and waivers to integrate certain Applicants into the CAPCO reserve requirement program. The 12-year period should permit new entrants to avoid initial discrimination but to accommodate and adjust to the CAPCO system over some reasonable period of time. Presumably new entrants will be acquiring ownership shares and entitlements during the 12-year period so that adverse consequences of applying the P/N formula will be mitigated.

** Our objective is to prevent impediments to the operation and development of an areawide power pool through the inability of lesser entities to respond timely or to make necessary planning commitments. While we grant new member entities the opportunity to participate in CAPCO it is not our intent to relieve joining entities of responsibilities and obligations necessary to the successful operation of the pool. For those smaller entities which do not wish to assume the broad range of obligations associated with CAPCO membership we have provided for access to bulk power service options which will further their ability to survive and offer competition in the CCCT.

- 2.E(5) Applicants shall sell maintenance power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (1) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (2) to non-Applicant entities outside the CCCT.
- (6) Applicants shall sell emergency power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (1) to each either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (2) to non-Applicant entities outside the CCCT.
- (7) Applicants shall sell economy energy to requesting entities in the CCCT, when available, on terms and conditions no less favorable than those available: (1) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (2) to non-Applicant entities outside the CCCT.
- (8) Applicants shall share reserves with any interconnected generation entity in the CCCT upon request. The requesting entity shall have the option of sharing reserves on an equal percentage basis or by use of the CAPCO P/N allocation formula or on any other mutually agreeable basis.
- (9) (a) Applicants shall make available to entities in the CCCT access to the Davis-Besse 1, 2 and 3 and the Perry 1 and 2 nuclear units and any other nuclear units for which Applicants or any of them, shall apply for a construction permit or operating license during the next 25 years. Such access, at the option of the requesting entity, shall be on an ownership share, or unit participation or contractual pre-purchase of power basis.*

Each requesting entity (or collective group of entities) may obtain up to 10% of the capacity of the Davis-Besse and Perry Units and 20% of future units (subject to the 25-year limitation) except that once any entity or entities have contracted for allocations totaling 10% or 20%, respectively, no further participation in any given unit need be offered.

* Requesting entities' election as to the type of access may be affected by provisions of state law relating to dual ownership of generation facilities by municipalities and investor-owned utilities. Such laws may change during the period of applicability of these conditions. Accordingly, we allow requesting entities to be guided by relevant legal and financial considerations (including Commission regulations on nuclear power plant ownership) in fashioning their requests.

- 2.E(9)(b) Commitments for the Davis-Besse and Perry Units must be made by requesting entities within two years after this decision becomes final. Commitments for future units must be made within two years after a construction permit application is filed with respect to such a unit (subject to the 25-year limitation) or within two years after the receipt by a requesting entity of detailed written notice of Applicants' plans to construct the unit, whichever is earlier; provided, however, that the time for making the commitment shall not expire until at least three months after the filing of the application for a construction permit. Where an Applicant seeks to operate a nuclear plant with respect to which it did not have an interest at the time of the filing of the application for the construction permit, the time periods for commitments shall be the same except that reference should be to the operating license, not the construction permit.
- (10) Applicants shall sell wholesale power to any requesting entity in the CCCT, in amounts needed to meet all or part of such entity's requirements. The choice as to whether the agreement should cover all or part of the entity's requirements should be made by the entity, not the Applicant or Applicants.
- (11) These conditions are intended as minimum conditions and do not preclude Applicants from offering additional wholesale power or coordination services to entities within or without the CCCT. However, Applicants shall not deny wholesale power or coordination services required by these conditions to non-Applicant entities in the CCCT based upon prior commitments arrived at in the CAPCO Memorandum of Understanding or implementing agreements. Such denial shall be regarded as inconsistent with the purpose and intent of these conditions.

The above conditions are to be implemented in a manner consistent with the provisions of the Federal Power Act and all rates, charges or practices in connection therewith are to be subject to the approval of regulatory agencies having jurisdiction over them.

- 2.F. This renewed license is subject to the following additional conditions for the protection of the environment:
- (1) FENOC shall operate Davis-Besse Unit No. 1 within applicable Federal and State air and water quality standards.
 - (2) Before engaging in an operational activity not evaluated by the Commission, FENOC will prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated, or that is significantly greater than that evaluated in the Final Environmental Statement, FENOC shall provide a written evaluation of such activities and obtain prior approval of the Director, Office of Nuclear Reactor Regulation for the activities.

- G. In accordance with the requirement imposed by the October 8, 1976, order of the United States Court of Appeals for the District of Columbia Circuit in Natural Resources Defense Council v. Nuclear Regulatory Commission, No. 74-1385 and 74-1586, that the Nuclear Regulatory Commission “shall make any licenses granted between July 21, 1976 and such time when the mandate is issued subject to the outcome of such proceedings herein,” this license shall be subject to the outcome of such proceedings.
 - H. This renewed license is effective as of the date of issuance and shall expire at midnight April 22, 2037.
3. Based on the Commission’s Order dated December 16, 2005 and conforming Amendment No. 270 dated December 16, 2005 regarding the direct transfer of the license from the Cleveland Electric Illuminating Company (Cleveland Electric) and the Toledo Edison Company (Toledo Edison) to FirstEnergy Nuclear Generation Corp. (FENGenCo)*, FirstEnergy Nuclear Operating Company and FENGenCo* shall comply with the following conditions noted below:
- A. On the closing date of the transfers to FENGenCo* of their interests in Davis-Besse, Cleveland Electric and Toledo Edison shall transfer to FENGenCo* all of each transferor’s respective accumulated decommissioning funds for Davis-Besse and tender to FENGenCo* additional amounts equal to remaining funds expected to be collected in 2005, as represented in the application dated June 1, 2005, but not yet collected by the time of closing. All of the funds shall be deposited in a separate external trust fund for the reactor in the same amount as received with respect to the unit to be segregated from other assets of FENGenCo* and outside its administrative control, as required by NRC regulations, and FENGenCo* shall take all necessary steps to ensure that this external trust fund is maintained in accordance with the requirements of the order approving the transfer of the license and consistent with the safety evaluation supporting the order and in accordance with the requirements of 10 CFR Section 50.75, “Reporting and recordkeeping for decommissioning planning.”

* FirstEnergy Nuclear Generation Corp. (FENGenCo)* has been renamed FirstEnergy Nuclear Generation, LLC.

- B. The Support Agreement described in the application dated June 1, 2005 (up to \$400 million), shall be effective consistent with the representations contained in the application. FENGenCo* shall take no action to cause FirstEnergy, or its successors and assigns, to void, cancel, or modify the Support Agreement without the prior written consent of the NRC staff. FENGenCo* shall inform the Director of the Office of Nuclear Reactor Regulation, in writing, no later than ten days after any funds are provided to FENGenCo* by FirstEnergy under either Support Agreement.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William M. Dean, Director
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A - Technical Specifications
2. Preoperational Tests, Startup Tests and Other Items Which Must Be Completed Prior to Proceeding to Succeeding Operational Modes

Date of Issuance: December 8, 2015

* FirstEnergy Nuclear Generation Corp. (FENGenCo) has been renamed FirstEnergy Nuclear Generation, LLC.

ATTACHMENT 2 TO LICENSE NPF-3

Preoperational Test, Startup Tests, and Other Items Which Must be Completed Prior to Proceeding to Succeeding Operational Modes

This attachment identifies certain preoperational tests, startup tests, and other items which must be completed to the Commission's satisfaction prior to proceeding to certain specified Operational Modes. Toledo Edison Company shall not proceed beyond the authorized Operational Modes without prior written authorization from the Commission.

- A. Toledo Edison Company may at the license issue date proceed directly to Operational Mode 6 (initial fuel loading), and may subsequently proceed to Operational Mode 5 (cold shutdown), except as noted below.
- B. The following items must be completed prior to proceeding to Operational Mode 5 (cold shutdown):

- 1. Approval is required-of the fifteen listed surveillance procedures

ST5030.02	RPS Monthly Check
ST5030.09	RPS Response Time
ST5031.14	RPS Response Time Calculation
ST5036.02	Remote Shutdown Monitor Instrument Channel Calibration
ST5036.03	Post Accident Instrument Channel Check
ST5036.04	Post Accident Instrument Channel Calibration
ST5050.02	Core Flood System Isolation Valve Check
ST5051.01	ECCS Subsystem Monthly Test
ST5061.02	Containment Local Leak Test
ST5062.01	Containment Spray System Monthly Test
ST5070.01	Main Steam Safety Valve Setpoint
ST5020.01	Axial Power Imbalance Manual Calibration
ST5022.03	Quadrant Power Tilt
ST5033.02	Incore Monitor System Recorder Calibration
ST5042.03	Reactor Coolant Flow Rate Test

- 2. System Interaction

The Toledo Edison Company's 5000 and 8000 Series EIRs (Engineering Inspection Reports) concerning upgrading of supports and installation of water shields on non-safety related systems such that their failure will not degrade or cause failure of a safety related system must be completed as stated below:

- a. Upgrading of 29 electrical tray and conduit supports primarily located in the 4160 and 480 volt switch gear rooms and Intake Water Structure.
 - b. Final inspection and approval by Toledo Edison Company Quality Control of 24 completed modifications and approval by Engineering.
 - c. Final review and approval by Toledo Edison Company Engineering of 26 completed and inspected modifications.
 - d. Completion of 24 structural items, primarily shielding devices from water sources.
- C. The following items must be completed prior to proceeding to Operational Mode 4 (hot shutdown):
1. High Pressure Injection-Pump Modification

The Toledo Edison Company must provide documentation to establish that the modification work for the pumps is in accordance with the FSAR and the specification requirements.
 2. HVAC Systems

The reinspection activity and subsequent repair effort, relative to welds needed to resist seismic design forces, must be completed.
 3. Large Pipe Hangers and-Anchors

Corrective action relative to 76 large pipe hangers and seven anchors for safety related systems must be completed.
 4. Small Pipe Hangers and-Anchors

Corrective action relative to small piping system discrepancies must be completed.
 5. Valve Stem Locknuts

Stem locknuts for 141 valves with limit torque operators within safety related systems must be verified as being "staked."
 6. Leak-Tightness Test-of Valve Enclosure

Approval of periodic test procedure and completion of a leak tightness test of the enclosure installed around DH 11 and DH 12 valves in containment.

7. Systems Interaction
 - a. Upgrading of 20 electrical conduit supports primarily located in hallways and corridors.
 - b. Upgrading of 27 pipe supports.

- D. The following items must be completed prior to proceeding to Operational Mode 3 (hot standby):
 1. Reworked Valves

Five small valves within safety related systems must be hydrostatically tested and accepted to the requirements of the applicable code.

- E. The following items must be completed prior to proceeding to Operational Mode 2 (initial criticality):
 1. Modification to replace the four level switches in each steam generator inside containment with four level transmitters.
 2. Resolution of discrepancies for Preoperational Tests:

PT 232.01, Miscellaneous Radwaste System
PT 230.01, Clean Liquid Radwaste
 3. Completion of Preoperational Tests:

PT 230.02, Degassifier
PT 230.03, Boric Acid Evaporator
PT 231.02, Miscellaneous Waste Evaporator

- F. The following items must be completed prior to proceeding to Operational Mode 1 (power operation):
 1. Emergency Planning-Procedures
 - a. An isolation emergency plan implementing procedure to cope with weather conditions which require personnel to remain at the station for undetermined periods shall be developed. This procedure shall also address provisions for transportation of emergency personnel to the station when needed during these periods.
 - b. The following topics will be incorporated into the Emergency Plan Implementing Procedure:

- (1) Evacuation of personnel to minimize exposure to hazard.
- (2) Personnel accountability to assist the person in charge of emergency response actions to account for missing persons.
- (3) Reentry into previously evacuated areas for the purposes of saving lives, search and rescue of missing and injured persons. Safety equipment to be worn depending on areas or conditions shall be addressed.

2. Completion of Preoperational Tests Solid Waste Compactor, PT 233.02.

3. Electrical Firebarrier-Testing

The Toledo Edison Company shall provide documentation of fire barrier testing to assure conformance of the fire barriers installed at the Davis-Besse I plant to ASTS E-119.

4. Boron Dilution-Mode-Tests

Complete flow tests in the hot leg drain mode and the pressurizer spray mode to verify minimum flow of 40 gallons per minute.