



FirstEnergy Nuclear Operating Company

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June 11, 2009  
L-09-096

10 CFR 50.90

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

SUBJECT:  
Beaver Valley Power Station, Unit Nos. 1 and 2  
Docket Nos. 50-334 and 50-412, License Nos. DPR-66 and NPF-73  
License Amendment Request No. 08-008, Elimination of Recirculation Spray Pump  
Response Time Surveillance Requirement

In accordance with the provisions of 10 CFR 50.90, the FirstEnergy Nuclear Operating Company (FENOC) is submitting a request for an amendment to the operating licenses for Beaver Valley Power Station (BVPS) Unit Nos. 1 and 2.

The proposed amendment would revise the Technical Specifications to eliminate Surveillance Requirement 3.3.2.9, Verification of ESFAS Response Times, for the recirculation spray pumps. Section 1.4 of the Technical Specifications would be revised to add clarification to Notes associated with Surveillance Requirements in accordance with Technical Specification Task Force Traveler, TSTF-475-A, Revision 1, "Control Rod Notch Testing Frequency and SRM Insert Control Rod Action." The proposed amendment would also revise the BVPS Unit No. 1 operating license to remove a License Condition for recommended inspections of steam generator repairs. A BVPS Unit No. 2 exemption to 10 CFR 70.24 is no longer required and is also being deleted.

The amendment request also proposes several editorial changes to the operating license and Technical Specifications for both BVPS Unit Nos. 1 and 2.

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Beaver Valley Power Station, Unit Nos. 1 and 2  
L-09-096  
Page 2 of 2

FENOC requests approval of the proposed amendment within a nominal one year of the date of this letter. The amendments shall be implemented within 30 days of approval.

There are no regulatory commitments contained in this letter. If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at 330-761-6071.

I declare under penalty of perjury that the foregoing is true and correct. Executed on June   , 2009.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter P. Sena III". The signature is fluid and cursive, with the first name "Peter" and last name "Sena" being the most prominent parts.

Peter P. Sena III

Enclosure: FENOC Evaluation of the Proposed Changes

cc: NRC Region I Administrator  
NRC Senior Resident Inspector  
NRR Project Manager  
Director BRP/DEP  
Site Representative (BRP/DEP)

**FENOC Evaluation of the Proposed Changes  
Beaver Valley Power Station  
License Amendment Request No. 08-008**

Subject: Elimination of Recirculation Spray Pump Response Time Surveillance Requirement and other changes

Table of Contents

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.0	SUMMARY DESCRIPTION .....	1
2.0	DETAILED DESCRIPTION .....	1
3.0	TECHNICAL EVALUATION .....	2
4.0	REGULATORY EVALUATION .....	7
4.1	Significant Hazards Consideration .....	7
4.2	Applicable Regulatory Requirements/Criteria.....	9
4.3	Precedent.....	10
4.4	Conclusions.....	10
5.0	ENVIRONMENTAL CONSIDERATION.....	11
6.0	REFERENCES.....	11

**Attachments**

- 1 Beaver Valley Power Station, Unit No. 1 Proposed Operating License Changes
- 2 Beaver Valley Power Station, Unit No. 2 Proposed Operating License Changes
- 3 Beaver Valley Power Station, Unit Nos. 1 and 2 Proposed Technical Specification Changes
- 4 Beaver Valley Power Station, Unit No. 1 Retyped Operating License Pages
- 5 Beaver Valley Power Station, Unit No. 2 Retyped Operating License Pages
- 6 Beaver Valley Power Station, Unit Nos. 1 and 2 Retyped Technical Specification Pages

## 1.0 SUMMARY DESCRIPTION

This evaluation supports a request to amend the Operating Licenses (DPR-66 and NPF-73) and the Technical Specifications for Beaver Valley Power Station (BVPS) Units 1 and 2.

The proposed changes will revise the Operating Licenses and Technical Specifications by:

- adding a unit designator to the Operating License pages, renumbering the pages, and deleting an obsolete License Condition and Exemption,
- updating the list of enclosures in the Unit 2 license to reflect the current status of appendices to the license,
- removing an amendment issuance date from the "Implementation Date" column of Appendices C and D to the Unit 1 and Unit 2 licenses, respectively,
- modifying Example 1.4-3 in Section 1.4 to adopt a portion of Technical Specification Task Force (TSTF) 475-A, Revision 1, Control Rod Notch Testing Frequency and SRM Insert Control Rod Action, and
- eliminating Surveillance Requirement 3.3.2.9 from Function 2.b(2), Containment Spray Systems - Recirculation Spray - Containment Pressure High-High, in Table 3.3.2-1.

## 2.0 DETAILED DESCRIPTION

The proposed Operating License changes are provided in Attachments 1 and 2 for Units 1 and 2, respectively. The proposed Technical Specification changes are provided in Attachment 3. There are no Technical Specification Bases changes required for the submittal. Retyped Operating License pages are provided in Attachments 4 and 5 for Units 1 and 2, respectively. Retyped Technical Specification pages are provided in Attachment 6. The retyped pages are provided for readability and are labeled as "Unofficial" because the license amendments have not been issued and other BVPS amendments are expected to be issued prior to the issuance of the amendments requested by this License Amendment Request (LAR).

The proposed changes to the Operating Licenses and the Technical Specifications have been prepared electronically. Deletions are shown with a strike-through and insertions are shown double-underlined. This presentation allows the reviewer to readily identify the information that has been deleted and added.

To meet format requirements the Operating Licenses, Index and Technical Specification pages will be revised and repaginated as necessary to reflect the changes being proposed by this LAR.

The following describes the changes proposed in this LAR. The technical evaluation justifying these changes is provided in Section 3.0 of this submittal.

#### Operating License Changes

A unit designator is being added to the Operating License pages for each unit. The pages are renumbered to be in sequence and modified to uniquely identify each unit. The list of enclosures in the Unit 2 license is being updated to reflect the current status of license appendices to the license. The Unit 1 License Condition associated with Amendment 208 and Exemption 3, which is applicable to Unit 2, are being deleted. License Conditions associated with Amendments 281 and 163 are being revised to remove a February 15, 2008 amendment issuance date from the "Implementation Date" column of Appendices C and D for Unit 1 and Unit 2, respectively.

The list of enclosures in the Unit 2 license is being updated by adding Appendix D to the list of enclosures because it was not added when Appendix D was originally created.

#### Section 1.4 Change

Section 1.4, Example 1.4-3 is modified by inserting "(plus the extension allowed by SR 3.0.2)" in two locations.

#### Surveillance Requirement 3.3.2.9 Change

Surveillance Requirement (SR) 3.3.2.9 is being deleted from Function 2.b(2), Containment Spray Systems - Recirculation Spray - Containment Pressure High-High, in Technical Specification Table 3.3.2-1.

### 3.0 TECHNICAL EVALUATION

#### Operating License Changes

With the conversion of the BVPS Technical Specifications to the Improved Technical Specifications (ITS) by Unit 1 Amendment 278 and Unit 2 Amendment 161 (Reference 1), the Operating Licenses, Technical Specifications, and Technical Specification Bases all appear in one book. The addition of a unit designator to each Operating License page will more readily distinguish between pages applicable to each of the units. In addition, renumbering of the Operating License and Appendix pages will result in unique page identification.

The Unit 1 steam generators have been replaced with Model 54F steam generators. The steam generator replacement was approved by Unit 1 Amendment 273 (Reference 2). The resulting (current) Unit 1 Technical Specifications do not permit sleeving of steam generator tubes. Therefore, the conditions under which the License Condition incorporated by Amendment 208 would be implemented (perform the post weld heat treatment of sleeve welds and the NRC-recommended inspections for repaired tubes as described in the licensee's application dated March 10, 1997, as supplemented by July 28 and September 17, 1997 correspondence, and evaluated in the staff's safety evaluation attached to Amendment 208) no longer exist and the

License Condition is extraneous. If sleeving was to be used in the future, it would be necessary to obtain a suitable license amendment, including license conditions if appropriate, at that time.

The exemption to 10 CFR 70.24 (Exemption 3) was issued prior to the allowance for boron credit. Credit for the presence of soluble boron is allowed only under 10 CFR 50.68. The NRC Safety Evaluation for Unit 2 Amendment 156 (Reference 3), Extended Power Uprate, documents that BVPS is committed to 10 CFR 50.68 as part of the unit's licensing basis. As a result, the exemption to 10 CFR 70.24 (Exemption 3) regarding criticality alarms for stored fuel is no longer applicable or required in the Unit 2 Operating License.

License Conditions associated with Amendments 281 and 163 are being revised to remove a February 15, 2008 amendment issuance date from the "Implementation Date" column of Appendices C and D for Unit 1 and Unit 2, respectively. The issuance date is unnecessary because it is specified in the letters that granted the amendments. It is being removed because it gives the appearance of a conflict with other information in the "Implementation Date" column that states that the amendments shall be implemented within 120 days from date of issuance. The resulting license conditions will be consistent with the implementation date specified in the letters that granted the amendments.

All of the proposed changes to the Operating License pages are considered editorial or administrative in nature.

#### Section 1.4 Change

A portion of TSTF-475-A, Revision 1 (Reference 4) involves the insertion of "(plus the extension allowed by SR 3.0.2)" into Example 1.4-3. The insertion provides clarification that the extension allowed by Surveillance Requirements 3.0.2 applies to Notes associated with surveillance requirements as well as the surveillance requirements.

This proposed change makes it clear that the 25 percent extension provision in SR 3.0.2 is equally applicable to time periods specified in the "FREQUENCY" column and in Notes in the "SURVEILLANCE" column. This change is intended to achieve consistency with the definition of "specified Frequency" provided in the second paragraph of Section 1.4. This paragraph states:

"The "specified Frequency" is referred to throughout this section and each of the Specifications of Section 3.0.2, Surveillance Requirement (SR) Applicability. The "specified Frequency" consists of the requirements of the Frequency column of each SR, as well as certain Notes in the Surveillance column that modify performance requirements."

As made clear in the second sentence above, the "specified Frequency" includes time periods discussed in Notes in the "Surveillance" column, in addition to time periods listed in the "Frequency" column. Therefore, the provisions of SR 3.0.2 (which permit a

25% grace period to facilitate surveillance scheduling and avoid plant operating conditions that may not be suitable for conducting the test) also apply to the time periods listed in Notes in the "SURVEILLANCE" column. This is because SR 3.0.2 states "The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified..."

Therefore, Example 1.4-3 is to be revised to be consistent with the above statements. The Example currently explicitly recognizes that the 25% extension allowed by SR 3.0.2 is applicable to the time period listed in the "FREQUENCY" column, but it does not explicitly recognize that the SR 3.0.2 extension is applicable to the time period listed in the Note in the "SURVEILLANCE" column. The change to the Example provides this explicit recognition by copying the phrase "(plus the extension allowed by SR 3.0.2)" in two additional portions of the discussion for this example.

#### Surveillance Requirement 3.3.2.9 Change

Surveillance Requirement 3.3.2.9 is being deleted from Function 2.b(2), Containment Spray Systems - Recirculation Spray - Containment Pressure High-High, in Table 3.3.2-1 because the potential variation in the measurable response time has an insignificant effect on the results of the applicable safety analysis. The surveillance requirement as it pertains to Function 2.b(2) was introduced into the BVPS Technical Specifications by Amendments 280 and 164 (References 5 and 6). Amendments 280 (Unit 1) and 164 (Unit 2) split Function 2, Containment Spray, into Function 2.a, Containment Spray Systems - Quench Spray, and Function 2.b, Containment Spray Systems - Recirculation Spray. Each of these Functions, along with Function 3.b, Containment Isolation - Phase B Isolation, receives Containment Pressure High-High as an initiating signal. The change made by Amendments 280 and 164 are the result of changing how the recirculation spray pumps are started. Prior to the amendment, the recirculation spray pumps were started by a timer that was started upon receipt of a Containment Pressure High-High signal. With the implementation of the subject amendments the pumps are now started following receipt of a coincident Containment Pressure High-High/Refueling Water Storage Tank (RWST) Level Low signal.

Included in Table 3.3.2-1 are the surveillance requirements that must be met to demonstrate operability of initiating signals. For the Containment Pressure High-High signal, four surveillance requirements are listed as applicable. Surveillance Requirement 3.3.2.1 is a Channel Check. Surveillance Requirement 3.3.2.4 is a Channel Operational Test. Surveillance Requirement 3.3.2.8 is a Channel Calibration. Surveillance Requirement 3.3.2.9 is a response time verification. Surveillance Requirements 3.3.2.1, 3.3.2.4 and 3.3.2.8 are clearly applicable to any Function that has Containment Pressure High-High as an initiating signal, because these surveillance requirements are verifying the operability of the Containment Pressure High-High instrumentation channel itself. However, Surveillance Requirement 3.3.2.9 is not appropriate for all Functions for which Containment Pressure High-High is an initiating signal. The following explains why Surveillance Requirement 3.3.2.9 is applicable to Function 2.a, Containment Spray Systems - Quench Spray, and Function 3.b,

Containment Isolation - Phase B Isolation, but not necessary for Function 2.b,  
Containment Spray Systems - Recirculation Spray.

For Function 2.a, Containment Spray Systems - Quench Spray, the response time being verified by Surveillance Requirement 3.3.2.9 is the time associated with starting the quench spray pumps. This time appears in the Licensing Requirements Manual (LRM) for each unit. This equipment response time is a critical assumption of the applicable safety analysis. The analyzed performance of the quench spray system is dependent upon the quench spray pumps starting and delivering flow to the spray nozzles within the time period specified in each unit's LRM.

For Function 3.b, Containment Isolation - Phase B Isolation, the response time being verified by Surveillance Requirement 3.3.2.9 is the time associated with Control Room Ventilation Isolation (on Containment Isolation-Phase B). This time appears in the LRM for each unit. This response time is an assumption of the applicable safety analysis because the dose to the control room occupants assumes the control room is isolated within the time period specified in each unit's LRM.

For Function 2.b, Containment Spray Systems – Recirculation Spray, the response time being verified by Surveillance Requirement 3.3.2.9 is the time associated with starting the recirculation spray pumps. However, the response time for the recirculation spray pumps is shown as Not Applicable in the LRM for each unit. This is because the potential variation in the measurable response time has an insignificant effect on the results of the applicable safety analysis. The reason for this is provided in the following paragraphs.

The Technical Specifications define Engineered Safety Features (ESF) response time as that time interval from when the monitored parameter exceeds its actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). For the recirculation spray system the time interval is from when the monitored parameters (containment pressure and refueling water storage tank level) exceed their setpoints to when the recirculation spray flow begins exiting the spray nozzles. This includes the time it takes for the pumps to start.

The recirculation spray system provides two primary functions. These are to provide containment spray in conjunction with the quench spray system to reduce containment temperature and pressure and to provide for long term heat removal via the recirculation spray heat exchangers following a Design Basis Accident (DBA). The recirculation spray system is actuated automatically by a containment high-high pressure signal coincident with a refueling water storage tank (RWST) low level signal. This initiation logic ensures that adequate water is contained in the containment sump to submerge the sump strainers and provide adequate net positive suction head (NPSH) to the recirculation spray pumps. Based on the containment analysis, the earliest time that the initiation conditions will be reached is approximately 19 minutes for Unit 1 and 39 minutes for Unit 2, following the initiating event.



The total system response time includes the time required for initiation conditions to be reached, the signal delay times, a time for the recirculation spray pumps to produce rated flow and head, and the time required to fill the recirculation spray system piping following pump start. Assuming the recirculation spray system is dry prior to initiation, calculations have shown a maximum system fill time of 65 seconds for Unit 1 and 77 seconds for Unit 2. Therefore, the total system response time from the start of an event is a minimum of approximately 20 minutes (19 minutes + 65 seconds) for Unit 1 and 40 minutes (39 minutes + 77 seconds) for Unit 2. This value is based on maximum safeguards conditions with a large break loss-of-coolant accident (LOCA) and would be longer for minimum safeguards and smaller break sizes. Of the total system response time, a minimum of 20 minutes for Unit 1 or 40 minutes for Unit 2, the time required for the signal response and pump start is short (several seconds) and thus, insignificant when compared to the total system response time.

The only portions of the total system response time for the recirculation spray system that are capable of being directly measured are the signal delay and pump start times. This is because the piping fill time cannot be measured without risk of damage to plant systems, structures and components due to containment spray. The system initiation time is calculated as a function of the RWST drawdown rate which is specific to the accident scenario. The potential variation in the measured recirculation spray response time following initiation is limited by the variation in the signal response and pump start times. This potential variation is very small (several seconds) in comparison to the minimum overall system response time of approximately 20 (Unit 1) or 40 (Unit 2) minutes.

A sensitivity evaluation was performed for BVPS Unit 1 in which the recirculation spray system response time was varied. For BVPS Unit 2, potential variations would have an even less significant effect since the initiation time is longer. The evaluation demonstrated that the measurable system response time could be increased by a substantial amount as compared to normal performance before results are significantly affected. A substantial increase in signal delay and/or pump start time, although not specifically measured, would be evident as a failure during normal functional testing. This indicates that a variation in the measurable response time for the start of recirculation spray pumps up to a point where failure would be evident is not critical to the success of the safety analysis and is therefore not a critical assumption in the analysis. Therefore, there is no need for a surveillance requirement to verify a response time for the recirculation spray pumps in the Technical Specifications.

The performance of the recirculation spray pumps and their ability to start upon demand are verified by other surveillance requirements. Surveillance Requirement 3.6.7.2 verifies that the recirculation spray pump's developed head is greater than or equal to what is required, and Surveillance Requirement 3.6.7.3 verifies that each pump starts on an actual or simulated signal. A channel operational test (Surveillance Requirement 3.3.2.4) and a channel calibration (Surveillance Requirement 3.3.2.8) are required for both the containment pressure high signal and the RWST level low signal.

Therefore, based on the surveillance requirements that verify the recirculation spray pumps start, develop the required head, and because a response time is not required in the safety analysis, Surveillance Requirement 3.3.2.9 can be deleted from Function 2.b(2), Containment Spray Systems - Recirculation Spray - Containment Pressure High-High, in Table 3.3.2-1.

#### 4.0 REGULATORY EVALUATION

The proposed changes would revise the Beaver Valley Power Station (BVPS) Units 1 and 2 Operating Licenses and Technical Specifications by:

- adding a unit designator to the Operating License pages, renumbering the pages and deleting an obsolete License Condition and Exemption,
- updating the list of enclosures in the Unit 2 license to reflect the current status of appendices to the license,
- modifying Example 1.4-3 in Section 1.4 to adopt a portion of Technical Specification Task Force (TSTF) 475-A, Revision 1, Control Rod Notch Testing Frequency and SRM Insert Control Rod Action, and
- eliminating Surveillance Requirement 3.3.2.9 from Function 2.b(2), Containment Spray Systems - Recirculation Spray - Containment Pressure High-High, in Table 3.3.2-1.

The changes to the Operating License pages are editorial or administrative that will (1) permit unique and unit-specific page identification, (2) update the list of enclosures in the Unit 2 license to reflect the current status of appendices to the license, (3) remove a condition and an exemption that are no longer applicable, and (4) remove a February 15, 2008 amendment issuance date from the "Implementation Date" column of Appendices C and D for Unit 1 and Unit 2, respectively. The change to Example 1.4-3 is being made for clarification and consistency. The surveillance requirement to verify a response time for the recirculation spray pumps is being eliminated because the potential variation in the measurable response time has an insignificant effect on the results of the applicable analyses.

#### 4.1 Significant Hazards Consideration

FirstEnergy Nuclear Operating Company (FENOC) has evaluated whether or not a significant hazards consideration is involved with the proposed amendments by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed changes to the Operating License pages and Example 1.4-1 are editorial changes that do not have any effect on equipment or plant operation. Therefore, these proposed changes will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The elimination of the requirement to verify a response time for the recirculation spray pumps will not affect the operation of the pumps and will not impact the applicable safety analyses because the potential variation in the measurable response time has an insignificant effect on the results of the applicable safety analyses. The recirculation spray system is an accident mitigation system, so no new accident initiators are created by the elimination of the subject surveillance requirement. Thus eliminating the surveillance requirement will not result in a significant increase in the probability of an accident previously evaluated. The elimination of the subject surveillance requirement will not impact the accident mitigation function of the recirculation spray system because the pump response time is not a critical safety analyses assumption due to the fact that the potential variation in the measurable response time has an insignificant effect on the analysis. Since the post-accident performance of the recirculation spray system is not changed by eliminating the requirement to verify a response time for the pumps, the proposed change will not involve a significant increase in consequences of an accident previously evaluated. Therefore, the elimination of the surveillance requirement will not involve a significant increase in the probability or consequences of an accident previously evaluated.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed changes to the Operating License pages and Example 1.4-1 are editorial changes that do not have any effect on equipment or plant operation. Therefore, these proposed changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The elimination of the surveillance requirement to verify a response time for the recirculation spray pumps will not affect the operation of the pumps. The pumps will continue to perform in the same manner after the elimination of the surveillance requirement as they do with the surveillance requirement. Therefore, the elimination of the surveillance requirement will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed changes to the Operating License pages and Example 1.4-1 are editorial changes that do not have any effect on equipment or plant operation. Therefore, these proposed changes will not involve a significant reduction in a margin of safety.

The elimination of the surveillance requirement to verify a response time for the recirculation spray pumps is consistent with the applicable safety analysis since a response time for the pumps is not an analysis assumption. As a result the existing margin of safety is not impacted. Therefore, the elimination of the surveillance requirement will not involve a significant reduction in a margin of safety.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above, FENOC concludes that the proposed amendments do not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

#### 4.2 Applicable Regulatory Requirements/Criteria

A review of 10 CFR 50, Appendix A, "General Design Criteria for Nuclear Power Plants" and the Regulatory Guides, was conducted to assess the potential impact associated with the proposed changes. The General Design Criteria (GDC) and the Regulatory Guides (RG) were evaluated as follows:

General Design Criterion 38, with respect to the recirculation spray system.

General Design Criterion 39, with respect to permitting periodic inspection of the recirculation spray system.

General Design Criterion 40, with respect to permitting periodic testing of the recirculation spray system.

Regulatory Guide 1.1, as it relates to the NPSH available to the recirculation spray system pumps.

Regulatory Guide 1.26, "Quality Group Classifications and Standards," as it relates to quality group standards for the recirculation spray system.

Regulatory Guide 1.29, "Seismic Design Classification," as it relates to seismic classification of the recirculation spray system.

#### Assessment

No change to either unit's Updated Final Safety Analysis Report (UFSAR) description of conformance to the GDCs or the listed Regulatory Guides is required as a result of the changes proposed in this LAR.

#### 4.3 Precedent

There is no precedent for the proposed changes to the Operating Licenses and the elimination of the surveillance requirement for the recirculation spray pumps because these are unique to BVPS.

As of June 2008, LARs seeking adoption of TSTF-475-A, Revision 1, have been submitted for Duane Arnold, Fermi Unit 2, Vermont Yankee, FitzPatrick, Monticello, Clinton Unit 1, Dresden Units 1 and 2, LaSalle Units 1 and 2, Oyster Creek, Peach Bottom Units 2 and 3 and Quad Cities Units 1 and 2 (References 7 through 12). All of these submittals included the change to Example 1.4-3 except Vermont Yankee, which has not converted to the Improved Technical Specifications. These submittals were made during the December 2007 to June 2008 time period. The change to Example 1.4-1 being proposed for BVPS does not differ from what is contained in the approved TSTF or the applicable submittals listed as precedent.

#### 4.4 Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

## 5.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendments would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendments do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendments meet the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendments.

## 6.0 REFERENCES

1. NRC letter dated February 21, 2007, "BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 – ISSUANCE OF AMENDMENTS RE: THE CONVERSION TO THE IMPROVED TECHNICAL SPECIFICATIONS WITH BEYOND-SCOPE ISSUES (TAC NOS. MC6285, MC6286, MC6579 – MC6612, MC6614 – MC6626, AND MC6783)," Amendments 278 and 161.
2. NRC letter dated February 9, 2006, "BEAVER VALLEY POWER STATION, UNIT NO. 1 (BVPS-1) – ISSUANCE OF AMENDMENT RE: STEAM GENERATOR (SG) REPLACEMENT (TAC NO. MC6725)," Amendment 273.
3. NRC letter dated July 19, 2006, "BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 (BVPS-1 AND 2) – ISSUANCE OF AMENDMENT REGARDING THE 8-PERCENT EXTENDED POWER UPRATE (TAC NOS. MC4645 AND MC4646)," Amendments 275 and 156.
4. Technical Specification Task Force Traveler, TSTF-475-A, Revision 1, "Control Rod Notch Testing Frequency and SRM Insert Control Rod Action."
5. NRC letter dated October 5, 2007, "BEAVER VALLEY POWER STATION, UNIT NO. 1 – ISSUANCE OF AMENDMENT RE: CHANGES TO THE RECIRCULATION SPRAY SYSTEM PUMP START SIGNAL DUE TO THE CONTAINMENT SUMP SCREEN MODIFICATION (TAC NO. MC4290)," Amendment 280.
6. NRC letter dated March 11, 2008, "BEAVER VALLEY POWER STATION, UNIT NO. 2 – ISSUANCE OF AMENDMENT RE: CHANGES TO THE RECIRCULATION SPRAY SYSTEM PUMP START SIGNAL DUE TO THE CONTAINMENT SUMP SCREEN MODIFICATION (TAC NO. MC4291)," Amendment 164.

7. Letter from Richard L. Anderson (FPL Energy Duane Arnold, LCC letter NG-07-0971) to U. S. Nuclear Regulatory Commission, "TSCR-098, Application for Technical Specification Improvement to Adopt TSTF-475, Revision 1. "Revise Control Rod Notch Surveillance Frequency, and Clarify Example," Affected Technical Specifications: Sections 1.4, 3.1.3, and 3.1.4," December 20, 2007.
8. Letter from Joseph H. Plona (DTE Energy letter NRC-09-0001) to U. S. Nuclear Regulatory Commission, "Application for Technical Specification Change Regarding Revision of Control Rod Notch Surveillance Test Frequency and a Clarification of a Frequency Example Using the Consolidated Line Item Improvement Process," dated January 15, 2008.
9. Letter from Ted A. Sullivan (Entergy Nuclear Operations, Inc. letter BVY 08-007) to U. S. Nuclear Regulatory Commission, "Vermont Yankee Nuclear Power Station - License No. DPR-28 (Docket No. 50-271) Technical Specification Proposed Change No. 276 - Revision to TS Sections 3.3/4.3 for Control Rod System," dated February 6, 2008.
10. Letter from Pete Dietrich (Entergy Nuclear Northeast - Entergy Nuclear Operations, Inc. letter JAFP-08-0011) to U. S. Nuclear Regulatory Commission, "License Amendment Request Application for Technical Specification Changes Using the Consolidated Line Item Improvement Process (CLIP)," dated February 7, 2008.
11. Letter from Timothy J. O'Connor (Monticello Nuclear Generating Plant letter L-MT-08-012) to U. S. Nuclear Regulatory Commission, "License Amendment Request: Application for Technical Specification Change Regarding Revision of Control Rod Notch Surveillance Test Frequency and a Clarification of a Frequency Example Using the Consolidated Line Item Improvement Process," dated April 22, 2008.
12. Letter from Pamela B. Cowan (AmerGen Energy Company letters RS-08-061 and RA-08-047) to U. S. Nuclear Regulatory Commission, "Clinton Power Station, Unit 1 – Facility Operating License No. NPF-62 – NRC Docket No. 50-461, Dresden Nuclear Power Station, Units 2 and 3 - Renewed Facility Operating License Nos. DPR-19 and DPR-25 – NRC Docket Nos. 50-237 and 50-249, LaSalle County Station, Units 1 and 2 - Facility Operating License Nos. NPF-11 and NPF-18 – NRC Docket Nos. 50-373 and 50-374, Oyster Creek Nuclear Generating Station, Facility Operating License No. DPR-16 – NRC Docket No. 50-219, Peach Bottom Atomic Power Station, Units 2 and 3 – Renewed Facility Operating License Nos. DPR-44 and DPR-56 – NRC Docket Nos. 50-277 and 50-278, Quad Cities Nuclear Power Station, Unit 1 and 2, Renewed Facility Operating License Nos. DPR-29 and DPR-30 – NRC Docket Nos. 50-254 and 50-265," dated June 9, 2008.

## Attachment 1

### Beaver Valley Power Station, Unit No. 1 Proposed Operating License Changes

### License Amendment Request No. 08-008

The following is a list of the affected pages:

Operating License
1*
2
3
4
6
7
8
Appendix B
1
Appendix C
1
2
3
4
5

\* No Change. Page provided for context only.



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

No change.  
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for context only.

FIRSTENERGY NUCLEAR OPERATING COMPANY

FIRSTENERGY NUCLEAR GENERATION CORP.

DOCKET NO. 50-334

BEAVER VALLEY POWER STATION, UNIT NO. 1

FACILITY OPERATING LICENSE

Amendment No. 269  
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) having found that:
  - A. The application for license filed by FirstEnergy Nuclear Operating Company (FENOC)\* acting on its own behalf and as agent for FirstEnergy Nuclear Generation Corp. (the 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 1, and all required notifications to other agencies or bodies have been duly made;
  - B. Construction of the Beaver Valley Power Station, Unit No. 1 (facility), has been substantially completed in conformity with Construction Permit No. CPPR-75 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;
  - D. There is reasonable assurance: (i) that the activities authorized by this amended 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. FENOC is technically qualified and the licensees are financially qualified to engage in the activities authorized by this amended 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;

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

- G. The issuance of this amended 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 Amendment No. 4 to Facility Operating License No. DPR-66 is in accordance with 10 CFR Part 51 (formerly Appendix D of 10 CFR Part 50) of the Commission's regulations and all applicable requirements have been satisfied; and
  - I. The receipt, possession, and use of source, by-product, and special nuclear material as authorized by this amended license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70, including 10 CFR Sections 30.33, 40.32, 70.23, and 70.31.
2. Facility Operating License No. DPR-66 issued to FENOC and FirstEnergy Nuclear Generation Corp. is hereby amended in its entirety to read as follows:
- A. This amended license applies to the Beaver Valley Power Station, Unit No. 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by FirstEnergy Nuclear Generation Corp., and operated by FENOC. The facility is located in Beaver County, Pennsylvania, on the southern shore of the Ohio River, and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 1 through 21) and the Environmental Report as amended (Supplements 1 through 6).
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
    - (1) FENOC, pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility, and FirstEnergy Nuclear Generation Corp. to possess the facility at the designated location in Beaver County, Pennsylvania in accordance with the procedures and limitations set forth in this amended license;
    - (2) 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;

- (3) 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;
- (4) 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;
- (5) 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.

C. This amended license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: 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 a steady state reactor core power level of 2900 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 282TBD, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Auxiliary River Water System

(Deleted by Amendment No. 8)

(3) Less Than Three Loop Operation

Deleted per License Amendment No. 239.

(4) Steam Generator Water Rise Rate

Deleted per License Amendment No. 24.

(5) Fire Protection Program

FENOC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report (UFSAR) for the facility, 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.

(6) Systems Integrity

FENOC shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

(7) Iodine Monitoring

FENOC shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

(8) Backup Method for Determining Subcooling Margin

FENOC shall implement a program which will ensure the capability to accurately monitor the Reactor Coolant System subcooling margin. This program shall include the following:

1. Training of personnel, and
2. Procedures for monitoring.

(9) Steam Generator Surveillance Interval Extension

Deleted per License Amendment No. 278.

(10) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 278, are hereby incorporated into this license. FENOC shall operate the facility in accordance with the Additional Conditions.

(11) Mitigation Strategy License Condition

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

- (a) Fire fighting response strategy with the following elements:
  - 1. Pre-defined 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

D. Physical Protection

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 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21 is entitled: "Beaver Valley Power Station (BVPS) Physical Security Plan" submitted by letter September 9, 2004, and supplemented September 30, 2004, October 14, 2004, and May 12, 2006.

E. All work and activities in connection with this project shall be performed pursuant to the provisions of the Commonwealth of Pennsylvania Clean Streams Acts of June 24, 1913, as amended and of June 22, 1937, as amended, and in accordance with all permits issued by the Department of Environmental Resources of the Commonwealth of Pennsylvania.

F. This amended license is effective as of the date of issuance and shall expire at midnight on January 29, 2016.

FOR THE NUCLEAR REGULATORY COMMISSION

**ORIGINAL SIGNED BY  
R. S. BOYD**

Roger S. Boyd, Director  
Division of Project Management  
Office of Nuclear Reactor Regulation

Date of Issuance: July 2, 1976

Docket No. 50-334

~~ENVIRONMENTAL TECHNICAL SPECIFICATIONS~~  
~~APPENDIX B~~

ENVIRONMENTAL TECHNICAL SPECIFICATIONS  
OPERATING LICENSE NO. DPR-66

Appendix B to Operating License DPR-66 has been eliminated in its entirety by this amendment 93. See Amendment Nos. 25, 64, 66 and 77.



APPENDIX C

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
202	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 9, 1996, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from April 14, 1997
208	<del>The licensee commits to perform the post weld heat treatment of sleeve welds and the NRC-recommended inspections for repaired tubes as described in the licensee's application dated March 10, 1997, as supplemented July 28 and September 17, 1997, and evaluated in the staff's safety evaluation attached to this amendment.</del>	<del>The amendment shall be implemented within 60 days from November 25, 1997</del>
209	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated March 14, 1997, as supplemented July 29 and August 13, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from December 10, 1997
210	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 11, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 30 days from January 20, 1998

APPENDIX C

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
225	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these Technical Specification requirements to the appropriate documents as described in the licensee's application dated December 24, 1998, as supplemented June 15, June 17, and July 7, 1999, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from August 30, 1999
269	On the closing date(s) of the transfers to FENGenCo of their interests in Beaver Valley Power Station, Unit No. 1, Pennsylvania Power Company and Ohio Edison Company shall transfer to FENGenCo all of each transferor's respective accumulated decommissioning funds for Beaver Valley Power Station, Unit No. 1, 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."	The amendment shall be implemented within 30 days from December 16, 2005

APPENDIX C

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
269	<p>By the date of closing of the transfer of the ownership interests in Beaver Valley Power Station, Unit No. 1 from Pennsylvania Power Company to FENGenCo, FENGenCo shall obtain a parent company guarantee from FirstEnergy in an initial amount of at least \$80 million (in 2005 dollars) to provide additional decommissioning funding assurance regarding such ownership interests. Required funding levels shall be recalculated annually and, as necessary, FENGenCo shall either obtain appropriate adjustments to the parent company guarantee or otherwise provide any additional decommissioning funding assurance necessary for FENGenCo to meet NRC requirements under 10 CFR 50.75.</p> <p>The Support Agreements described in the applications dated May 18, 2005 (up to \$80 million), and June 1, 2005 (up to \$400 million), shall be effective consistent with the representations contained in the applications. FENGenCo shall take no action to cause FirstEnergy, or its successors and assigns, to void, cancel, or modify the Support Agreements without the prior written consent of the NRC staff, except, however, the \$80 million Support Agreement in connection with the transfer of the Pennsylvania Power Company interests may be revoked or rescinded if and when the \$400 million support agreement described in the June 1, 2005, application becomes effective. 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.</p>	The amendment shall be implemented within 30 days from December 16, 2005

APPENDIX C

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
278	<p><u>Schedule for New and Revised Surveillance Requirements (SRs)</u></p> <p>The schedule for performing SRs that are new or revised in Amendment No. 278 shall be as follows:</p> <p style="padding-left: 40px;">For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval, which begins on the date of implementation of this amendment.</p> <p style="padding-left: 40px;">For SRs that existed prior to this amendment, 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.</p> <p style="padding-left: 40px;">For SRs that existed prior to this amendment, whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of this amendment.</p> <p style="padding-left: 40px;">For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance subject to the modified acceptance criteria is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment.</p>	<p>The amendment shall be implemented within 150 days from date of issuance</p>
278	<p><u>Relocation of Certain Technical Specification Requirements</u></p> <p>License Amendment No. 278 authorizes the relocation of certain Technical Specifications to other licensee-controlled documents. Implementation of this amendment shall include relocation of the requirements to the specified documents, as described in (1) Sections 4D and 4E of the NRC staff's Safety Evaluation, and (2) Table LA, Removed Detail Changes, and Table R, Relocated Specifications, attached to the NRC staff's Safety Evaluation, which is enclosed in this amendment.</p>	<p>The amendment shall be implemented within 150 days from date of issuance</p>

APPENDIX C

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
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281

Initial Performance of New Surveillance and Assessment Requirements

~~February 15, 2008~~ |

Upon implementation of Amendment No. 281 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air inleakage as required by Surveillance Requirement (SR) 3.7.10.4, in accordance with Specification 5.5.14.c(i), the assessment of CRE habitability as required by Specification 5.5.14.c(ii), and the measurement of CRE pressure as required by Specification 5.5.14.d, shall be considered met. Following implementation:

The amendment shall be implemented within 120 days from date of issuance

- (a) The first performance of SR 3.7.10.4, in accordance with Specification 5.5.14.c(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.
- (b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.14.c(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.
- (c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.14.d, shall be within 18 months, plus the 138 days allowed by SR 3.0.2, as measured from the date of the most recent successful pressure measurement test.

## Attachment 2

### Beaver Valley Power Station, Unit No. 2 Proposed Operating License Changes

### License Amendment Request No. 08-008

The following is a list of the affected pages:

Operating License
1*
2
3
3a
4
5
5a
6
7
Appendix B
Title Page
Table of Contents
1
2
3
4
5
Appendix D
1
2
3
4
5

\* No Change. Page provided for context only.

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

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FIRSTENERGY NUCLEAR OPERATING COMPANY

FIRSTENERGY NUCLEAR GENERATION CORP.

OHIO EDISON COMPANY

THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412

BEAVER VALLEY POWER STATION, UNIT 2

FACILITY OPERATING LICENSE

License No. NPF-73

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for license filed by FirstEnergy Nuclear Operating Company (FENOC)\* acting on its own behalf and as agent for FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company (the licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 Beaver Valley Power Station, Unit 2 (the facility), has been substantially completed in conformity with Construction Permit No. CPPR-105 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
  - D. There is reasonable assurance: (i) that the activities authorized by this 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 Commission's regulations set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);

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\*FENOC is authorized to act as agent for FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

- E. FENOC is technically qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
  - 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 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 this Facility Operating License No. NPF-73 is subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 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 license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings, review by the Nuclear Regulatory Commission at a meeting on July 8, 1987, and approval by the Commission on August 13, 1987, the License for Fuel Loading and Low Power Testing, License No. NPF-64, issued on May 28, 1987, is superseded by Facility Operating License NPF-73, hereby issued to FENOC, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company (the licensees) to read as follows:
- A. This amended license applies to the Beaver Valley Power Station, Unit 2, a pressurized water reactor and associated equipment (the facility), owned by FirstEnergy Nuclear Generation Corp. (owner), leased to Ohio Edison Company (lessee), and The Toledo Edison Company (lessee) and operated by FENOC (collectively the licensees). The facility is located on the licensees' site on the southern shore of the Ohio River in Beaver County, Pennsylvania, approximately 22 miles northwest of Pittsburgh and 5 miles east of East Liverpool, Ohio, and is described in FENOC's Final Safety Analysis Report, as supplemented and amended, and in its Environmental Report, as supplemented and amended;
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
    - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, FENOC to possess, use, and operate the facility at the designated location in Beaver County, Pennsylvania, in accordance with the procedures and limitations set forth in this license;



- (2) Pursuant to the Act and 10 CFR Part 50, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company to possess the facility at the designated location in Beaver County, Pennsylvania, in accordance with the procedures and limitations set forth in the license;
- (3) Pursuant to the Act and 10 CFR Part 70, FENOC, 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) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, FENOC to receive, possess, and use at any time any byproduct, source, and special nuclear material such 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) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, FENOC 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 other activity associated with radioactive apparatus or components;
- (6) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, FENOC to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein.
- (7) (a) Ohio Edison Company and The Toledo Edison Company are authorized to transfer any portion of their respective leased interests in BVPS Unit 2 and a proportionate share of their leased interests in the BVPS common facilities to certain potential investors identified in their submittals of July 14, 16, 22 and 31, and September 14, 17 and 18, 1987, and at the same time to lease back from such purchasers such interest transferred in the BVPS Unit 2 facility. The term of the lease is for approximately 29-1/2 years subject to a right of renewal. Such sale and leaseback transactions are subject to the representations and conditions set forth in the aforementioned submittals. Specifically, a lessor and anyone else who may acquire an interest under these transactions are prohibited from exercising directly or indirectly any control over the license of BVPS Unit 2. For purposes of this condition the limitations in 10 CFR 50.81, as now in effect and as may be subsequently amended, are fully applicable to the lessor and any successor in interest to that lessor as long as the license for BVPS Unit 2 remains in effect; these financial

transactions shall have no effect on the license for the BVPS Unit 2 facility throughout the term of the license.

- (b) Further, the licensees are also required to notify the NRC in writing prior to any change in: (i) the term or conditions of any lease agreements executed as part of these transactions; (ii) the BVPS Operating Agreement, (iii) the existing property insurance coverage for BVPS Unit 2, and (iv) any action by a lessor or others that may have adverse effect on the safe operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations set forth in 10 CFR Chapter 1 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 a steady state reactor core power level of 2900 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~166~~TBD, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated in the license. FENOC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

- (3) Initial Startup Test Program (Section 14 of the SER, and Supplements 3 and 5)

Deleted

- (4) Fresh Fuel Storage

The following criteria apply to the storage and handling of new fuel assemblies in the fuel handling building:

- (a) No more than two fuel assemblies shall be out of approved shipping containers or fuel assembly storage racks at any one time.
- (b) The minimum edge-to-edge distance between the above two new assemblies, the shipping container array, and the storage rack arrays shall be at least 12 inches.
- (c) New fuel assemblies shall be stored in such a manner that water would drain freely from the assemblies in the event of flooding and subsequent draining of the fuel storage area.

- (5) Inservice Inspection (Section 6.6 of SER Supplement 5)

Deleted

- (6) Formal Federal Emergency Management Agency Finding

In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of emergency preparedness, the provisions of 10 CFR Section 50.54(s)(2) will apply.

- (7) Plant Safety Monitoring System (PSMS)

Deleted

(8) Detailed Control Room Design Review (DCRDR)

Deleted

(9) Safety Parameter Display System (SPDS)

Deleted

(10) Fire Protection Modifications (Section 9.5.1 of SER Supplement 6)

Deleted

(11) Additional Conditions

The Additional Conditions contained in Appendix D, as revised through Amendment No. 161, are hereby incorporated into this license. FENOC shall operate the facility in accordance with the Additional Conditions.

(12) Steam Generator Surveillance Interval Extension

Deleted

(13) Mitigation Strategy License Condition

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

- (a) Fire fighting response strategy with the following elements:
  - 1. Pre-defined 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

D. Exemptions

The following exemptions are authorized by law and will not endanger life or property or the common defense and security, and certain special circumstances are present. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

- (1) The facility requires an exemption from the requirements of General Design Criterion (GDC) 4, Appendix A to 10 CFR 50. The staff has described in detail in Supplement 4 and Supplement 5 to the Safety Evaluation Report the technical basis and "special circumstances" associated with this exemption. The staff's environmental assessment was published on March 27, 1987 (52 FR 9979). Therefore, pursuant to 10 CFR 50.12(a)(1), 10 CFR 50.12(a)(2)(ii) and (iv), Beaver Valley Power Station, Unit 2 is exempt from the requirements of GDC 4, Appendix A to 10 CFR 50 with respect to the dynamic loading effects associated with the postulated pipe breaks described in detail in Section 3.6.3 of Supplement 4 to the Safety Evaluation Report. These dynamic loading effects include pipe whip, jet impingement, and break-associated dynamic transients. Specifically, this eliminates the need to install jet impingement barriers and pipe whip restraints associated with postulated pipe breaks in the pressurizer surge line, reactor coolant bypass system,

safety injection system, and residual heat removal system. This exemption will expire when the current GDC 4 rulemaking changes have been completed.

- (2) The facility requires an exemption from the requirements of 10 CFR 50, Appendix J, Section III.D.2(b)(ii). The justification of this exemption is contained in Section 6.2.6 of Supplement 5 to the Safety Evaluation Report and modified by a letter dated July 26, 1995. The staff's environmental assessment was published on May 12, 1987 (52 FR 17651) and on June 9, 1995 (60 FR 30611). Therefore, pursuant to 10 CFR 50.12(a)(1) and 10 CFR 50.12(a)(2)(ii) and (iii), Beaver Valley Power Station, Unit 2 is exempt from the quoted requirements and instead, is required to perform the overall air lock leak test at pressure  $P_a$  before establishing containment integrity if air lock maintenance has been performed that could affect the air lock sealing capability. Local leak rate testing at a pressure of not less than  $P_a$  may be substituted for an overall air lock test where the design permits.
- ~~(3) The facility was previously granted an exemption from the criticality alarm requirements of 10 CFR 70.24 (see License No. SNM-1954) dated April 9, 1986, which granted this exemption). Beaver Valley Power Station, Unit 2 is hereby exempted from the criticality alarm system provisions of 10 CFR 70.24 so far as this section applies to the storage of fuel assemblies held under this license.~~

E. Physical Security

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 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21 is entitled: "Beaver Valley Power Station (BVPS) Physical Security Plan" submitted by letter September 9, 2004, and supplemented September 30, 2004, October 14, 2004, and May 12, 2006.

F. Fire Protection Program (Section 9.5.1 of SER Supplement 3)

FENOC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report through Amendment No. 17, and submittals dated May 18, May 20, May 21, June 24 and July 6, 1987, and as described in the Safety Evaluation Report dated October 1985, and Supplements 1 through 6, 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.

G. Reporting to the Commission

DELETED

H. Financial Protection

The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

I. Expiration

This license is effective as of the date of issuance and shall expire at midnight on May 27, 2027.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY:

Thomas E. Murley, Director  
Office of Nuclear Reactor Regulation

Enclosures:

1. Appendix A - Technical Specifications (NUREG-1279)
2. Appendix B - Environmental Protection Plan
3. Appendix D - Additional Conditions

Date of Issuance: August 14, 1987

APPENDIX B  
TO FACILITY OPERATING LICENSE NO. NPF-73  
BEAVER VALLEY POWER STATION  
UNIT 2  
FIRSTENERGY NUCLEAR OPERATING COMPANY, ET AL  
DOCKET NO. 50-412  
ENVIRONMENTAL PROTECTION PLAN  
(NONRADIOLOGICAL)  
AUGUST 1987



APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-73

BEAVER VALLEY POWER STATION  
UNIT 2

ENVIRONMENTAL PROTECTION PLAN  
(NONRADIOLOGICAL)

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 Objectives of the Environmental Protection Plan.....	<u>B-1</u>
2.0 Environmental Protection Issues.....	<u>B-1</u>
3.0 Consistency Requirements.....	<u>B-1</u>
3.1 Plant Design and Operation.....	<u>B-1</u>
3.2 Reporting Related to the NPDES Permit and State Certifications.....	<u>B-2</u>
3.3 Changes Required for Compliance with Other Environmental Regulations.....	<u>B-2</u>
4.0 Environmental Conditions.....	<u>B-2</u>
4.1 Unusual or Important Environmental Events.....	<u>B-2</u>
4.2 Environmental Monitoring.....	<u>B-3</u>
5.0 Administrative Procedures.....	<u>B-3</u>
5.1 Review and Audit.....	<u>B-3</u>
5.2 Records Retention.....	<u>B-3</u>
5.3 Changes in Environmental Protection Plan.....	<u>B-4</u>
5.4 Plant Reporting Requirements.....	<u>B-4</u>

## 1.0 Objectives of the Environmental Protection Plan

The Environmental Protection Plan (EPP) is to provide for protection of nonradiological environmental values during operation of the Beaver Valley Power Station, Unit 2 (facility). The principal objectives of the EPP are as follows:

- (1) Verify that the facility is operated in an environmentally acceptable manner, as established by the Final Environmental Statement - Operating License Stage (FES-OL) and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State, and local requirements for environmental protection.
- (3) Keep NRC informed of the environmental effects of facility construction and operation and of actions taken to control those effects.

Environmental concerns identified in the FES-OL (September 1985, NUREG-1094) which relate to water quality matters are regulated by way of the licensee's\* NPDES permit.

## 2.0 Environmental Protection Issues

In the FES-OL (NUREG-1094, September 1985), the staff considered the environmental impacts associated with the operation of the Beaver Valley Power Station, Unit 2. No aquatic/water quality, terrestrial, or noise issues were identified.

## 3.0 Consistency Requirements

### 3.1 Plant Design and Operation

The licensee may make changes in station design or operation or perform tests or experiments affecting the environment provided such activities do not involve an unreviewed environmental question and do not involve a change in the EPP\*. Changes in station design or operation or performance of tests or experiments which do not affect the environment are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this Section.

Before engaging in additional construction or operational activities which may significantly affect the environment, the licensee shall prepare and record an environmental evaluation of such activity. Activities are excluded from this requirement if all measurable nonradiological environmental effects are confined to the on-site areas previously disturbed during site preparation and plant construction. When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activity and obtain prior NRC approval. Such activity and change to the EPP may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3 of this EPP.

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\*"Licensee" refers to FirstEnergy Nuclear Operating Company, operator of the facility, and acting as agent for FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company, owners or lessees of the facility.

A proposed change, test, or experiment shall be deemed to involve an unreviewed environmental question if it concerns: (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the FES-OL, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level; or (3) a matter, not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include written evaluations which provide bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question or constitute a decrease in the effectiveness of this EPP to meet the objectives specified in Section 1.0. The licensee shall include as part of the Annual Environmental Operating Report (per Subsection 5.4.1) brief descriptions, analyses, interpretations, and evaluations of such changes, tests, and experiments.

### 3.2 Reporting Related to the NPDES Permit and State Certification

Changes to, or renewals of, the NPDES Permit or the State certification shall be reported to the NRC within 30 days following the date the change or renewal is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

The licensee shall notify the NRC of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the NPDES Permit at the same time the application is submitted to the permitting agency.

### 3.3 Changes Required for Compliance with Other Environmental Regulators

Changes in plant design or operation and performance of tests or experiments which are required to achieve compliance with other Federal, State, and local environmental regulations are not subject to the requirements of Section 3.1.

## 4.0 Environmental Conditions

### 4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to plant operation shall be recorded and reported to the NRC within 24 hours followed by a written report per Subsection 5.4.2 of the EPP.

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\* This provision does not relieve the licensee of the requirements of 10 CFR 50.59.

No routine monitoring programs are required to implement this condition.

4.2 Environmental Monitoring

4.2.1 Aquatic Monitoring

The certifications and permits required under the Clean Water Act provide mechanisms for protecting water quality and, indirectly, aquatic biota. The NRC will rely on the decisions made by the Commonwealth of Pennsylvania under the authority of the Clean Water Act for any requirements for aquatic monitoring.

4.2.2 Terrestrial Monitoring

DELETED.

4.2.3 Noise Monitoring

Noise monitoring program during first year of plant operation (Section 5.14.4 of FES).

5.0 Administrative Procedures

5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the EPP. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organization structure used to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

5.2 Records Retention

Records and logs relative to the environmental aspects of station operation shall be made and retained in a manner convenient for review and inspection. These records and logs shall be made available to NRC on request.

Records of modifications to station structures, systems and components determined to potentially affect the continued protection of the environment shall be retained for the life of the station. All other records, data and logs relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

### 5.3 Changes in Environmental Protection Plan

Requests for changes in the EPP shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a license amendment incorporating the appropriate revision to the EPP.

### 5.4 Plant Reporting Requirements

#### 5.4.1 Routine Reports

An Annual Environmental Operating Report describing implementation of this EPP for the previous year shall be submitted to the NRC prior to May 1 of each year. The period of the first report shall begin with the date of issuance of the operating license, and the initial report shall be submitted prior to May 1 of the year following issuance of the operating license.

The report shall include summaries and analyses of the results of the environmental protection activities required by Subsection 4.2 (if any) of this EPP for the report period, including a comparison with related preoperational studies, operational controls (as appropriate), and previous nonradiological environmental monitoring reports, and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of trends toward irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of mitigating action.

The Annual Environmental Operating Report shall also include:

- (1) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (2) A list of all changes in station design or operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental question.
- (3) A list of nonroutine reports submitted in accordance with Subsection 5.4.2.

In the event that some results are not available by the report due date, the report shall be submitted, noting and explaining the missing results. The missing results shall be submitted as soon as possible in a supplementary report.

- 5.4.2 A written report shall be submitted to the NRC within 30 days of occurrence of a nonroutine event. The report shall: (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact, and plant operating characteristics; (b) describe the probable cause of the event; (c) indicate the action taken to correct the reported event; (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems; and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this subsection which also require reports to others Federal, State, or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The NRC shall be provided with a copy of such reports at the same time it is submitted to the other agency.

APPENDIX D

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
83	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 9, 1996, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from April 14, 1997
87	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated March 14, 1997, as supplemented July 29 and August 13, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from December 10, 1997
88	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 11, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 30 days from January 20, 1998
98	The licensee commits to perform visual acceptance examinations of sleeve welds; post weld heat treatment of sleeve welds; and the NRC-recommended inspections of repaired tubes as described in the licensee's application dated March 10, 1997, as supplemented July 28, 1997, September 17, 1997, April 30, 1998, and January 29, 1999, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from March 26, 1999

APPENDIX D

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
102	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these Technical Specification requirements to the appropriate documents as described in the licensee's application dated December 24, 1998, as supplemented June 15, June 17, and July 7, 1999, and evaluated in the staff's evaluation attached to this amendment.	The amendment shall be implemented within 60 days from August 30, 1999
151	On the closing date(s) of the transfers to FENGenCo of their interests in Beaver Valley Power Station, Unit No. 2, Pennsylvania Power Company, The Cleveland Electric Illuminating Company, Ohio Edison Company, and The Toledo Edison Company shall transfer to FENGenCo all of each transferor's respective accumulated decommissioning funds for Beaver Valley Power Station, Unit No. 2, except for funds associated with the leased portions of Beaver Valley Power Station, Unit No. 2, 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."	The amendment shall be implemented within 30 days from December 16, 2005



APPENDIX D

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
151	<p>By the date of closing of the transfer of the ownership interests in Beaver Valley Power Station, Unit No. 2 from Pennsylvania Power Company to FENGenCo, FENGenCo shall obtain a parent company guarantee from FirstEnergy in an initial amount of at least \$80 million (in 2005 dollars) to provide additional decommissioning funding assurance regarding such ownership interests. Required funding levels shall be recalculated annually and, as necessary, FENGenCo shall either obtain appropriate adjustments to the parent company guarantee or otherwise provide any additional decommissioning funding assurance necessary for FENGenCo to meet NRC requirements under 10 CFR 50.75.</p> <p>The Support Agreements described in the applications dated May 18, 2005 (up to \$80 million), and June 1, 2005 (up to \$400 million), shall be effective consistent with the representations contained in the applications. FENGenCo shall take no action to cause FirstEnergy, or its successors and assigns, to void, cancel, or modify the Support Agreements without the prior written consent of the NRC staff, except, however, the \$80 million Support Agreement in connection with the transfer of the Pennsylvania Power Company interests may be revoked or rescinded if and when the \$400 million support agreement described in the June 1, 2005, application becomes effective. 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.</p>	The amendment shall be implemented within 30 days from December 16, 2005

APPENDIX D

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
161	<p><u>Schedule for New and Revised Surveillance Requirements (SRs)</u></p> <p>The schedule for performing SRs that are new or revised in Amendment No. 161 shall be as follows:</p> <p style="padding-left: 40px;">For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval, which begins on the date of implementation of this amendment.</p> <p style="padding-left: 40px;">For SRs that existed prior to this amendment, 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.</p> <p style="padding-left: 40px;">For SRs that existed prior to this amendment, whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of this amendment.</p> <p style="padding-left: 40px;">For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance subject to the modified acceptance criteria is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment.</p>	<p>The amendment shall be implemented within 150 days from date of issuance</p>
161	<p><u>Relocation of Certain Technical Specification Requirements</u></p> <p>License Amendment No. 161 authorizes the relocation of certain Technical Specifications to other licensee-controlled documents. Implementation of this amendment shall include relocation of the requirements to the specified documents, as described in (1) Sections 4D and 4E of the NRC staff's Safety Evaluation, and (2) Table LA, Removed Detail Changes, and Table R, Relocated Specifications, attached to the NRC staff's Safety Evaluation, which is enclosed in this amendment.</p>	<p>The amendment shall be implemented within 150 days from date of issuance</p>

APPENDIX D

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
163	<p><u>Initial Performance of New Surveillance and Assessment Requirements</u></p> <p>Upon implementation of Amendment No. 163 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air inleakage as required by Surveillance Requirement (SR) 3.7.10.4, in accordance with Specification 5.5.14.c(i), the assessment of CRE habitability as required by Specification 5.5.14.c(ii), and the measurement of CRE pressure as required by Specification 5.5.14.d, shall be considered met. Following implementation:</p> <p>(a) The first performance of SR 3.7.10.4, in accordance with Specification 5.5.14.c(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.</p> <p>(b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.14.c(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.</p> <p>(c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.14.d, shall be within 18 months, plus the 138 days allowed by SR 3.0.2, as measured from the date of the most recent successful pressure measurement test.</p>	<p><del>February 15, 2008</del></p> <p>The amendment shall be implemented within 120 days from date of issuance</p>

### Attachment 3

## Beaver Valley Power Station, Unit Nos. 1 and 2 Proposed Technical Specification Changes

License Amendment Request No. 08-008

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The following is a list of the affected pages:

Technical Specifications
1.4-1*
1.4-2*
1.4-5
3.3.2-5*
3.3.2-6*
3.3.2-7*
3.3.2-8*
3.3.2-9
3.3.2-10*

\* No Change. Page provided for context only.

## 1.0 USE AND APPLICATION

### 1.4 Frequency

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**PURPOSE** The purpose of this section is to define the proper use and application of Frequency requirements.

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**DESCRIPTION** Each Surveillance Requirement (SR) has a specified Frequency in which the Surveillance must be met in order to meet the associated LCO. An understanding of the correct application of the specified Frequency is necessary for compliance with the SR.

The "specified Frequency" is referred to throughout this section and each of the Specifications of Section 3.0.2, Surveillance Requirement (SR) Applicability. The "specified Frequency" consists of the requirements of the Frequency column of each SR as well as certain Notes in the Surveillance column that modify performance requirements.

Sometimes special situations dictate when the requirements of a Surveillance are to be met. They are "otherwise stated" conditions allowed by SR 3.0.1. They may be stated as clarifying Notes in the Surveillance, as part of the Surveillance or both.

Situations where a Surveillance could be required (i.e., its Frequency could expire), but where it is not possible or not desired that it be performed until sometime after the associated LCO is within its Applicability, represent potential SR 3.0.4 conflicts. To avoid these conflicts, the SR (i.e., the Surveillance or the Frequency) is stated such that it is only "required" when it can be and should be performed. With an SR satisfied, SR 3.0.4 imposes no restriction.

The use of "met" or "performed" in these instances conveys specific meanings. A Surveillance is "met" only when the acceptance criteria are satisfied. Known failure of the requirements of a Surveillance, even without a Surveillance specifically being "performed," constitutes a Surveillance not "met." "Performance" refers only to the requirement to specifically determine the ability to meet the acceptance criteria.

Some Surveillances contain notes that modify the Frequency of performance or the conditions during which the acceptance criteria must be satisfied. For these Surveillances, the MODE-entry restrictions of SR 3.0.4 may not apply. Such a Surveillance is not required to be performed prior to entering a MODE or other specified condition in the Applicability of the associated LCO if any of the following three conditions are satisfied:

## 1.4 Frequency

---

### DESCRIPTION (continued)

- a. The Surveillance is not required to be met in the MODE or other specified condition to be entered, or
- b. The Surveillance is required to be met in the MODE or other specified condition to be entered, but has been performed within the specified Frequency (i.e., it is current) and is known not to be failed, or
- c. The Surveillance is required to be met, but not performed, in the MODE or other specified condition to be entered, and is known not to be failed.

Examples 1.4-3, 1.4-4, 1.4-5, and 1.4-6 discuss these special situations.

---

### EXAMPLES

The following examples illustrate the various ways that Frequencies are specified. In these examples, the Applicability of the LCO (LCO not shown) is MODES 1, 2, and 3.

1.4 Frequency

EXAMPLES (continued)

EXAMPLE 1.4-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>-----</p> <p style="text-align: center;"><b>- NOTE -</b></p> <p>Not required to be performed until 12 hours after ≥ 25% RTP.</p> <p>-----</p>	
Perform channel adjustment.	7 days

The interval continues, whether or not the unit operation is < 25% RTP between performances.

As the Note modifies the required performance of the Surveillance, it is construed to be part of the "specified Frequency." Should the 7 day interval be exceeded while operation is < 25% RTP, this Note allows 12 hours after power reaches ≥ 25% RTP to perform the Surveillance. The Surveillance is still considered to be performed within the "specified Frequency." Therefore, if the Surveillance were not performed within the 7 day (plus the extension allowed by SR 3.0.2) interval, but operation was < 25% RTP, it would not constitute a failure of the SR or failure to meet the LCO. Also, no violation of SR 3.0.4 occurs when changing MODES, even with the 7 day Frequency not met, provided operation does not exceed 12 hours (plus the extension allowed by SR 3.0.2) with power ≥ 25% RTP.

Once the unit reaches 25% RTP, 12 hours would be allowed for completing the Surveillance. If the Surveillance were not performed within this 12 hour interval (plus the extension allowed by SR 3.0.2), there would then be a failure to perform a Surveillance within the specified Frequency, and the provisions of SR 3.0.3 would apply.

No change. Page included for context only.

**SURVEILLANCE REQUIREMENTS**

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**- NOTE -**

Refer to Table 3.3.2-1 to determine which SRs apply for each ESFAS Function.

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SURVEILLANCE		FREQUENCY
SR 3.3.2.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.2.2	Perform ACTUATION LOGIC TEST.	92 days on a STAGGERED TEST BASIS
SR 3.3.2.3	Perform MASTER RELAY TEST.	92 days on a STAGGERED TEST BASIS
SR 3.3.2.4	Perform COT.	184 days
SR 3.3.2.5	<p style="text-align: center;">-----</p> <p style="text-align: center;"><b>- NOTE -</b></p> <p style="text-align: center;">Verification of relay setpoints not required.</p> <p style="text-align: center;">-----</p>	184 days
	Perform TADOT.	





SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.2.6	Perform SLAVE RELAY TEST.	18 months (Unit 1) 92 days (Unit 2)  OR  ----- - NOTE - Only applicable to Unit 2 provided a satisfactory contact loading analysis has been completed, and a satisfactory slave relay service life has been established, for the slave relay being tested -----  12 months
SR 3.3.2.7	----- - NOTE - Verification of setpoint not required. -----  Perform TADOT.	18 months
SR 3.3.2.8	----- - NOTE - This Surveillance shall include verification that the time constants are adjusted to the prescribed values. -----  Perform CHANNEL CALIBRATION.	18 months

No change. Page included for context only.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.2.9</p> <p>-----</p> <p style="text-align: center;"><b>- NOTE -</b></p> <p>Not required to be performed for the turbine driven AFW pump until 24 hours after SG pressure is <math>\geq</math> 600 psig.</p> <p>-----</p> <p>Verify ESFAS RESPONSE TIMES are within limit.</p>	<p>18 months on a STAGGERED TEST BASIS</p>

Table 3.3.2-1 (page 1 of 7)  
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	UNIT 1 ALLOWABLE VALUE	UNIT 2 ALLOWABLE VALUE
<b>1. Safety Injection</b>						
a. Manual Initiation	1,2,3,4	2	B	SR 3.3.2.7	NA	NA
b. Automatic Actuation Logic and Actuation Relays	1,2,3,4	2 trains	C	SR 3.3.2.2 SR 3.3.2.3 SR 3.3.2.6	NA	NA
c. Containment Pressure - High	1,2,3	3	D	SR 3.3.2.1 SR 3.3.2.4 <sup>(e)(f)</sup> SR 3.3.2.8 <sup>(e)(f)</sup> SR 3.3.2.9	≤ 5.33 psig	≤ 5.3 psig
d. Pressurizer Pressure - Low	1,2,3 <sup>(a)</sup>	3	D	SR 3.3.2.1 SR 3.3.2.4 SR 3.3.2.8 SR 3.3.2.9	≥ 1841 psig	≥ 1852 psig
e. Steam Line Pressure - Low	1,2,3 <sup>(a)</sup>	3 per steam line	D	SR 3.3.2.1 SR 3.3.2.4 SR 3.3.2.8 SR 3.3.2.9	≥ 495.8 psig with time constant $\tau_1$ ≥ 50 secs and $\tau_2 \leq 5$ secs	≥ 494 psig with time constant $\tau_1$ ≥ 50 secs and $\tau_2 \leq 5$ secs
<b>2. Containment Spray Systems</b>						
<b>a. Quench Spray</b>						
(1) Manual Initiation	1,2,3,4	2 per train, 2 trains	B	SR 3.3.2.7	NA	NA

(a) Above the P-11 (Pressurizer Pressure) interlock.

(e) If the as-found channel setpoint is conservative with respect to the Allowable Value but outside its predefined as-found acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service. If the as-found instrument channel setpoint is not conservative with respect to the Allowable Value, the channel shall be declared inoperable.

(f) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance of the Nominal Trip Setpoint, or a value that is more conservative than the Nominal Trip Setpoint; otherwise, the channel shall be declared inoperable. The Nominal Trip Setpoint and the methodology used to determine the Nominal Trip Setpoint, the predefined as-found acceptance criteria band, and the as-left setpoint tolerance band are specified in a document incorporated by reference into the Updated Final Safety Analysis Report.

Table 3.3.2-1 (page 2 of 7)  
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	UNIT 1 ALLOWABLE VALUE	UNIT 2 ALLOWABLE VALUE
<b>2. Containment Spray Systems</b>						
(2) Automatic Actuation Logic and Actuation Relays	1,2,3,4	2 trains	C	SR 3.3.2.2 SR 3.3.2.3 SR 3.3.2.6	NA	NA
(3) Containment Pressure - High High	1,2,3	4	E	SR 3.3.2.1 SR 3.3.2.4 <sup>(e)(f)</sup> SR 3.3.2.8 <sup>(e)(f)</sup> SR 3.3.2.9	≤ 11.43 psig	≤ 11.4 psig
<b>b. Recirculation Spray</b>						
(1) Automatic Actuation Logic	1,2,3	2 trains	F	SR 3.3.2.2 SR 3.3.2.3	NA	NA
(2) Refueling Water Storage Tank (RWST) Level Low	1,2,3	3	D	SR 3.3.2.1 SR 3.3.2.4 <sup>(e)(f)</sup> SR 3.3.2.8 <sup>(e)(f)</sup>	≥ 27' 4" and ≤ 27' 11"	≥ 32' 8" and ≤ 32' 10"
Coincident with						
Containment Pressure High High	1,2,3	4	E	SR 3.3.2.1 SR 3.3.2.4 <sup>(e)(f)</sup> SR 3.3.2.8 <sup>(e)(f)</sup> SR 3.3.2.9	≤ 11.43 psig	≤ 11.4 psig

- (e) If the as-found channel setpoint is conservative with respect to the Allowable Value but outside its predefined as-found acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service. If the as-found instrument channel setpoint is not conservative with respect to the Allowable Value, the channel shall be declared inoperable.
- (f) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance of the Nominal Trip Setpoint, or a value that is more conservative than the Nominal Trip Setpoint; otherwise, the channel shall be declared inoperable. The Nominal Trip Setpoint and the methodology used to determine the Nominal Trip Setpoint, the predefined as-found acceptance criteria band, and the as-left setpoint tolerance band are specified in a document incorporated by reference into the Updated Final Safety Analysis Report.

Table 3.3.2-1 (page 3 of 7)  
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	UNIT 1 ALLOWABLE VALUE	UNIT 2 ALLOWABLE VALUE
3. Containment Isolation						
a. Phase A Isolation						
(1) Manual Initiation	1,2,3,4	2	B	SR 3.3.2.7	NA	NA
(2) Automatic Actuation Logic and Actuation Relays	1,2,3,4	2 trains	C	SR 3.3.2.2 SR 3.3.2.3 SR 3.3.2.6	NA	NA
(3) Safety Injection	Refer to Function 1 (Safety Injection) for all initiation functions and requirements.					
b. Phase B Isolation						
(1) Manual Initiation	1,2,3,4	2 per train, 2 trains	B	SR 3.3.2.7	NA	NA
(2) Automatic Actuation Logic and Actuation Relays	1,2,3,4	2 trains	C	SR 3.3.2.2 SR 3.3.2.3 SR 3.3.2.6	NA	NA
(3) Containment Pressure - High High	1,2,3	4	E	SR 3.3.2.1 SR 3.3.2.4 <sup>(e)(f)</sup> SR 3.3.2.8 <sup>(e)(f)</sup> SR 3.3.2.9	≤ 11.43 psig	≤ 11.4 psig

(e) If the as-found channel setpoint is conservative with respect to the Allowable Value but outside its predefined as-found acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service. If the as-found instrument channel setpoint is not conservative with respect to the Allowable Value, the channel shall be declared inoperable.

(f) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance of the Nominal Trip Setpoint, or a value that is more conservative than the Nominal Trip Setpoint; otherwise, the channel shall be declared inoperable. The Nominal Trip Setpoint and the methodology used to determine the Nominal Trip Setpoint, the predefined as-found acceptance criteria band, and the as-left setpoint tolerance band are specified in a document incorporated by reference into the Updated Final Safety Analysis Report.

## Attachment 4

### Beaver Valley Power Station, Unit No. 1 Retyped Operating License Pages License Amendment Request No. 08-008

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The following is a list of the retyped pages:

Operating License
2
3
4
5
6
7
Appendix B
B-1
Appendix C
C-1
C-2
C-3
C-4
C-5

- G. The issuance of this amended 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 Amendment No. 4 to Facility Operating License No. DPR-66 is in accordance with 10 CFR Part 51 (formerly Appendix D of 10 CFR Part 50) of the Commission's regulations and all applicable requirements have been satisfied; and
  - I. The receipt, possession, and use of source, by-product, and special nuclear material as authorized by this amended license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70, including 10 CFR Sections 30.33, 40.32, 70.23, and 70.31.
2. Facility Operating License No. DPR-66 issued to FENOC and FirstEnergy Nuclear Generation Corp. is hereby amended in its entirety to read as follows:
- A. This amended license applies to the Beaver Valley Power Station, Unit No. 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by FirstEnergy Nuclear Generation Corp., and operated by FENOC. The facility is located in Beaver County, Pennsylvania, on the southern shore of the Ohio River, and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 1 through 21) and the Environmental Report as amended (Supplements 1 through 6).
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
    - (1) FENOC, pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility, and FirstEnergy Nuclear Generation Corp. to possess the facility at the designated location in Beaver County, Pennsylvania in accordance with the procedures and limitations set forth in this amended license;
    - (2) 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;



- (3) 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;
  - (4) 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;
  - (5) 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.
- C. This amended license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: 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 a steady state reactor core power level of 2900 megawatts thermal.
  - (2) Technical Specifications  
The Technical Specifications contained in Appendix A, as revised through Amendment No. TBD, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.
  - (3) Auxiliary River Water System  
(Deleted by Amendment No. 8)

(3) Less Than Three Loop Operation

Deleted per License Amendment No. 239.

(4) Steam Generator Water Rise Rate

Deleted per License Amendment No. 24.

(5) Fire Protection Program

FENOC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report (UFSAR) for the facility, 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.

(6) Systems Integrity

FENOC shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

(7) Iodine Monitoring

FENOC shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

(8) Backup Method for Determining Subcooling Margin

FENOC shall implement a program which will ensure the capability to accurately monitor the Reactor Coolant System subcooling margin. This program shall include the following:

1. Training of personnel, and
2. Procedures for monitoring.

(9) Steam Generator Surveillance Interval Extension

Deleted per License Amendment No. 278.

(10) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 278, are hereby incorporated into this license. FENOC shall operate the facility in accordance with the Additional Conditions.

(11) Mitigation Strategy License Condition

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

- (a) Fire fighting response strategy with the following elements:
  - 1. Pre-defined 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

D. Physical Protection

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 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21 is entitled: "Beaver Valley Power Station (BVPS) Physical Security Plan" submitted by letter September 9, 2004, and supplemented September 30, 2004, October 14, 2004, and May 12, 2006.

E. All work and activities in connection with this project shall be performed pursuant to the provisions of the Commonwealth of Pennsylvania Clean Streams Acts of June 24, 1913, as amended and of June 22, 1937, as amended, and in accordance with all permits issued by the Department of Environmental Resources of the Commonwealth of Pennsylvania.

F. This amended license is effective as of the date of issuance and shall expire at midnight on January 29, 2016.

FOR THE NUCLEAR REGULATORY COMMISSION

**ORIGINAL SIGNED BY  
R. S. BOYD**

Roger S. Boyd, Director  
Division of Project Management  
Office of Nuclear Reactor Regulation

Date of Issuance: July 2, 1976

Unofficial

APPENDIX B

ENVIRONMENTAL TECHNICAL SPECIFICATIONS  
OPERATING LICENSE NO. DPR-66

Appendix B to Operating License DPR-66 has been eliminated in its entirety by Amendment 93. See Amendment Nos. 25, 64, 66 and 77.

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
202	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 9, 1996, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from April 14, 1997
209	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated March 14, 1997, as supplemented July 29 and August 13, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from December 10, 1997
210	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 11, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 30 days from January 20, 1998

Unofficial

APPENDIX C

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
225	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these Technical Specification requirements to the appropriate documents as described in the licensee's application dated December 24, 1998, as supplemented June 15, June 17, and July 7, 1999, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from August 30, 1999
269	On the closing date(s) of the transfers to FENGenCo of their interests in Beaver Valley Power Station, Unit No. 1, Pennsylvania Power Company and Ohio Edison Company shall transfer to FENGenCo all of each transferor's respective accumulated decommissioning funds for Beaver Valley Power Station, Unit No. 1, 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."	The amendment shall be implemented within 30 days from December 16, 2005



ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
269	<p>By the date of closing of the transfer of the ownership interests in Beaver Valley Power Station, Unit No. 1 from Pennsylvania Power Company to FENGenCo, FENGenCo shall obtain a parent company guarantee from FirstEnergy in an initial amount of at least \$80 million (in 2005 dollars) to provide additional decommissioning funding assurance regarding such ownership interests. Required funding levels shall be recalculated annually and, as necessary, FENGenCo shall either obtain appropriate adjustments to the parent company guarantee or otherwise provide any additional decommissioning funding assurance necessary for FENGenCo to meet NRC requirements under 10 CFR 50.75.</p> <p>The Support Agreements described in the applications dated May 18, 2005 (up to \$80 million), and June 1, 2005 (up to \$400 million), shall be effective consistent with the representations contained in the applications. FENGenCo shall take no action to cause FirstEnergy, or its successors and assigns, to void, cancel, or modify the Support Agreements without the prior written consent of the NRC staff, except, however, the \$80 million Support Agreement in connection with the transfer of the Pennsylvania Power Company interests may be revoked or rescinded if and when the \$400 million support agreement described in the June 1, 2005, application becomes effective. 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.</p>	<p>The amendment shall be implemented within 30 days from December 16, 2005</p>

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
278	<p><u>Schedule for New and Revised Surveillance Requirements (SRs)</u></p> <p>The schedule for performing SRs that are new or revised in Amendment No. 278 shall be as follows:</p> <p>For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval, which begins on the date of implementation of this amendment.</p> <p>For SRs that existed prior to this amendment, 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.</p> <p>For SRs that existed prior to this amendment, whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of this amendment.</p> <p>For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance subject to the modified acceptance criteria is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment.</p>	<p>The amendment shall be implemented within 150 days from date of issuance</p>
278	<p><u>Relocation of Certain Technical Specification Requirements</u></p> <p>License Amendment No. 278 authorizes the relocation of certain Technical Specifications to other licensee-controlled documents. Implementation of this amendment shall include relocation of the requirements to the specified documents, as described in (1) Sections 4D and 4E of the NRC staff's Safety Evaluation, and (2) Table LA, Removed Detail Changes, and Table R, Relocated Specifications, attached to the NRC staff's Safety Evaluation, which is enclosed in this amendment.</p>	<p>The amendment shall be implemented within 150 days from date of issuance</p>

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. DPR-66

FirstEnergy Nuclear Operating Company and FirstEnergy Nuclear Generation Corp. shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
281	<p><u>Initial Performance of New Surveillance and Assessment Requirements</u></p> <p>Upon implementation of Amendment No. 281 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air inleakage as required by Surveillance Requirement (SR) 3.7.10.4, in accordance with Specification 5.5.14.c(i), the assessment of CRE habitability as required by Specification 5.5.14.c(ii), and the measurement of CRE pressure as required by Specification 5.5.14.d, shall be considered met. Following implementation:</p> <ul style="list-style-type: none"> <li>(a) The first performance of SR 3.7.10.4, in accordance with Specification 5.5.14.c(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.</li> <li>(b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.14.c(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.</li> <li>(c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.14.d, shall be within 18 months, plus the 138 days allowed by SR 3.0.2, as measured from the date of the most recent successful pressure measurement test.</li> </ul>	<p>The amendment shall be implemented within 120 days from date of issuance</p>

## Attachment 5

### Beaver Valley Power Station, Unit No. 2 Retyped Operating License Pages License Amendment Request No. 08-008

The following is a list of the retyped pages:

Operating License
2
3
4
5
6
7
8
9
Appendix B
B-i
B-ii
B-1
B-2
B-3
B-4
B-5
Appendix D
D-1
D-2
D-3
D-4
D-5

- E. FENOC is technically qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
  - 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 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 this Facility Operating License No. NPF-73 is subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 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 license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings, review by the Nuclear Regulatory Commission at a meeting on July 8, 1987, and approval by the Commission on August 13, 1987, the License for Fuel Loading and Low Power Testing, License No. NPF-64, issued on May 28, 1987, is superseded by Facility Operating License NPF-73, hereby issued to FENOC, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company (the licensees) to read as follows:
- A. This amended license applies to the Beaver Valley Power Station, Unit 2, a pressurized water reactor and associated equipment (the facility), owned by FirstEnergy Nuclear Generation Corp. (owner), leased to Ohio Edison Company (lessee), and The Toledo Edison Company (lessee) and operated by FENOC (collectively the licensees). The facility is located on the licensees' site on the southern shore of the Ohio River in Beaver County, Pennsylvania, approximately 22 miles northwest of Pittsburgh and 5 miles east of East Liverpool, Ohio, and is described in FENOC's Final Safety Analysis Report, as supplemented and amended, and in its Environmental Report, as supplemented and amended;
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
    - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, FENOC to possess, use, and operate the facility at the designated location in Beaver County, Pennsylvania, in accordance with the procedures and limitations set forth in this license;

- (2) Pursuant to the Act and 10 CFR Part 50, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company to possess the facility at the designated location in Beaver County, Pennsylvania, in accordance with the procedures and limitations set forth in the license;
- (3) Pursuant to the Act and 10 CFR Part 70, FENOC, 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) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, FENOC to receive, possess, and use at any time any byproduct, source, and special nuclear material such 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) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, FENOC 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 other activity associated with radioactive apparatus or components;
- (6) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, FENOC to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein.
- (7) (a) Ohio Edison Company and The Toledo Edison Company are authorized to transfer any portion of their respective leased interests in BVPS Unit 2 and a proportionate share of their leased interests in the BVPS common facilities to certain potential investors identified in their submittals of July 14, 16, 22 and 31, and September 14, 17 and 18, 1987, and at the same time to lease back from such purchasers such interest transferred in the BVPS Unit 2 facility. The term of the lease is for approximately 29-1/2 years subject to a right of renewal. Such sale and leaseback transactions are subject to the representations and conditions set forth in the aforementioned submittals. Specifically, a lessor and anyone else who may acquire an interest under these transactions are prohibited from exercising directly or indirectly any control over the license of BVPS Unit 2. For purposes of this condition the limitations in 10 CFR 50.81, as now in effect and as may be subsequently amended, are fully applicable to the lessor and any successor in interest to that lessor as long as the license for BVPS Unit 2 remains in effect; these financial

transactions shall have no effect on the license for the BVPS Unit 2 facility throughout the term of the license.

- (b) Further, the licensees are also required to notify the NRC in writing prior to any change in: (i) the term or conditions of any lease agreements executed as part of these transactions; (ii) the BVPS Operating Agreement, (iii) the existing property insurance coverage for BVPS Unit 2, and (iv) any action by a lessor or others that may have adverse effect on the safe operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations set forth in 10 CFR Chapter 1 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 a steady state reactor core power level of 2900 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. TBD, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated in the license. FENOC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Initial Startup Test Program (Section 14 of the SER, and Supplements 3 and 5)

Deleted

(4) Fresh Fuel Storage

The following criteria apply to the storage and handling of new fuel assemblies in the fuel handling building:

- (a) No more than two fuel assemblies shall be out of approved shipping containers or fuel assembly storage racks at any one time.
- (b) The minimum edge-to-edge distance between the above two new assemblies, the shipping container array, and the storage rack arrays shall be at least 12 inches.
- (c) New fuel assemblies shall be stored in such a manner that water would drain freely from the assemblies in the event of flooding and subsequent draining of the fuel storage area.

(5) Inservice Inspection (Section 6.6 of SER Supplement 5)

Deleted

(6) Formal Federal Emergency Management Agency Finding

In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of emergency preparedness, the provisions of 10 CFR Section 50.54(s)(2) will apply.

(7) Plant Safety Monitoring System (PSMS)

Deleted



(8) Detailed Control Room Design Review (DCRDR)

Deleted

(9) Safety Parameter Display System (SPDS)

Deleted

(10) Fire Protection Modifications (Section 9.5.1 of SER Supplement 6)

Deleted

(11) Additional Conditions

The Additional Conditions contained in Appendix D, as revised through Amendment No. 161, are hereby incorporated into this license. FENOC shall operate the facility in accordance with the Additional Conditions.

(12) Steam Generator Surveillance Interval Extension

Deleted

(13) Mitigation Strategy License Condition

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

- (a) Fire fighting response strategy with the following elements:
  - 1. Pre-defined 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

D. Exemptions

The following exemptions are authorized by law and will not endanger life or property or the common defense and security, and certain special circumstances are present. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

- (1) The facility requires an exemption from the requirements of General Design Criterion (GDC) 4, Appendix A to 10 CFR 50. The staff has described in detail in Supplement 4 and Supplement 5 to the Safety Evaluation Report the technical basis and "special circumstances" associated with this exemption. The staff's environmental assessment was published on March 27, 1987 (52 FR 9979). Therefore, pursuant to 10 CFR 50.12(a)(1), 10 CFR 50.12(a)(2)(ii) and (iv), Beaver Valley Power Station, Unit 2 is exempt from the requirements of GDC 4, Appendix A to 10 CFR 50 with respect to the dynamic loading effects associated with the postulated pipe breaks described in detail in Section 3.6.3 of Supplement 4 to the Safety Evaluation Report. These dynamic loading effects include pipe whip, jet impingement, and break-associated dynamic transients. Specifically, this eliminates the need to install jet impingement barriers and pipe whip restraints associated with postulated pipe breaks in the pressurizer surge line, reactor coolant bypass system,

safety injection system, and residual heat removal system. This exemption will expire when the current GDC 4 rulemaking changes have been completed.

- (2) The facility requires an exemption from the requirements of 10 CFR 50, Appendix J, Section III.D.2(b)(ii). The justification of this exemption is contained in Section 6.2.6 of Supplement 5 to the Safety Evaluation Report and modified by a letter dated July 26, 1995. The staff's environmental assessment was published on May 12, 1987 (52 FR 17651) and on June 9, 1995 (60 FR 30611). Therefore, pursuant to 10 CFR 50.12(a)(1) and 10 CFR 50.12(a)(2)(ii) and (iii), Beaver Valley Power Station, Unit 2 is exempt from the quoted requirements and instead, is required to perform the overall air lock leak test at pressure  $P_a$  before establishing containment integrity if air lock maintenance has been performed that could affect the air lock sealing capability. Local leak rate testing at a pressure of not less than  $P_a$  may be substituted for an overall air lock test where the design permits.

E. Physical Security

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 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21 is entitled: "Beaver Valley Power Station (BVPS) Physical Security Plan" submitted by letter September 9, 2004, and supplemented September 30, 2004, October 14, 2004, and May 12, 2006.

F. Fire Protection Program (Section 9.5.1 of SER Supplement 3)

FENOC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report through Amendment No. 17, and submittals dated May 18, May 20, May 21, June 24 and July 6, 1987, and as described in the Safety Evaluation Report dated October 1985, and Supplements 1 through 6, 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.

G. Reporting to the Commission

DELETED

H. Financial Protection

The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

I. Expiration

This license is effective as of the date of issuance and shall expire at midnight on May 27, 2027.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY:

Thomas E. Murley, Director  
Office of Nuclear Reactor Regulation

Enclosures:

1. Appendix A - Technical Specifications (NUREG-1279)
2. Appendix B - Environmental Protection Plan
3. Appendix D - Additional Conditions

Date of Issuance: August 14, 1987

APPENDIX B  
TO FACILITY OPERATING LICENSE NO. NPF-73  
BEAVER VALLEY POWER STATION  
UNIT 2  
FIRSTENERGY NUCLEAR OPERATING COMPANY, ET AL  
DOCKET NO. 50-412  
ENVIRONMENTAL PROTECTION PLAN  
(NONRADIOLOGICAL)  
AUGUST 1987

TO FACILITY OPERATING LICENSE NO. NPF-73

BEAVER VALLEY POWER STATION  
UNIT 2

ENVIRONMENTAL PROTECTION PLAN  
(NONRADIOLOGICAL)

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
1.0	Objectives of the Environmental Protection Plan.....	B-1
2.0	Environmental Protection Issues .....	B-1
3.0	Consistency Requirements.....	B-1
3.1	Plant Design and Operation.....	B-1
3.2	Reporting Related to the NPDES Permit and State Certifications .....	B-2
3.3	Changes Required for Compliance with Other Environmental Regulations .....	B-2
4.0	Environmental Conditions.....	B-2
4.1	Unusual or Important Environmental Events .....	B-2
4.2	Environmental Monitoring .....	B-3
5.0	Administrative Procedures.....	B-3
5.1	Review and Audit .....	B-3
5.2	Records Retention .....	B-3
5.3	Changes in Environmental Protection Plan .....	B-4
5.4	Plant Reporting Requirements.....	B-4

## 1.0 Objectives of the Environmental Protection Plan

The Environmental Protection Plan (EPP) is to provide for protection of nonradiological environmental values during operation of the Beaver Valley Power Station, Unit 2 (facility). The principal objectives of the EPP are as follows:

- (1) Verify that the facility is operated in an environmentally acceptable manner, as established by the Final Environmental Statement - Operating License Stage (FES-OL) and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State, and local requirements for environmental protection.
- (3) Keep NRC informed of the environmental effects of facility construction and operation and of actions taken to control those effects.

Environmental concerns identified in the FES-OL (September 1985, NUREG-1094) which relate to water quality matters are regulated by way of the licensee's\* NPDES permit.

## 2.0 Environmental Protection Issues

In the FES-OL (NUREG-1094, September 1985), the staff considered the environmental impacts associated with the operation of the Beaver Valley Power Station, Unit 2. No aquatic/water quality, terrestrial, or noise issues were identified.

## 3.0 Consistency Requirements

### 3.1 Plant Design and Operation

The licensee may make changes in station design or operation or perform tests or experiments affecting the environment provided such activities do not involve an unreviewed environmental question and do not involve a change in the EPP\*. Changes in station design or operation or performance of tests or experiments which do not affect the environment are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this Section.

Before engaging in additional construction or operational activities which may significantly affect the environment, the licensee shall prepare and record an environmental evaluation of such activity. Activities are excluded from this requirement if all measurable nonradiological environmental effects are confined to the on-site areas previously disturbed during site preparation and plant construction. When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activity and obtain prior NRC approval. Such activity and change to the EPP may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3 of this EPP.

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\*"Licensee" refers to FirstEnergy Nuclear Operating Company, operator of the facility, and acting as agent for FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company, owners or lessees of the facility.

A proposed change, test, or experiment shall be deemed to involve an unreviewed environmental question if it concerns: (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the FES-OL, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level; or (3) a matter, not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include written evaluations which provide bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question or constitute a decrease in the effectiveness of this EPP to meet the objectives specified in Section 1.0. The licensee shall include as part of the Annual Environmental Operating Report (per Subsection 5.4.1) brief descriptions, analyses, interpretations, and evaluations of such changes, tests, and experiments.

### 3.2 Reporting Related to the NPDES Permit and State Certification

Changes to, or renewals of, the NPDES Permit or the State certification shall be reported to the NRC within 30 days following the date the change or renewal is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

The licensee shall notify the NRC of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the NPDES Permit at the same time the application is submitted to the permitting agency.

### 3.3 Changes Required for Compliance with Other Environmental Regulators

Changes in plant design or operation and performance of tests or experiments which are required to achieve compliance with other Federal, State, and local environmental regulations are not subject to the requirements of Section 3.1.

### 4.0 Environmental Conditions

#### 4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to plant operation shall be recorded and reported to the NRC within 24 hours followed by a written report per Subsection 5.4.2 of the EPP.

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\* This provision does not relieve the licensee of the requirements of 10 CFR 50.59.



No routine monitoring programs are required to implement this condition.

#### 4.2 Environmental Monitoring

##### 4.2.1 Aquatic Monitoring

The certifications and permits required under the Clean Water Act provide mechanisms for protecting water quality and, indirectly, aquatic biota. The NRC will rely on the decisions made by the Commonwealth of Pennsylvania under the authority of the Clean Water Act for any requirements for aquatic monitoring.

##### 4.2.2 Terrestrial Monitoring

DELETED.

##### 4.2.3 Noise Monitoring

Noise monitoring program during first year of plant operation (Section 5.14.4 of FES).

#### 5.0 Administrative Procedures

##### 5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the EPP. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organization structure used to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

##### 5.2 Records Retention

Records and logs relative to the environmental aspects of station operation shall be made and retained in a manner convenient for review and inspection. These records and logs shall be made available to NRC on request.

Records of modifications to station structures, systems and components determined to potentially affect the continued protection of the environment shall be retained for the life of the station. All other records, data and logs relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

### 5.3 Changes in Environmental Protection Plan

Requests for changes in the EPP shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a license amendment incorporating the appropriate revision to the EPP.

### 5.4 Plant Reporting Requirements

#### 5.4.1 Routine Reports

An Annual Environmental Operating Report describing implementation of this EPP for the previous year shall be submitted to the NRC prior to May 1 of each year. The period of the first report shall begin with the date of issuance of the operating license, and the initial report shall be submitted prior to May 1 of the year following issuance of the operating license.

The report shall include summaries and analyses of the results of the environmental protection activities required by Subsection 4.2 (if any) of this EPP for the report period, including a comparison with related preoperational studies, operational controls (as appropriate), and previous nonradiological environmental monitoring reports, and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of trends toward irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of mitigating action.

The Annual Environmental Operating Report shall also include:

- (1) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (2) A list of all changes in station design or operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental question.
- (3) A list of nonroutine reports submitted in accordance with Subsection 5.4.2.

In the event that some results are not available by the report due date, the report shall be submitted, noting and explaining the missing results. The missing results shall be submitted as soon as possible in a supplementary report.

- 5.4.2 A written report shall be submitted to the NRC within 30 days of occurrence of a nonroutine event. The report shall: (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact, and plant operating characteristics; (b) describe the probable cause of the event; (c) indicate the action taken to correct the reported event; (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems; and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this subsection which also require reports to others Federal, State, or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The NRC shall be provided with a copy of such reports at the same time it is submitted to the other agency.

APPENDIX D

Unofficial

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
83	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 9, 1996, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from April 14, 1997
87	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated March 14, 1997, as supplemented July 29 and August 13, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from December 10, 1997
88	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 11, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 30 days from January 20, 1998
98	The licensee commits to perform visual acceptance examinations of sleeve welds; post weld heat treatment of sleeve welds; and the NRC-recommended inspections of repaired tubes as described in the licensee's application dated March 10, 1997, as supplemented July 28, 1997, September 17, 1997, April 30, 1998, and January 29, 1999, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from March 26, 1999

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
102	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these Technical Specification requirements to the appropriate documents as described in the licensee's application dated December 24, 1998, as supplemented June 15, June 17, and July 7, 1999, and evaluated in the staff's evaluation attached to this amendment.	The amendment shall be implemented within 60 days from August 30, 1999
151	On the closing date(s) of the transfers to FENGenCo of their interests in Beaver Valley Power Station, Unit No. 2, Pennsylvania Power Company, The Cleveland Electric Illuminating Company, Ohio Edison Company, and The Toledo Edison Company shall transfer to FENGenCo all of each transferor's respective accumulated decommissioning funds for Beaver Valley Power Station, Unit No. 2, except for funds associated with the leased portions of Beaver Valley Power Station, Unit No. 2, 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."	The amendment shall be implemented within 30 days from December 16, 2005

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
151	<p>By the date of closing of the transfer of the ownership interests in Beaver Valley Power Station, Unit No. 2 from Pennsylvania Power Company to FENGenCo, FENGenCo shall obtain a parent company guarantee from FirstEnergy in an initial amount of at least \$80 million (in 2005 dollars) to provide additional decommissioning funding assurance regarding such ownership interests. Required funding levels shall be recalculated annually and, as necessary, FENGenCo shall either obtain appropriate adjustments to the parent company guarantee or otherwise provide any additional decommissioning funding assurance necessary for FENGenCo to meet NRC requirements under 10 CFR 50.75.</p> <p>The Support Agreements described in the applications dated May 18, 2005 (up to \$80 million), and June 1, 2005 (up to \$400 million), shall be effective consistent with the representations contained in the applications. FENGenCo shall take no action to cause FirstEnergy, or its successors and assigns, to void, cancel, or modify the Support Agreements without the prior written consent of the NRC staff, except, however, the \$80 million Support Agreement in connection with the transfer of the Pennsylvania Power Company interests may be revoked or rescinded if and when the \$400 million support agreement described in the June 1, 2005, application becomes effective. 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.</p>	The amendment shall be implemented within 30 days from December 16, 2005

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
161	<p><u>Schedule for New and Revised Surveillance Requirements (SRs)</u></p> <p>The schedule for performing SRs that are new or revised in Amendment No. 161 shall be as follows:</p> <p style="padding-left: 40px;">For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval, which begins on the date of implementation of this amendment.</p> <p style="padding-left: 40px;">For SRs that existed prior to this amendment, 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.</p> <p style="padding-left: 40px;">For SRs that existed prior to this amendment, whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of this amendment.</p> <p style="padding-left: 40px;">For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance subject to the modified acceptance criteria is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment.</p>	<p>The amendment shall be implemented within 150 days from date of issuance</p>
161	<p><u>Relocation of Certain Technical Specification Requirements</u></p> <p>License Amendment No. 161 authorizes the relocation of certain Technical Specifications to other licensee-controlled documents. Implementation of this amendment shall include relocation of the requirements to the specified documents, as described in (1) Sections 4D and 4E of the NRC staff's Safety Evaluation, and (2) Table LA, Removed Detail Changes, and Table R, Relocated Specifications, attached to the NRC staff's Safety Evaluation, which is enclosed in this amendment.</p>	<p>The amendment shall be implemented within 150 days from date of issuance</p>

ADDITIONAL CONDITIONS  
OPERATING LICENSE NO. NPF-73

FirstEnergy Nuclear Operating Company, FirstEnergy Nuclear Generation Corp., Ohio Edison Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
163	<p><u>Initial Performance of New Surveillance and Assessment Requirements</u></p> <p>Upon implementation of Amendment No. 163 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air leakage as required by Surveillance Requirement (SR) 3.7.10.4, in accordance with Specification 5.5.14.c(i), the assessment of CRE habitability as required by Specification 5.5.14.c(ii), and the measurement of CRE pressure as required by Specification 5.5.14.d, shall be considered met. Following implementation:</p> <ul style="list-style-type: none"> <li>(a) The first performance of SR 3.7.10.4, in accordance with Specification 5.5.14.c(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.</li> <li>(b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.14.c(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from the date of the most recent successful tracer gas test, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.</li> <li>(c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.14.d, shall be within 18 months, plus the 138 days allowed by SR 3.0.2, as measured from the date of the most recent successful pressure measurement test.</li> </ul>	<p>The amendment shall be implemented within 120 days from date of issuance</p>



**Attachment 6**

**Beaver Valley Power Station, Unit Nos. 1 and 2  
Retyped Technical Specification Pages  
License Amendment Request No. 08-008**

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The following is a list of the affected pages:

Technical Specifications
1.4-5
3.3.2-9

1.4 Frequency

EXAMPLES (continued)

EXAMPLE 1.4-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>-----</p> <p><b>- NOTE -</b></p> <p>Not required to be performed until 12 hours after ≥ 25% RTP.</p> <p>-----</p>	
Perform channel adjustment.	7 days

The interval continues, whether or not the unit operation is < 25% RTP between performances.

As the Note modifies the required performance of the Surveillance, it is construed to be part of the "specified Frequency." Should the 7 day interval be exceeded while operation is < 25% RTP, this Note allows 12 hours after power reaches ≥ 25% RTP to perform the Surveillance. The Surveillance is still considered to be performed within the "specified Frequency." Therefore, if the Surveillance were not performed within the 7 day (plus the extension allowed by SR 3.0.2) interval, but operation was < 25% RTP, it would not constitute a failure of the SR or failure to meet the LCO. Also, no violation of SR 3.0.4 occurs when changing MODES, even with the 7 day Frequency not met, provided operation does not exceed 12 hours (plus the extension allowed by SR 3.0.2) with power ≥ 25% RTP.

Once the unit reaches 25% RTP, 12 hours would be allowed for completing the Surveillance. If the Surveillance were not performed within this 12 hour interval (plus the extension allowed by SR 3.0.2), there would then be a failure to perform a Surveillance within the specified Frequency, and the provisions of SR 3.0.3 would apply.

Table 3.3.2-1 (page 2 of 7)  
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	UNIT 1 ALLOWABLE VALUE	UNIT 2 ALLOWABLE VALUE
<b>2. Containment Spray Systems</b>						
(2) Automatic Actuation Logic and Actuation Relays	1,2,3,4	2 trains	C	SR 3.3.2.2 SR 3.3.2.3 SR 3.3.2.6	NA	NA
(3) Containment Pressure - High High	1,2,3	4	E	SR 3.3.2.1 SR 3.3.2.4 <sup>(e)(f)</sup> SR 3.3.2.8 <sup>(e)(f)</sup> SR 3.3.2.9	≤ 11.43 psig	≤ 11.4 psig
<b>b. Recirculation Spray</b>						
(1) Automatic Actuation Logic	1,2,3	2 trains	F	SR 3.3.2.2 SR 3.3.2.3	NA	NA
(2) Refueling Water Storage Tank (RWST) Level Low	1,2,3	3	D	SR 3.3.2.1 SR 3.3.2.4 <sup>(e)(f)</sup> SR 3.3.2.8 <sup>(e)(f)</sup>	≥ 27' 4" and ≤ 27' 11"	≥ 32' 8" and ≤ 32' 10"
Coincident with						
Containment Pressure High High	1,2,3	4	E	SR 3.3.2.1 SR 3.3.2.4 <sup>(e)(f)</sup> SR 3.3.2.8 <sup>(e)(f)</sup>	≤ 11.43 psig	≤ 11.4 psig

- (e) If the as-found channel setpoint is conservative with respect to the Allowable Value but outside its predefined as-found acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service. If the as-found instrument channel setpoint is not conservative with respect to the Allowable Value, the channel shall be declared inoperable.
- (f) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance of the Nominal Trip Setpoint, or a value that is more conservative than the Nominal Trip Setpoint; otherwise, the channel shall be declared inoperable. The Nominal Trip Setpoint and the methodology used to determine the Nominal Trip Setpoint, the predefined as-found acceptance criteria band, and the as-left setpoint tolerance band are specified in a document incorporated by reference into the Updated Final Safety Analysis Report.