FENOC

FirstEnergy Nuclear Operating Company

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September 1, 2000
L-00-112

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

Subject: Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, License No. NPF-73
License Amendment Request No. 160

Pursuant to 10 CFR 50.90, FENOC requests an amendment to the above license in the form of changes to the technical specifications. The proposed amendment will revise certain 18 month surveillance requirements by eliminating the condition that testing be conducted either during shutdown, or during cold shutdown or refueling mode (i.e., shutdown conditions). Elimination of the requirement to perform testing during shutdown conditions will allow credit to be taken for testing that is currently being performed at power to meet the 18 month surveillance requirement.

The proposed amendment will result in a substantial reduction in the number of components that must be tested during shutdown conditions. This reduction in shutdown testing will improve the availability and reliability of systems important to maintaining the plant in a safe shutdown condition (e.g., RHS). Tests that can not be performed at power safely will continue to be performed during shutdown conditions; however, performing component testing during shutdown conditions that is redundant to testing performed at power is an unnecessary distraction for operation and maintenance personnel. The numerous and sometimes complex component testing required by the current surveillances during shutdown conditions is a significant burden to plant personnel and results in an adverse but unquantifiable impact on risk. By allowing credit to be taken for testing accomplished while at power, eliminating redundant testing and performing the portions of the associated tests that must be performed during shutdown conditions, plant safety is not adversely affected, and shutdown risk can be reduced.

Therefore, FirstEnergy Nuclear Operating Company (FENOC) requests that the review of this license amendment request be expedited in order that the resultant amendment can be issued by October 13, 2000. Approval by this date is requested to allow this amendment to be utilized during the upcoming refueling outage at Beaver Valley Power Station Unit No. 2.

A001

The proposed technical specification changes are presented in Attachment A. The safety analysis and no significant hazard evaluation are presented in Attachment B.

This change has been reviewed by the Beaver Valley review committees. The change was determined to be safe and does not involve a significant hazard consideration as defined in 10 CFR 50.92 based on the attached safety analysis and no significant hazard evaluation. An implementation period of up to 60 days is requested following the effective date of this amendment.

If there are any questions concerning this matter, please contact Mr. Thomas S. Cosgrove, Manager, Licensing at 724-682-5203.

Sincerely,

Lew W. Myers

c: Mr. D. S. Collins, Project Manager
Mr. D. M. Kern, Sr. Resident Inspector
Mr. H. J. Miller, NRC Region I Administrator
Mr. D. A. Allard, Director BRP/DEP
Mr. L. E. Ryan (BRP/DEP)

Subject: **Beaver Valley Power Station, Unit No. 2**
BV-2 Docket No. 50-412, License No. NPF-73
License Amendment Request No. 160

I, Marc P. Pearson, being duly sworn, state that I am Director, Plant Services of FirstEnergy Nuclear Operating Company (FENOC), that I am authorized to sign and file this submittal with the Nuclear Regulatory Commission on behalf of FENOC, and that the statements made and the matters set forth herein pertaining to FENOC are true and correct to the best of my knowledge and belief.

FirstEnergy Nuclear Operating Company

Marc P. Pearson

Marc P. Pearson
Director, Plant Services - FENOC

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF BEAVER

Subscribed and sworn to me, a Notary Public, in and for the County and State above named, this 1st th day of September, 2000.

Tracey A. Baczek

My Commission Expires:

Notarial Seal
Tracey A. Baczek, Notary Public
Shippingport Boro, Beaver County
My Commission Expires Aug. 16, 2001
Member, Pennsylvania Association of Notaries

ATTACHMENT A

Beaver Valley Power Station, Unit No. 2
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The following is a list of the affected pages:

Affected Pages:	3/4 5-5
	3/4 6-10
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	B 3/4 5-1a
	B 3/4 6-11
	B 3/4 6-12

SURVEILLANCE REQUIREMENTS (Continued)

2. Verifying that each ECCS subsystem is aligned to receive electrical power from separate OPERABLE emergency buses.

d. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suctions during LOCA conditions. This visual inspection shall be performed:

1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and

2. Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.

e. At least once per 18 months by:

1. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.

DELETE

f. At least once per 18 months, ~~during shutdown,~~ by:

1. Cycling each power operated (excluding automatic) valve in the flow path ~~that is not testable during plant operation,~~ through at least one complete cycle of full travel.

DELETE

2. Verifying that each automatic valve in the flow path actuates to its correct position on a safety injection signal.

3. Verifying that the centrifugal charging pump and low head safety injection pumps start automatically upon receipt of a safety injection signal.

g. The containment recirculation spray subsystem shall be demonstrated OPERABLE per the applicable portions of Specification 4.6.2.2.

(Proposed Wording)

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT QUENCH SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two separate and independent containment quench spray subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one containment quench spray subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment quench spray subsystem shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

2. Verifying the temperature of the borated water in the refueling water storage tank is within the limits of Specification 3.1.2.8.b.3.

b. By verifying, at the frequency specified in the Inservice Testing Program, that each quench spray pump's developed head at the flow test point is greater than or equal to the required developed head as specified in the Inservice Testing Program and the Containment Integrity Safety Analysis.

c. At least once per 18 months ~~during shutdown,~~ by: DELETE

1. Cycling each power operated (excluding automatic) valve in the flow path ~~that is not testable during plant operation,~~ through at least one complete cycle of full travel. DELETE

(Proposed Wording)

SURVEILLANCE REQUIREMENTS (Continued)

d. Verify, at the frequency specified in the Inservice Testing Program, that each recirculation spray pump's developed head at the flow test point is greater than or equal to the required developed head as specified in the Inservice Testing Program and the Containment Integrity Safety Analysis.

DELETE

e. At least once per 18 months ~~during shutdown,~~ by:

1. Cycling each power operated (excluding automatic) valve in the flow path ~~not testable during plant operation,~~ through at least one complete cycle of full travel.

DELETE

2. Verifying that each automatic valve in the flow path actuates to its correct position on a test signal.

3. Initiating flow through each Service Water subsystem and its two associated recirculation spray heat exchangers, and verifying a flow rate of at least 11,000 gpm.

f. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

(Proposed Wording)

CONTAINMENT SYSTEMS

CHEMICAL ADDITION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.3 The chemical addition system shall be OPERABLE with:

a. A chemical addition tank containing at least 8500 gallons of between 23 and 25 percent by weight NaOH solution, and

b. Two chemical injection subsystems each capable of adding NaOH solution from the chemical addition tank to a containment quench spray system pump flow.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one chemical addition subsystem inoperable, restore the subsystem to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours; restore the chemical addition subsystem to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the next 36 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.3 The chemical addition system shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

b. By verifying that on recirculation flow, each injection pump develops a flow between 40 and 60 gpm when tested pursuant to Specification 4.0.5.

c. At least once per 6 months by:

1. Verifying the contained solution volume in the tank, and
2. Verifying the concentration of the NaOH solution by chemical analysis.

DELETE

d. At least once per 18 months, ~~during shutdown,~~ by:

1. Cycling each valve in the chemical addition system flow path ~~that is not testable during plant operation,~~ through at least one complete cycle of full travel.

2. Verifying that each automatic valve in the flow path actuates to its correct ~~postiion~~ position on a test signal.

3. Verifying that each chemical injection pump starts automtically on a test signal.

(Proposed Wording)

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.1.2 Each containment isolation valve shall be demonstrated OPERABLE* ~~during the COLD SHUTDOWN or REFUELING MODE~~ at least once per 18 months by:

DELETE

a. Verifying that on a Phase A containment isolation test signal each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.

d. Cycling each power operated or automatic valve through at least one complete cycle of full travel and measuring the isolation time pursuant to Specification 4.0.5.

e. Cycling each weight or spring loaded check valve not testable during plant operation, through one complete cycle of full travel and verifying that each check valve remains closed when the differential pressure in the direction of flow is < 1.2 psid and opens when the differential pressure in the direction of flow is ≥ 1.2 psid but less than 6.0 psid.

f. Cycling each manual valve not locked, sealed or otherwise secured in the closed position through at least one complete cycle of full travel.

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* Locked or sealed closed valves may be opened on an intermittent basis under administrative control.

(Proposed Wording)

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS (Continued)

Periodic surveillance testing of ECCS pumps to detect gross degradation caused by impeller structural damage or other hydraulic component problems is required by Section XI of the ASME Code. This type of testing may be accomplished by measuring the pump developed head at only one point on the pump characteristic curve. This verifies both that the measured performance is within an acceptable tolerance of the original pump baseline performance and that the performance at the test flow is greater than or equal to the performance assumed in the ECCS Flow Analysis. The term "required developed head" refers to the pump performance at a given flow point that is assumed in the ECCS Flow Analysis. This is possible since the analysis assumes the pump delivers different flows at different times during accident mitigation. These multiple points are represented by a curve. The values at various flow points are defined by the Minimum Operating Point (MOP) curve in the Inservice Testing (IST) Program. The verification that the pump's developed head at the flow test point is greater than or equal to the required developed head is performed by using the MOP curve. Surveillance requirements are specified in the IST Program, which encompasses Section XI of the ASME Code. Section XI of the ASME Code provides the activities and frequencies necessary to satisfy the requirements.

The limitation for a maximum of one charging pump to be OPERABLE and the surveillance requirement to verify all charging pumps except the required OPERABLE pump to be inoperable below 350°F provides assurance that a mass addition pressure transient can be relieved by the operation of a single PORV.

ADD INSERT

3/4.6.2.1 and 3/4.6.2.2 CONTAINMENT QUENCH AND RECIRCULATION SPRAY SYSTEMS (Continued)

on bypass flow. This test confirms one point on the pump design curve and is indicative of overall performance. Such inservice tests confirm component OPERABILITY, trend performance, and detect incipient failures by indicating abnormal performance.

Verifying that each recirculation spray system pump's developed head at the flow test point is greater than or equal to the required developed head ensures that recirculation spray system pump performance has not degraded during the cycle. The term "required developed head" refers to the value that is assumed in the Containment Integrity Safety Analysis for the recirculation spray pump's developed head at a specific flow point. This value for the required developed head at a flow point is defined as the MOP in the IST Program. The verification that the pump's developed head at the flow test point is greater than or equal to the required developed head is performed by using a MOP curve. The MOP curve is contained in the IST Program and was developed using the required developed head at a specific flow point as a reference point. From the reference point, a curve was drawn which is a constant percentage below the current pump performance curve. Based on the MOP curve, a verification is performed to ensure that the pump's developed head at the flow test point is greater than or equal to the required developed head. Flow and differential head are normal test parameters of centrifugal pump performance required by Section XI of the ASME Code. Since the recirculation spray system pumps cannot be tested with flow through the spray headers, they are tested on bypass flow. This test confirms one point on the pump design curve and is indicative of overall performance. Such inservice tests confirm component OPERABILITY, trend performance, and detect incipient failures by indicating abnormal performance.

The ten year surveillance interval for performing an air or smoke flow test through each spray header is considered adequate for detecting obstruction of the nozzles due to the passive design of the spray header and the header's components being constructed with stainless steel.

Add Insert

3/4.6.2.3 CHEMICAL ADDITION SYSTEM

The OPERABILITY of the chemical addition system ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH minimum volume and concentration, ensure that 1) the iodine removal efficiency of the spray water is maintained because of the increase in pH value, and 2) corrosion effects on components within containment are minimized. These assumptions are consistent with the iodine removal efficiency assumed in the accident analyses.

Add Insert

(Proposed Wording)

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for both a LOCA and major secondary system breaks.

The opening of locked or sealed closed containment isolation valves on an intermittent basis under administrative control includes the following considerations: (1) stationing an operator, who is in constant communication with the control room, at the valve controls, (2) instructing this operator to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to close the valves and that this action will prevent the release of radioactivity outside the containment.

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water, and 3) corrosion of metals within containment. These hydrogen control systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA."

ADD INSERT

Attachment A
Beaver Valley Power Station, Unit No. 2
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BASES INSERT

The 18-month surveillance interval is consistent with expected length of fuel cycles and allows for component testing to be performed during plant shutdown conditions if necessary to avoid a plant transient that could occur if the component were tested at power. However, for those components that may be safely tested at power, the 18-month surveillance may be met by performing the required testing at power.

ATTACHMENT B

Beaver Valley Power Station, Unit No. 2
License Amendment Request No. 160
REVISION OF 18 MONTH SURVEILLANCE CRITERIA

A. DESCRIPTION OF AMENDMENT REQUEST

The proposed amendment will revise certain 18 month surveillance requirements (SRs) by deleting reference to the requirement for the testing to be conducted either during shutdown, or "during the COLD SHUTDOWN or REFUELING MODE" (i.e., shutdown conditions). In addition certain SRs will also be revised by deleting reference to testing valves that are not testable during plant operation. The associated BASES section for the affected SRs will also be revised.

The affected SRs for which the terms "during shutdown" will be deleted from the surveillance wording are as follows: 1) SR 4.5.2.f associated with Specification 3/4.5.2 titled "ECCS Subsystems – Tavg ≥ 350°F" 2) SR 4.6.2.1.c associated with Specification 3/4.6.2.1 titled "Containment Quench Spray System" 3) SR 4.6.2.2.e associated with Specification 3/4.6.2.2 titled "Containment Recirculation Spray System" and 4) SR 4.6.2.3.d associated with Specification 3/4.6.2.3 titled "Chemical Addition System."

SR 4.6.3.1.2 associated with Specification 3/4.6.3.1 titled "Containment Isolation Valves" will be revised by deleting the terms "during the COLD SHUTDOWN or REFUELING MODE" from the surveillance wording.

The affected SRs for which the terms "that is not testable during plant operation" will be deleted from the surveillance wording are as follows: 1) SR 4.5.2.f.1 associated with Specification 3/4.5.2 titled "ECCS Subsystems – Tavg ≥ 350°F" 2) SR 4.6.2.1.c.1 associated with Specification 3/4.6.2.1 titled "Containment Quench Spray System" 3) SR 4.6.2.2.e.1 associated with Specification 3/4.6.2.2 titled "Containment Recirculation Spray System" and 4) SR 4.6.2.3.d.1 associated with Specification 3/4.6.2.3 titled " Chemical Addition System."

The changes to the associated Bases sections will add additional wording pertaining to the bases for the 18 month testing requirement and testing components during plant operation.

Editorial and format changes have been included as necessary to allow for the addition and deletion of text and correction of spelling errors.

B. DESIGN BASES

Emergency Core Cooling System (ECCS)

The primary function of the ECCS following a loss-of-coolant accident (LOCA) is to remove the stored and fission product decay heat from the reactor core such that fuel rod damage, to the extent that it would impair effective cooling of the core, is prevented.

The ECCS consists of the high head safety injection (HHSI)/charging pumps, the refueling water storage tank (RWST), low head safety injection (LHSI) pumps, recirculation spray pumps, and the safety injection (SI) accumulators with the associated valves, instrumentation, and piping.

The ECCS is designed to cool the reactor core as well as to provide additional shutdown capability following initiation of the following accident conditions:

1. A LOCA, including a pipe break or a spurious relief or safety valve opening in the reactor coolant system (RCS), which would result in a discharge larger than that which could be made up by the normal make-up system.

2. A rupture of a control rod drive mechanism causing a rod cluster control assembly (RCCA) ejection accident.

3. A steam or feedwater system break accident, including a pipe break or a spurious relief or safety valve opening in the secondary steam system which would result in an uncontrolled steam release or a loss of feedwater.

4. A steam generator tube rupture.

Containment Depressurization and Cooling System

The containment depressurization and cooling system is composed of two systems: the quench spray system (QSS) and the recirculation spray system (RSS).

The containment depressurization and cooling system reduces the containment temperature and returns the containment pressure to subatmospheric following a break in either the primary or secondary system piping inside the containment.

Heat that is removed from the containment atmosphere by the QSS and RSS is transferred to the containment sump. Heat is then removed from the containment by the service water system via the recirculation spray coolers.

Containment Isolation System (CIS)

The purpose of the CIS is to isolate piping lines which penetrate the containment and to prevent the release of radioactive materials from the primary containment in the event of a LOCA.

Containment isolation consists of at least two barriers consisting of the following arrangements:

a. One normally closed, administratively controlled isolation valve inside containment, and one normally closed, administratively controlled isolation valve outside containment,

b. One automatic isolation valve inside containment and one normally closed, administratively controlled isolation valve outside containment,

c. One normally closed, administratively controlled isolation valve inside containment and one automatic isolation valve outside containment; however, a simple check valve may not be used as the automatic isolation valve outside containment,

d. One automatic isolation valve inside containment and one automatic isolation valve outside containment; however, a simple check valve may not be used as the automatic isolation valve outside containment,

e. A sealed system inside containment and one isolation valve outside containment which is either automatic, normally closed, administratively controlled, or remote manually operated (a sealed system is one which is neither part of the reactor coolant pressure boundary nor connected directly to the containment atmosphere), or

f. In the case of the containment sump suction pipe and valve arrangements, a conservatively designed and fabricated single valve and suction pipe arrangement that prevents gross system leakage.

Check valves are weight-loaded or spring-loaded to have positive closure in the direction of flow. This ensures that these check valves will remain closed when the inside containment atmosphere returns to subatmospheric conditions following a Design Basis Accident (DBA).

Containment isolation is accomplished in two phases. Initiation of a Containment Isolation Phase A (CIA) signal shuts most of the automatic isolation valves. Selected other critical lines such as component cooling water to the reactor coolant pumps (RCPs), service water to the containment recirculation air coolers or control rod drive mechanism shroud coolers are considered important enough to delay until the next phase - Containment Isolation Phase B (CIB). Initiating signals for this phase closes all required automatic valves.

Chemical Addition System

Sodium hydroxide (NaOH) solution from the chemical addition tank (CAT) is added to the quench spray by means of the chemical injection system to improve the iodine removal capability of the quench spray.

Two redundant, positive displacement pumps are utilized to add the caustic NaOH solution to the quench spray. One positive displacement pump is designated as a preferred pump, with the second one as a backup to the first.

The operation of the chemical addition system is divided into two stages. The first stage directs flow from the CAT to the suctions of the quench spray pumps upon receiving a CIB signal. This alignment maintains the spray pH between 8.5 and 10.5 for all possible operating modes. The second stage begins once the RWST is below a predetermined level. The flow from the chemical addition pump is then automatically diverted from the suctions of the quench spray pumps to the containment sump. This alignment will inject the caustic solution remaining in the CAT into the containment sump to achieve a minimum ultimate sump pH of 8.5.

System Surveillance Requirements

The design bases of the affected SRs is to ensure that the associated plant equipment will function as required to mitigate the effects of a DBA. The affected SRs involve periodically cycling power operated valves contained in the associated system's flow path to ensure that they are capable of being placed in the required position following a DBA. The affected SRs also involve periodically verifying that automatic valves contained in the associated system's flow will actuate to their correct safety function position when an automatic safety system signal is generated from the plant's solid state protection system. In addition, the associated system's pump(s) are also periodically verified to start on an automatic safety system signal. Other surveillance requirements contained in the associated SRs include periodic verification of the required service water flow rate through the recirculation spray heat exchangers, periodic cycling of containment isolation valves including the measurement of isolation time, periodic cycling of certain manual containment isolation valves and periodic verification of certain types of containment isolation check valves to ensure that they will function as required. The above SRs are based on periodically verifying that the associated system components will function as designed following a DBA.

C. JUSTIFICATION

The proposed change eliminates the current requirement to perform the identified surveillance testing only during "shutdown" or during "Cold Shutdown or Refueling Mode" from the subject technical specifications. The restriction to perform certain surveillance tests only during shutdown conditions is intended to ensure the surveillances are performed consistent with safe plant operation. However, many components affected by this restriction are designed such that they may be safely tested at power. In addition, many of the affected components are required by technical specification surveillances to be tested quarterly and are routinely tested at power. The quarterly surveillance testing performed to verify the Engineered Safety Feature Actuation System (ESFAS) Instrumentation relay operation requires numerous components to be actuated. The quarterly ESFAS surveillances will in most cases satisfy the 18-month surveillance requirement to verify component actuation or valve cycling. However, the existing surveillances with the restriction to be performed during shutdown conditions force additional redundant testing to be performed on a substantial number of components solely to meet the surveillance requirement condition of "during shutdown" or "during the

Cold Shutdown or Refueling Mode." The 18-month interval may have already been met by previous component testing performed at power but all components must be tested during shutdown conditions to meet the current surveillance requirement. Thus, the proposed change would allow credit to be taken for testing accomplished while at power to meet the 18-month surveillance requirement and eliminate redundant testing.

The surveillance testing affected by this change includes actuations from CIA and CIB. The containment isolation signals affect components in numerous safety related systems. The proposed change would avoid redundant testing involving approximately six major tests performed during shutdown, affecting approximately 50 ESFAS slave relays and approximately 190 components. These slave relays and components are tested during power operation in accordance with ESFAS Technical Specification Surveillance 4.3.2.1.1. For cases where the actuated equipment is not tested during power operation (as permitted by Regulatory Guide 1.22), the actuated equipment is tested during shutdown by existing outage procedures such as valve stroke tests required by the Inservice Testing (IST) Program.

An example of a potential challenge to systems important to safe operation during shutdown conditions, introduced by the current testing requirements, is performance of surveillance 4.6.2.3.d.3 which requires the chemical addition pump (Train A) to be started automatically by a test signal during shutdown. The chemical addition pump (Train A) is automatically started by ESFAS slave relay K618. This relay actuates in response to a CIB signal and also trips a Residual Heat Removal System (RHS) pump and a Component Cooling Water System pump. When this relay is operated to satisfy surveillance 4.6.2.3.d.3, the Train A RHS pump and Component Cooling Water System pump (which supports the RHS) will receive trip signals from K618. The RHS system is required for core cooling during shutdown conditions.

The proposed change will result in a substantial reduction in the number of components that must be tested during shutdown conditions. This reduction in shutdown testing will improve the availability and reliability of systems important to maintaining the plant in a safe shutdown condition (e.g., RHS). Additionally, the redundant component testing performed during shutdown conditions is an unnecessary distraction for operation and maintenance personnel. The numerous and sometimes complex component testing required by the current surveillances

during shutdown conditions is a significant burden to plant personnel and results in an adverse but unquantifiable impact on risk. Therefore, the elimination of the requirement to perform testing during shutdown conditions will result in a qualitative reduction in plant risk during shutdown conditions.

The proposed change is consistent with the surveillance wording of the Improved Standard Technical Specifications for Westinghouse plants (NUREG-1431, Rev. 1) and previous NRC generic guidance regarding specific conditions for performing surveillance requirements. In Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate A 24-Month Fuel Cycle" the NRC specifically recommends the elimination of the condition during shutdown from surveillance requirements. The intent of the restriction to perform surveillances "during shutdown" is to ensure the surveillance is performed consistent with safe plant operation. However, in Generic Letter 91-04, the NRC recognized that the consideration of safe plant operation is valid for other surveillances that are performed during operational modes other than shutdown, but is not addressed by restricting the conduct of these surveillances.

The Generic Letter states:

> "The Staff concludes that the TS need not restrict surveillances as only being performed during shutdown. Nevertheless, safety dictates that when refueling interval surveillances are performed during power operation, licensees give proper regard for their effect on the safe operation of the plant. If the performance of a refueling interval surveillance during plant operation would adversely affect safety, the licensee should postpone the surveillance until the unit is shutdown for refueling or is in a condition or mode that is consistent with the safe conduct of that surveillance."

BVPS is actively managing operational risk using insights from the site-specific probabilistic risk assessment. Through active risk management, BVPS assesses the effect of scheduled maintenance and surveillance activities on core damage frequency. Adjustments to scheduled activities are made, when possible, to lower operational risk. Written risk thresholds have also been established, that when exceeded, either require senior management approval for performing an activity on line or deferral of the activity until a shutdown condition, depending upon the level of risk.

The proposed changes include an addition to the Bases that is consistent with the guidance provided in Generic Letter 91-04. Additionally, the proposed change includes the removal of the phrase "that is not testable during plant operation." This phrase is no longer needed with the removal of the requirement for testing during shutdown conditions. It was a clarification that was needed because the surveillance applied only during shutdown conditions. The removal of this phrase is considered an administrative change to support the elimination of the phrase "during shutdown."

D. SAFETY ANALYSIS

Certain components can be tested only during plant shutdown in order to avoid a plant transient during power operation as described in UFSAR Section 7. This amendment does not conflict with the testing criteria stated in UFSAR Section 7. The 18-month surveillances associated with this license amendment request also involve testing of components (e.g., relays) that are coupled with safety related systems and components which interface with core cooling systems used during shutdown conditions. Performance of this testing during shutdown conditions increases the shutdown risk (e.g., by adding challenges to core cooling systems, extending the time other safety systems are out of service, making the outage schedule more complex, etc.). Elimination of the requirement to test associated components during shutdown conditions will minimize overall plant risk by allowing credit to be taken for testing accomplished while at power to meet the 18-month surveillance requirement. Other surveillance testing on the identified systems and components is already required to be performed periodically at power which duplicates a portion of the identified 18-month surveillance tests. By allowing credit to be taken for testing accomplished while at power to meet the 18-month surveillance requirement, eliminating redundant testing, and performing that portion of the associated tests that need to be performed at shutdown, plant safety is not adversely affected and shutdown risk can be minimized.

The proposed amendment does not change the current type and frequency of the 18-month surveillances for the ECCS, Containment Depressurization and Cooling System, Chemical Addition System, and Containment Isolation Valves. The proposed amendment deletes only the requirement to perform this testing during shutdown conditions. Allowing this testing to be performed either at shutdown or crediting testing performed at power maintains the safety analysis conclusions and allows shutdown activities to be planned which will reduce the shutdown risk.

The proposed administrative, editorial, and format changes have no impact on plant safety.

Therefore, based on the above, the proposed amendment does not adversely affect the safe operation of the plant.

E. NO SIGNIFICANT HAZARDS EVALUATION

This license amendment request involves the removal of the requirement to perform several 18-month surveillances involving the Emergency Core Cooling System (ECCS), Containment Depressurization and Cooling System, Chemical Addition System, and Containment Isolation Valves during either "shutdown" or during "Cold Shutdown or Refueling Mode," as applicable. In addition, an administrative change is included which will revise certain Surveillance Requirements associated with the above systems by deleting reference to testing valves that are not testable during plant operation. The associated Bases section will also be revised. The type and frequency of the current subject surveillance requirements will remain unchanged, except that, with the removal of the criteria to perform these tests either during shutdown, or during Cold Shutdown or Refueling Mode (i.e., shutdown conditions), the subject surveillance tests may also credit tests performed at power. Editorial and format changes have been included as necessary to allow for the addition and deletion of text and correction of spelling errors.

The no significant hazard considerations involved with the proposed amendment have been evaluated. The evaluation focused on the three standards set forth in 10 CFR 50.92(c), as quoted below:

> The Commission may make a final determination, pursuant to the procedures in paragraph 50.91, that a proposed amendment to an operating license for a facility licensed under paragraph 50.21(b) or paragraph 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:
>
> (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) Involve a significant reduction in a margin of safety.

The following evaluation is provided for the no significant hazards consideration standards:

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

   The proposed amendment does not involve a significant increase in the probability of an accident previously evaluated because no changes are being made to any event initiator. The proposed amendment involves changes to accident mitigation system surveillance requirements. No analyzed accident scenario is being revised. The initiating conditions and assumptions for accidents described in the Updated Final Safety Analysis Report (UFSAR) remain as previously analyzed.

   Certain safety related components can be tested only during plant shutdown in order to avoid a plant transient during power operation. The 18-month surveillances associated with this license amendment request also involve testing of components (e.g., relays) that are coupled with safety related systems and components which interface with core cooling systems used during shutdown conditions. Performance of this testing during shutdown conditions increases the shutdown risk. Elimination of the requirement to test associated components during shutdown conditions will minimize overall plant risk by allowing credit for components that are tested at power when the testing is consistent with safe operation of the plant. Other surveillance testing on the identified systems and components is already required to be performed periodically at power which duplicates a portion of the identified 18-month surveillance tests. By allowing credit to be taken for testing accomplished while at power to meet the 18-month surveillance requirement, eliminating redundant testing, and performing that portion of the associated tests that need to be performed at shutdown, plant safety is not adversely affected and shutdown risk can be minimized.

Beaver Valley Power Station (BVPS) is actively managing operational risk using insights from the site-specific probabilistic risk assessment. Through active risk management, BVPS assesses the effect of scheduled maintenance and surveillance activities on core damage frequency. Adjustments to scheduled activities are made, when possible, to lower operational risk.

These accident mitigation systems will be demonstrated to be able to function as required on a periodic basis. Thus, the performance of the affected surveillance requirements will continue to ensure that these systems are capable of mitigating a design basis accident. Therefore, the consequence of an accident previously evaluated is not significantly increased as a result of this license amendment request.

The proposed administrative, editorial, and format changes have no impact on plant safety.

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

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

The proposed amendment does not involve any physical changes to the plant or the modes of plant operation defined in the plant Technical Specifications. The proposed amendment does not involve the addition or modification of plant equipment nor does it alter the design or operation of any plant systems. No new accident scenarios, transient precursors, failure mechanisms, or limiting single failures are introduced as a result of these changes.

There are no changes in this amendment that would cause the malfunction of safety-related equipment assumed to be operable in accident analyses. No new mode of failure has been created and no new equipment performance requirements are imposed. The proposed amendment has no effect on any previously evaluated accident.

This license amendment request does not alter the surveillance type or frequency of the affected 18 month surveillance requirements for the ECCS,

Containment Depressurization and Cooling System, Chemical Addition System, and Containment Isolation Valves. The license amendment request only proposes the removal of the requirement to perform the associated surveillances during shutdown conditions. Elimination of the requirement to test associated components during shutdown conditions will minimize overall plant risk by allowing credit for components that tested at power when the testing is consistent with safe operation of the plant.

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

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

The proposed amendment does not involve revisions to any safety limits or safety system setting that would adversely impact plant safety. The proposed amendment does not affect the ability of systems, structures or components important to the mitigation and control of design basis accident conditions within the facility to perform their safety related functions. In addition, the proposed amendment does not affect the ability of the safety systems to ensure that the facility can be maintained in a shutdown or refueling condition for extended periods of time.

The proposed amendment does not change the current surveillance type and frequency of the affected 18 month surveillance requirements for the ECCS, Containment Depressurization and Cooling System, Chemical Addition System, and Containment Isolation Valves. The proposed amendment removes only the requirement to perform this testing during shutdown conditions. Allowing this testing to be performed either during shutdown or at power when plant conditions do not adversely affect plant safety maintains the safety analysis conclusions and allows shutdown activities to be planned which will reduce the shutdown risk.

The proposed administrative, editorial, and format changes have no impact on plant safety.

Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

F. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the considerations expressed above, it is concluded that the activities associated with this license amendment request satisfy the requirements of 10 CFR 50.92(c) and, accordingly, a no significant hazards consideration finding is justified.

G. ENVIRONMENTAL CONSIDERATION

This license amendment request changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. It has been determined that this license amendment request involves no significant increase in the amounts, and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. This license amendment request may change requirements with respect to installation or use of a facility component located within the restricted area or change an inspection or surveillance requirement; however, the category of this licensing action does not individually or cumulatively have a significant effect on the human environment. Accordingly, this license amendment request meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this license amendment request.