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December 20, 2007
L-07-519

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

SUBJECT:

Beaver Valley Power Station, Unit Nos. 1 and 2
BV-1 Docket No. 50-334, License No. DPR-66
BV-2 Docket No. 50-412, License No. NPF-73
Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency
Recirculation During Design Basis Accidents at Pressurized-Water Reactors" - Request
for Extension of Completion Date for Corrective Actions

FirstEnergy Nuclear Operating Company (FENOC) letter dated December 7, 2007 (Reference 1) requested an extension for the completion of corrective actions relative to Generic Letter 2004-02 (GL 2004-02). Based on a phone call with NRC staff on December 13, 2007, FENOC has revised the submittal (Reference 1) to request a 60 day extension period. This letter supersedes the previous FENOC letter of December 7, 2007 (Reference 1) and requests an extension to February 29, 2008 for the completion of certain GL 2004-02 activities beyond December 31, 2007.

NRC Generic Letter (GL) 2004-02 (Reference 2) requested that licensees provide information regarding the impact of debris blockage on emergency recirculation during design basis accidents. FirstEnergy Nuclear Operating Company (FENOC) provided the requested information for Beaver Valley Power Station (BVPS), Unit Nos. 1 and 2 in References 4, 5 and 6. In subsequent letters dated April 3, 2006 (Reference 3) and September 6, 2005 (Reference 7), FENOC requested an extension for BVPS Unit No. 2 to permit the completion of the installation of the Recirculation Spray System (RSS) pumps start signal and the High Pressure Safety Injection Throttle Valve gap sizing modifications during the spring 2008 refueling outage (2R13). The NRC approved the BVPS Unit No. 2 extension request in their letter dated May 18, 2006 (Reference 8).

GL 2004-02 also requested that all licensees complete actions related to the Generic Letter by December 31, 2007, or provide justification for continued operation until the actions are completed. This letter requests an extension for the completion date of certain GL 2004-02 activities beyond December 31, 2007.

Replacement strainers have been installed at BVPS Unit No. 1 and Unit No. 2; during the BVPS Unit No. 2 fall 2006 refueling outage (2R12) and during the BVPS Unit No. 1

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fall 2007 refueling outage (1R18). The new replacement strainers provide design improvements including increased surface area and filtering capability.

In addition to the replacement strainers, a modification to the start signal for the RSS pumps was completed at BVPS Unit No. 1 during 1R18. This modification will allow sufficient pool depth to cover the sump strainers before initiating recirculation flow in the event of a loss of coolant accident (LOCA). At BVPS Unit No. 2, this modification is scheduled to be completed during the spring 2008 refueling outage (2R13).

In Response 2(d)(iii) of Reference 7, FENOC stated that chemical effects testing was being developed, and that additional steps to reduce the debris particulate load inside the BVPS Unit No. 1 and Unit No. 2 Containment Buildings would be dependent on the results of the testing. The chemical effects testing was conducted in November 2007, however, the evaluation of the results will not be completed by the end of 2007. FENOC will fully assess the chemical effects testing that has been performed to date, formalize the results, and develop a plan of action by February 29, 2008.

To address the potential uncertainties related to head loss from chemical effects, FENOC believes that the most probable course of action will be insulation remediation inside the Containment Buildings at both BVPS Unit No. 1 and Unit No. 2. FENOC will replace insulation to the extent practical in the upcoming spring refueling outage for BVPS Unit No. 2 (2R13). The scope of the insulation remediation to fully address the issue is currently unknown. It is expected that the scope will be identified by February 29, 2008, at which time the extent of the insulation replacement in 2R13 will also be identified. FENOC is currently addressing constraints related to the 2R13 outage scope which includes material procurement, adequate planning to minimize personnel dose and ensure worker safety, and consideration for currently planned outage activities. FENOC will include the details of insulation replacement scope and schedule for corrective actions in a supplemental submittal by February 29, 2008. FENOC understands the significance of the GSI-191 issue and is determined to resolve the issue. Plans for insulation replacement for BVPS Unit No. 1 will also be developed within this time frame with details provided in the February 29th supplemental submittal for GL 2004-02.

A downstream effects analysis was conducted for both BVPS Unit Nos. 1 and 2 in accordance with WCAP-16406-P Revision 0 "Evaluation of Downstream Debris Effects in Support of GSI-191". As a result, the High Pressure Safety Injection Cold Leg Throttle Valves were replaced during 1R18 at BVPS Unit No. 1. At BVPS Unit No. 2, the High Pressure Safety Injection Throttle Valves will be modified during the spring 2008 Refueling Outage (2R13). The recently issued guidance on downstream effects, both in-vessel and ex-vessel, will require the previously developed analyses to be revised. In addition, the insulation remediation for both units will have an impact on these analyses. FENOC will provide a submittal describing the status of the ex-vessel downstream effects evaluations by February 29, 2008.

Therefore, FENOC is requesting a schedule extension to February 29, 2008 for BVPS-1 and BVPS-2 to develop an action plan that will be required based on the results of the chemical effects testing. This extension request is being submitted using the criteria of SECY-06-0078 and the guidance provided in NRC letter dated November 8, 2007 (Reference 9).

Attachment 1 provides the basis supporting FENOC's conclusion that it is acceptable to extend the completion dates for these corrective actions beyond the December 31, 2007 deadline for BVPS Unit Nos. 1 and 2. Mitigative measures to minimize the risk of degraded safety system functions are included in the attached supporting basis.

A list of regulatory commitments made in this submittal is provided in Attachment 2. If there are any questions, or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – FENOC Fleet Licensing, at 330-761-6071.

I declare under penalty of perjury that the foregoing is true and correct. Executed on December 20, 2007.

Sincerely,



Peter P. Sena III

Attachments:

1. Justification for Additional Corrective Actions Extending Beyond December 31, 2007
2. List of Commitments

References:

1. FENOC Letter L-07-142 Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors" - Request for Extension of Completion Date for Corrective Actions, dated December 7, 2007.
2. Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated September 13, 2004.

3. FENOC Letter L-06-020 Supplemental Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated April 3, 2006.
 4. FENOC Letter L-06-171 "Revised Commitment Date Relevant to FirstEnergy Nuclear Operating Company Correspondence to the NRC, Dated September 29, 2006," dated December 21, 2006.
 5. FENOC Letter L-05-123 Response to Request for Additional Information on Generic Letter 2004-02 (TAC Nos. MC4665 and MC4666), dated July 22, 2005.
 6. FENOC Letter L-05-034 Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated March 4, 2005.
 7. FENOC Letter L-05-146 Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated September 6, 2005.
 8. NRC letter dated May 18, 2006 Beaver Valley Power Station, Unit No. 2 (BVPS-2) - Request for Scheduling Extension from Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors."
 9. NRC letter to NEI dated November 8, 2007 "Plant-Specific Requests for Extension of Time to Complete One or More Corrective Actions for Generic Letter 2004-02 Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors."
- c: Mr. S. J. Collins, NRC Region I Administrator
Mr. D. L. Werkheiser, NRC Senior Resident Inspector
Ms. N. S. Morgan, NRR Project Manager
Mr. D. J. Allard, Director BRP/DEP
Mr. L. E. Ryan (BRP/DEP)

ATTACHMENT 1

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Justification for Additional Corrective Actions Extending Beyond December 31, 2007

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Background:

Generic Letter (GL) 2004-02 (Reference 1) required that addressees provide a description of and implementation schedule for all corrective actions, including any plant modifications, that are identified while responding to the GL. FirstEnergy Nuclear Operating Company (FENOC) provided the requested information for Beaver Valley Power Station (BVPS) 1 and 2 in References 3, 4 and 5. In subsequent letters dated April 3, 2006 (Reference 2) and September 6, 2005 (Reference 6), FENOC requested an extension for BVPS-2 to permit the completion of the installation of the Recirculation Spray System (RSS) pumps start signal and the High Pressure Safety Injection Throttle Valve gap sizing modifications during the spring 2008 refueling outage (2R13). The NRC approved the BVPS-2 extension request in their letter dated May 18, 2006 (Reference 7).

During the ensuing work to complete the GL 2004-02 corrective actions, it has become apparent that certain activities required to resolve the containment sump issues cannot be completed within the current schedules, and, therefore, an extension is necessary. Certain activities have been identified for BVPS-1 and BVPS-2 that will not be completed by December 31, 2007; specifically, the downstream effects evaluations for components (in-vessel and ex-vessel), the chemical effects testing and evaluation, and the associated acceptance reviews. The extension is required to fully assess downstream effects and chemical effects testing that has been performed to date, formalize the results, and develop a plan of action by February 29, 2007.

To address the potential uncertainties related to head loss from chemical effects, FENOC believes that the most probable course of action will be insulation remediation inside the Containment Buildings at both BVPS Unit No. 1 and Unit No. 2. FENOC will replace insulation to the extent practical in the upcoming spring refueling outage for BVPS Unit No. 2 (2R13). The scope of the insulation remediation to fully address the issue is currently unknown. It is expected that the scope will be identified by February 29, 2008, at which time the extent of the insulation replacement in 2R13 will also be identified. FENOC is currently addressing constraints related to the 2R13 outage scope which includes material procurement, adequate planning to minimize personnel dose and ensure worker safety, and consideration for currently planned outage activities. FENOC will include the details of insulation replacement scope and schedule for corrective actions in a supplemental submittal by February 29, 2008. FENOC understands the significance of the GSI-191 issue and is determined to resolve the issue. Plans for insulation replacement for BVPS Unit No. 1 will also be developed within this time frame with details provided in the February 29th supplemental submittal for GL 2004-02.

Therefore, FENOC is requesting a schedule extension for BVPS-1 and BVPS-2 to assess the remaining technical evaluations as well as to determine what additional actions will be required based on the results of these evaluations. Justification is provided herein for an extension to the schedule beyond the December 31, 2007 implementation date for completion of actions at BVPS-1 and BVPS-2 associated with chemical effects and downstream effects (in-vessel and ex-vessel). This extension request is being submitted using the criteria of SECY-06-0078 (Reference 9) and the guidance provided in the NRC letter to NEI dated November 8, 2007 (Reference 10). Mitigative measures to minimize the risk of degraded safety system functions are included in the supporting basis provided below.

Activities Already Completed or to be Completed by December 31, 2007:

- Strainer replacements have been installed at both units. At BVPS-2, the new replacement strainer was installed during the fall 2006 refueling outage (2R12) which increased the available surface area from approximately 150 sq. ft. to 3300 sq. ft. At BVPS-1, the new replacement strainer was installed during the fall 2007 refueling outage (1R18) which increased the available surface area from approximately 130 sq. ft. to 3400 sq. ft.
- Replacement of BVPS-1 High Pressure Safety Injection Cold Leg Throttle Valves to increase the throttle valve gap.
- Changing the BVPS-1 start signal for the RSS pumps from a fixed time delay to an Engineered Safety Features Actuation System (ESFAS) signal based on a Refueling Water Storage Tank (RWST) Level Low coincident with a Containment Pressure High-High signal to allow sufficient pool depth to cover the sump strainer before initiating recirculation flow.
- Replacement of the BVPS-1 Reactor Vessel Closure Head insulation from Borated Temp Mat insulation encapsulated in Reflective Metal Insulation (RMI) to RMI during the spring 2006 refueling outage (1R17) to reduce particulate loading on the sump strainer.
- New RMI was installed on the BVPS-1 Replacement Steam Generators (RSGs) and associated piping in the vicinity of the RSGs during the spring 2006 refueling outage (1R17).
- Prototype testing of new strainer design was completed for BVPS-1 and BVPS-2.

Activities to be Completed During the BVPS-2 Spring 2008 Refueling Outage (2R13)

- Modification of the BVPS-2 High Pressure Safety Injection Throttle Valves to increase the throttle valve gap.
- Changing the BVPS-2 start signal for the RSS pumps from a fixed time delay to an ESFAS signal based on a RWST Level Low coincident with a Containment Pressure High-High signal to allow sufficient pool depth to cover the sump strainer before initiating recirculation flow.

- A containment coatings inspection and evaluation program will be implemented starting with the BVPS-2 Spring 2008 refueling outage. Containment coatings inspections will be a scheduled activity for the refueling outages at both BVPS-1 and BVPS-2.
- Insulation remediation will be performed during 2R13 at BVPS-2 to the extent practical. FENOC will include the details of insulation replacement scope and schedule for corrective actions for both units in a supplemental submittal by February 29, 2008.

Justification for Proposed Extension:

The NRC staff provided a justification for continued operation (JCO) in GL 2004-02 that justifies continued operation of pressurized water reactors through December 31, 2007. Elements of the JCO that are applicable to BVPS-1 and BVPS-2 are summarized below:

- The BVPS containments are compartmentalized making transport of debris to the sump difficult.
- BVPS does not require switchover to recirculation from the sump during a large-break loss-of-coolant accident (LOCA) until 20 to 30 minutes after accident initiation, allowing time for much of the debris to settle in other places within containment.
- The probability of the initiating event (i.e., large and intermediate-break LOCAs) is extremely low.
- Leak-before-break (LBB) qualified piping is of sufficient toughness that it will most likely leak (even under safe shutdown earthquake conditions) rather than rupture.
- The current industry issue regarding primary water stress corrosion cracking (PWSCC) associated with pressurizer Alloy 600/82/182 dissimilar metal welds at both BVPS-1 and BVPS-2 has been addressed. Full structural weld overlays on the BVPS-2 pressurizer spray, safety, relief and surge line nozzles were completed during the fall 2006 refueling outage (2R12). Similarly, full structural weld overlays were applied to the BVPS-1 pressurizer spray, safety, and relief nozzles during the fall 2007 refueling outage (1R18).
- The impact on risk for the requested extension period for actions to address chemical and downstream effects beyond the December 31, 2007 implementation date specified in GL 2004-02 is low based on the mitigative measures identified in this supporting document.

These elements will remain valid during the extension period requested by this submittal.

Compliance with SECY-06-0078 Criteria

SECY-06-0078 specifies two criteria for short duration GL 2004-02 extensions, limited to several months, and a third criterion for extensions beyond several months. These three criteria and FENOC's responses are provided below.

SECY-06-0078 Criterion No. 1:

The licensee has a plant-specific technical/experimental plan with milestones and schedule to address outstanding technical issues with enough margin to account for uncertainties.

FENOC Response:

BVPS has replaced the sump strainers for both units as follows:

- BVPS-2: Replaced during the 2R12 Refueling Outage (Fall 2006)
- BVPS-1: Replaced during the 1R18 Refueling Outage (Fall 2007)

The new strainers are a significant improvement over the original screen design. The new BVPS-1 strainer increases the surface area from 130 ft² to 3400 ft². The new BVPS-2 strainer increases the surface area from 150 ft² to 3300 ft².

In addition to the replacement of the strainers, a modification was completed for BVPS-1 during the fall 2007 refueling outage (1R18) that would allow sufficient pool depth to cover the sump strainers before initiating recirculation flow. The modification changed the BVPS-1 start signal for the RSS pumps from a fixed time delay to an ESFAS signal based on a RWST Level Low coincident with a Containment Pressure High-High signal. For BVPS-1, an operating strategy that directs securing of two of four RSS pumps upon transfer to cold leg recirculation has been implemented. This will reduce the velocity through the emergency sump strainer. At BVPS-2, the modification is scheduled to be completed during the spring 2008 refueling outage (2R13). The schedule extension for implementation of this modification beyond December 31, 2007 at BVPS-2 was approved by the staff via letter dated May 18, 2006 (Reference 7).

Mitigation efforts at BVPS-1 and BVPS-2 have been completed for addressing the issue associated with PWSCC and the pressurizer alloy 600/82/182 dissimilar metal welds. PWSCC was addressed during the BVPS-2 Fall 2006 refueling outage (2R12) through the application of full structural weld overlays on the pressurizer spray, safety, relief and surge line nozzles. Similarly, full structural weld overlays were applied to the BVPS-1 pressurizer spray, safety, and relief nozzles during the BVPS-1 fall 2007 refueling outage (1R18).

CHEMICAL EFFECTS (WCAP-16530-NP)

Chemical effects testing for both BVPS-1 and BVPS-2 was completed by Alion in November 2007; however, the final test reports for both units will not be completed by December 31, 2007. The results of these tests need to be evaluated for total head loss due to chemical effects.

FENOC will fully assess the chemical effects testing that has been performed to date, formalize the results, and develop a plan of action by February 29, 2008.

DOWNSTREAM EFFECTS EX-VESSEL (WCAP-16406-P)

BVPS-1 and BVPS-2 have been evaluated for ex-vessel downstream analysis based on the criteria established in WCAP-16406-P Rev 0. Based on this evaluation the High Pressure Safety Injection Cold Leg Throttle valves were replaced during 1R18 at BVPS-1. At BVPS-2, the High Pressure Safety Injection Throttle Valves are scheduled to be modified during the 2R13 outage in spring 2008. The schedule extension for implementation of this modification beyond December 31, 2007 at BVPS-2 was approved by the staff via letter dated May 18, 2006 (Reference 7).

Preliminary evaluations have been performed for orifices and pumps under the WCAP-16406-P Rev 1 methodology, however the final evaluations will not be completed by December 31, 2007. In addition, the insulation remediation for both units will have an impact on these analyses. FENOC will provide a submittal describing the status of the ex-vessel downstream effects evaluations by February 29, 2008.

DOWNSTREAM EFFECTS IN-VESSEL (WCAP-16793)

The final site specific analyses are to be developed by our NSSS Vendor, but will not be completed by December 31, 2007. In addition, the insulation remediation for both units will have an impact on these analyses. FENOC will provide a submittal describing the status of the in-vessel downstream effects evaluations by February 29, 2008.

SECY-06-0078 Criterion No. 2:

The licensee identifies mitigative measures to be put in place prior to December 31, 2007, and adequately describes how these mitigative measures will minimize the risk of degraded ECCS [emergency core cooling system] and CSS [containment spray system] functions during the extension period.

Response:

The following mitigative measures have been implemented to minimize the risk of degraded ECCS and CSS functions during the extension period.

Mitigative Measures:

Modifications to the Sump Screen Configuration at BVPS-1 and BVPS-2

During the BVPS-1 fall 2007 refueling outage (1R18), BVPS-1 installed new sump strainers that increased the available surface area from approximately 130 sq. ft. to 3400 sq. ft., to improve existing margins.

During the BVPS-2 fall 2006 refueling outage (2R12), BVPS-2 installed new sump strainers that increased the available surface area from approximately 150 sq. ft. to 3300 sq. ft., to improve existing margins.

For both units, the new strainer design was chosen based on the largest available sump strainer that would fit within the bounds of the existing sump area and be compatible with the anticipated water level. The new sump strainer is designed to reduce both head loss and the ingestion of debris, which could affect safety-related downstream components. The strainers are sized to preclude the passage of debris large enough to cause loss-of-function of downstream components.

Containment Spray System Design

As noted above, a modification to the containment sump was identified in the FENOC supplemental response to Generic Letter 2004-02 in FENOC letter L-06-020 dated April 3, 2006. Since the adoption of a licensing basis consistent with Generic Letter 2004-02 will result in an increase in the containment sump strainer head loss, it is necessary to increase the static height of water in the containment sump at both units in order to increase NPSH margin available. This is accomplished by changing the start signal for the RSS pumps from a fixed time delay to an ESFAS signal based on a RWST Level Low coincident with a Containment Pressure High-High signal. Starting the RSS pumps on this coincident signal provides assurance of adequate sump water level at RSS pump start over the range of potential break sizes and single failure assumptions. The higher water level will also ensure that the new containment sump

strainers will be submerged while accommodating a substantial increase in available surface area.

BVPS-1 completed the modifications associated with the RSS pump start signal during the 2007 fall refueling outage (1R18). For BVPS-2, a schedule extension for completion of the change associated with the RSS pump start signal during the spring 2008 refueling outage (2R13) was granted by NRC via letter dated May 18, 2006.

Insulation Remediation

BVPS-1:

New RMI was installed on the BVPS-1 RSGs and associated piping in the vicinity of the RSGs during the spring 2006 refueling outage (1R17). The associated piping includes the Reactor Coolant System crossover leg elbow, the main steam piping between the RSG main steam nozzle and first pipe rupture restraint, feedwater piping between the RSG feedwater nozzle and the first pipe rupture restraint, and the existing blowdown and shell drain piping between the RSG nozzles to the point where the two blowdown lines and the shell drain merge into a common header.

New RMI was also installed on the new BVPS-1 Reactor Vessel Closure Head (RVCH) during the spring 2006 refueling outage (1R17) to reduce debris loading on the sump strainer.

BVPS-2:

Additional insulation replacement in the BVPS-2 containment will be scheduled to the extent practical for 2R13 in spring 2008. FENOC will include the details of insulation replacement scope and schedule for corrective actions in a supplemental submittal by February 29, 2008.

Debris Generation

Periodic containment walkdowns are conducted using procedures which focus on sources, types and locations of items or conditions having the potential to become debris following a LOCA. Noted discrepancies are addressed via the BVPS corrective action program.

Leak-Before-Break

Postulated breaks in the reactor coolant loop and the pressurizer surge line have been evaluated for both BVPS-1 and BVPS-2 by application of leak-before-break (LBB) technology.

While LBB is not being used to establish the design basis debris load on the new sump strainers, the use of LBB would result in a substantial reduction in the zone of influence, and thus a significant reduction in the postulated debris generation, loading on the sump strainers, and potential clogging and wear of downstream components. With the installation of the additional sump strainer area, the possibility of clogging due to debris is greatly reduced.

Implementation of Mitigative Measures in Response to Bulletin 2003-01

In addition to the plant modifications and mitigative measures described above, current mitigative measures in response to Bulletin 2003-01 "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized-Water Reactors" (Reference 11) are in place and continue to be current. FENOC's response is documented in Reference 12 for BVPS-1 and BVPS-2. By letter dated September 6, 2005 (Reference 13), the NRC staff concluded that the compensatory measures that have been implemented to reduce the interim risk associated with the potentially degraded or nonconforming emergency core cooling system and containment spray system recirculation function are responsive to and meet the intent of Bulletin 2003-01.

In summary, these mitigative measures include:

1. Provisions of procedural guidance and operator training on indications of and responses to sump clogging. The guidelines contain instructions to establish flow to the reactor if symptoms of containment sump blockage are present.
2. Procedural guidance to minimize RWST inventory depletion in the event of loss of sump recirculation capability. Procedural guidance is also provided to refill the RWST when SI recirculation flow is reduced or lost when symptoms of containment sump blockage are present.
3. Procedural guidance to refill the RWST through the normal makeup path and other alternate sources in the event containment sump blockage is a concern.
4. Implementation of mitigative measures that assure containment cleanliness and foreign material exclusion:
 - a) Foreign material exclusion (FME) is assured by procedural controls at BVPS-1 and BVPS-2, which applies to inspection, operation, maintenance and outage activities.
 - b) Ensuring sump strainers are free of adverse gaps and breaches, and verifying each refueling outage that the sumps are free of debris in accordance with surveillance requirements of the Technical Specifications at each unit.

- c) Procedures require the use of the recirculation spray pumps at BVPS-1 and BVPS-2 to circulate water through the sump after installing a temporary dike around the sump. Although this test is intended to confirm pump performance, it also provides confidence of sump function, and is performed each refueling outage.
- d) Other procedures which focus on sources, types and locations of items or conditions having potential to become debris following a LOCA are also utilized. These procedures specifically identify examples of items to look for that may have the potential to be transported to the containment sump under accident conditions. Noted discrepancies are addressed via the BVPS corrective action program.
- e) Plant labels and signs are controlled by procedure that implements special requirements on labels, signs, and placards inside containment at BVPS-1 and BVPS-2 to assure that they meet the post-LOCA environment requirements.

These mitigative measures are already in place to minimize the risk of degraded ECCS and CSS functions during the requested extension period.

In addition, a containment coatings inspection and evaluation program is scheduled to be implemented starting with the BVPS-2 Spring 2008 refueling outage. Containment coatings inspections will be a scheduled activity for the refueling outages at both BVPS-1 and BVPS-2. This commitment is identified in Attachment 2 of this correspondence.

SECY-06-0078 Criterion No. 3:

For proposed extensions beyond several months, a licensee's request will more likely be accepted if the proposed mitigative measures include temporary physical improvements to the ECCS sump or materials inside containment to better ensure a high level of ECCS sump performance.

FENOC Response:

Physical mitigative measures in place at BVPS-1 and BVPS-2 are described in detail in Section SECY-06-0078 Criterion 2 of this extension request.

List of References

1. NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated September 13, 2004.
2. FENOC Letter L-06-020 Supplemental Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated April 3, 2006.
3. FENOC Letter L-06-171 "Revised Commitment Date Relevant to FirstEnergy Nuclear Operating Company Correspondence to the NRC, Dated September 29, 2006," dated December 21, 2006.
4. FENOC Letter L-05-123 Response to Request for Additional Information on Generic Letter 2004-02 (TAC Nos. MC4665 and MC4666), dated July 22, 2005.
5. FENOC Letter L-05-034 Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated March 4, 2005.
6. FENOC Letter L-05-146 Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated September 6, 2005.
7. NRC letter dated May 18, 2007 Beaver Valley Power Station, Unit No. 2 (BVPS-2) - Request for Scheduling Extension from Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors."
8. Summary of July 26-27, 2001, Meeting with Nuclear Energy Institute and Industry on ECCS Strainer Blockage in PWRs, dated August 14, 2001.
9. SECY-06-0078, from L. A. Reyes, NRC Executive Director for Operations, to NRC Commissioners, "Status of Resolution of GSI -191, 'Assessment of [Effect of] Debris Accumulation on PWR [Pressurized Water Reactor] Sump Performance,'" dated March 31, 2006.
10. NRC letter to NEI dated November 8, 2007 "Plant-Specific Requests for Extension of Time to Complete One or More Corrective Actions for Generic Letter 2004-02 Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors."
11. NRC Bulletin 2003-01, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized-Water Reactors," dated June 9, 2003.

12. FENOC Letter L-03-117, "60-Day Response to NRC Bulletin 2003-01," dated August 8, 2003.
13. NRC letter dated September 6, 2005 "Beaver Valley Power station, Unit Nos. 1 and 2 Response to NRC Bulletin 2003-01, Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized Water Reactors (TAC NOS. MB9554 and MB9555).
14. FENOC Letter L-07-142 Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors" - Request for Extension of Completion Date for Corrective Actions dated December 7, 2007

ATTACHMENT 2
L-07-519

Regulatory Commitment List
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The following list identifies those actions committed to by FirstEnergy Nuclear Operating Company (FENOC) for Beaver Valley Power Station (BVPS) Unit Nos. 1 and 2 in this document. Any other actions discussed in the submittal represent intended or planned actions by FENOC. They are described only as information and are not Regulatory Commitments. Please notify Mr. Thomas A. Lentz, Manager - Licensing, at (330) 761-6071 of any questions regarding this document or associated Regulatory Commitments.

<u>Regulatory Commitments</u>	<u>Due Date</u>
1. FENOC will provide a status of the downstream effects evaluations (both in-vessel and ex-vessel) in a supplemental submittal by February 29, 2008.	2/29/08
2. FENOC will fully assess the chemical effects testing that has been performed to date, formalize the results, and develop a plan of action by February 29, 2008.	2/29/08
3. A containment coatings inspection and evaluation program will be implemented starting with the BVPS-2 Spring 2008 refueling outage. Containment coatings inspections will be a scheduled activity for the refueling outages at both BVPS-1 and BVPS-2.	BVPS-2 Spring 2008 Refueling Outage (2R13)
4. FENOC will replace insulation to the extent practical in the upcoming spring refueling outage for BVPS Unit No. 2 (2R13). FENOC will include the details of insulation replacement scope and schedule for corrective actions in a supplemental submittal by February 29, 2008 for both BVPS-1 and BVPS-2.	2/29/08