

# Beaver Valley 2

## 2Q/2007 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to implement and control chemical addition activities results in a degraded auxiliary feedwater pump**

A self-revealing, Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, was identified in that the licensee failed to properly implement and control chemical additions to the Unit 2 Steam Generators, which resulted in a valve being out of its normal alignment for approximately 71 days. Subsequently, borated water interacted with the Auxiliary Feedwater System in such a way that ultimately caused the blockage of the 'B' motor-driven auxiliary feedwater pump packing leakoff reservoir drain, water to back up and enter the forced lubrication system of the pump, and result in extended periods of inoperability. FENOC subsequently utilized the corrective action program and performed a root cause evaluation, evaluated appropriate human performance and organizational contributors, and initiated physical repairs and procedure revisions to prevent recurrence.

The inspectors determined that this finding is more than minor because it affected the equipment performance attribute of the associated Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined that this finding is of very low safety significance, because there was no overall loss of system function due to system redundancy, and that after analysis, the pump would have been able to perform its required safety function for the applicable mission time during design basis events. This finding has a cross-cutting aspect in the area of human performance, because FENOC failed to ensure appropriate coordination of work activities during steam generator chemical additions, which resulted in a loss of configuration control that degraded a safety-related Auxiliary Feedwater pump for an extended period of time [H.3.(b)].

Inspection Report# : [2007002](#) (*pdf*)

**Significance:**  Jul 19, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

#### **FAILURE TO VERIFY THE ADEQUACY OF A TEMPORARY DESIGN MODIFICATION ASSOCIATED WITH THE UNIT 2 CHILLED WATER SYSTEM**

An NRC-identified non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," was identified for failure to provide for verifying the adequacy of design associated with a temporary design modification installed on the Unit 2 chilled water system. In particular, adequate justification and bases for assumptions, positions, and conclusions were not adequately provided where necessary, were not identified during reviews, and ultimately challenged the functional capabilities of the system upon implementation. The licensee entered this issue into the corrective action program, performed an apparent cause assessment, will use this modification in engineering training as a case study, will revise design interface review checklist questions to prevent similar issues in the future, and has repaired the system and removed the temporary modification.

This finding was considered more than minor since the modification resulted in degrading temperature trends that if left uncorrected, could have led to a more significant safety concern. Specifically, components necessary to achieve safe shutdown were exposed to higher temperatures for normal operation than credited in the design qualification records. In addition, increasing temperatures in containment under less than favorable external conditions (high ambient temperatures) could have led to exceeding the technical specification limit to support containment

operability, and resulted in a plant shutdown. This finding was considered to be of very low safety significance because there was no loss of system safety function and was not impacted by external events.

Inspection Report# : [2006004](#) (*pdf*)

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## Barrier Integrity

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## Emergency Preparedness

**Significance:** **W** Aug 22, 2006

Identified By: NRC

Item Type: VIO Violation

### **Inadequate dose assessment procedure.**

During an NRC inspection conducted between June 26 and August 22, 2006, for which an exit meeting was held on August 22, 2006, and a Regulatory Conference was held on October 24, 2006, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR Part 50.47(b)(9), requires, in part, that adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

Contrary to the above, as of June 27, 2006, the Beaver Valley Power Station (BVPS) method for assessing actual and potential offsite consequences of a radiological emergency condition was inadequate. Specifically, "BVPS Procedure 1/2-EPP-IP-2.6.3, Dose Projection - ARERAS/MIDAS With Real-Time Inputs, revision 13," stated that "IF the duration of a release cannot be estimated, THEN use 1.0 hour, and repeat the projection as better data become available." This is inadequate because the one hour default release duration may not adequately envelope existing plant conditions and therefore could lead to untimely protective action recommendations. As an example, during the June 27, 2006, emergency preparedness exercise, the licensee used one hour as a release duration time, even though the release had been occurring for at least 30 minutes and there was no reason to conclude the release would be terminated within one hour of initiation.

This violation is associated with a White Significance Determination Process finding.

The 95001 Inspection was completed and exited June 28, 2007. The Regulatory Performance Meeting was performed on June 28, 2007 after the exit meeting.

Inspection Report# : [2006009](#) (*pdf*)

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## Occupational Radiation Safety

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## Public Radiation Safety

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## Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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# Miscellaneous

Last modified : August 24, 2007