

Beaver Valley 2

1Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Nov 24, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

RHR PUMP SUCTION RELIEF LIFT DURING SYSTEM SHUTDOWN

A self-revealing NCV of TS 5.4.1, "Procedures", was identified in that procedures for securing Residual Heat Removal System (RHS) were not adequately maintained and did not contain relevant operating restrictions resulting in the inadvertent lifting of the "A" RHS pump suction relief [2RHS-RV721A] during normal operation, excessive identified leakage of reactor coolant to the Pressurizer Relief Tank, and a declaration of an Unusual Event.

The inspectors determined that the finding was not similar to the examples for minor deficiencies contained in IMC 0612, Appendix E, "Examples of Minor Issues". The finding was more than minor because if left uncorrected could have the potential to lead to a more significant safety concern. Traditional enforcement does not apply because the issue did not have an actual safety consequence or the potential for impacting NRC's regulatory function, and was not the result of any willful violation of NRC requirements.

The inspectors performed a Phase 1 SDP evaluation in accordance with IMC 0609, Appendix G. There were no conditions indicating a loss of control as listed in Table 1 "Losses of Control." Attachment 1, Checklist 1 "PWR Hot Shutdown Operation: Time to Core Boiling <2 Hours" guidelines were used to evaluate the event. All mitigating capabilities were available, therefore a Phase 2 quantitative assessment was not required. The issue screens to Green (very low safety significance). Because this finding is of very low safety significance and has been entered into FENOC's corrective action program (CR 09-68214), the violation is being treated as a non-cited violation.

The cause of this finding is related to the cross-cutting area of human performance, resources, in that procedures for RHS system shutdown were not complete and up to date. [H.2(c)].

Inspection Report# : [2009005](#) (*pdf*)

Significance:  Nov 11, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

OVERPRESS OF THE ISOLATED B RCS LOOP

A self-revealing NCV of TS 5.4.1, "Procedures", was identified in that operators failed to properly align and check the position of the "B" reactor coolant system (RCS) loop bypass valve [2RCS*45], as required by procedure. This deficiency caused an incorrect lineup of the required vent path and resulted in the over-pressurization of the isolated "B" RCS loop while filling. The estimated pressure exceeded the pressure/ temperature limit for an isolated RCS loop on November 11.

The inspectors determined that the finding was not similar to the examples for minor deficiencies contained in IMC 0612, Appendix E, "Examples of Minor Issues". The finding was more than minor because if left uncorrected could have the potential to lead to a more significant safety concern. Traditional enforcement does not apply because the issue did not have an actual safety consequence or the potential for impacting NRC's regulatory function, and was not the result of any willful violation of NRC requirements.

The inspectors performed a Phase 1 SDP evaluation in accordance with IMC 0609, Appendix G, Attachment 1, CHECKLIST 4 "PWR Refueling Operation: RCS level > 23' OR PWR Shutdown Operation with Time to Boil > 2 hours And Inventory in the Pressurizer." Because the loop was isolated from the reactor vessel and pressurizer, the required reactor coolant inventory and the decay heat removal system were not affected. There were no conditions indicating a loss of control as listed in Appendix G, Table 1 "Losses of Control." Therefore, a Phase 2 quantitative

assessment was not required and the issue screened to Green (very low safety significance). Because this finding is of very low safety significance and has been entered into FENOC's corrective action program, the violation is being treated as a non-cited violation.

The cause of this finding is related to the cross-cutting area of human performance, work practices, in that FENOC's failed to follow station procedures resulting in an over-pressurization of the isolated "B" RCS loop. [H.4.(b)]

Inspection Report# : [2009005](#) (pdf)

Mitigating Systems

Significance:  Mar 04, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

Human Performance Error Results in Disabling Control Room Annunciator

A self-revealing finding was identified for FENOC's failure to properly implement a station procedure. Specifically, work order instructions were not properly followed, as expected by NOP-WM-4006, "Conduct of Maintenance", causing leads to be inadvertently lifted for an alarm to the main control room control board. This annunciator is used by operators in the "Loss of Main Feedwater" Abnormal Operating Procedure. The leads were reconnected and this issue was entered into the licensee's corrective action program as CR 10-72654.

The finding is more than minor because it is similar to example 2.f in IMC 0612, Appendix E. Traditional enforcement does not apply because the issue did not have an actual safety consequence or the potential for impacting NRC's regulatory function, and was not the result of any willful violation of NRC requirements. In accordance with IMC 0609.04 (Table 4a), "Phase 1 – Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance.

The cause of this finding relates to the CCA of Human Performance, Work Practices, in that FENOC personnel did not follow procedures, resulting in a control room annunciator's leads being inadvertently lifted. [H.4.(b)]

Inspection Report# : [2010002](#) (pdf)

Significance:  Sep 15, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

PERSONNEL FAILURE TO DEMONSTRATE THAT 10CFR 50.65(a)(2) PERFORMANCE OF CONTAINMENT ISOLATION VALVE LIMIT SWITCHES WAS EFFECTIVELY CONTROLLED THROUGH PERFORMANCE OF APPROPRIATE PREVENTATIVE MAINTENANC

The inspectors identified an NCV of very low significance (Green) of 10CFR 50.65 (a)(2), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, " due to FENOC personnel's failure to demonstrate that the 10 CFR 50.65(a)(2) performance of the containment isolation vlve limit switches was effectively controlled through the performance of appropriate preventative maintenance. Specifically, as evidenced by repeat dual position indications of containment isolation valves in the control room between 2007 and 2009 resulting in 21 unplanned entries into Technical Specification 3.6.3, the containment isolation valve system 10 CFR 50.65(a)(2) performance demonstration was no longer justified in accordance with Maintenance Rule implementing procedure guidance. This should have resulted in placement of the containment isolation valve system in 10CFR 50.65(a)(1) for goal setting and montioring. FENOC entered this issue intot he CAP (CR 09-64040).

The inspectors determined the finding was more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the conerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. the finding was determined to be of very lowe significance (Green) because the finding did not result in a loss of system safety function, and did not screen as potentially risk significant due to external initiating events. the inspectors determined that this finding had a cross-cutting aspect in the "Corrective Action Program" component of the Problem

Identification and Resolution cross-cutting area because FENOC did not take appropriate corrective actions to address safety issues and adverse trends associated with faulty containment isolation valve limit switches in a timely manner, commensurate with their safety significance and complexity [P.1(d)].

Inspection Report# : [2009008](#) (*pdf*)

Significance: G Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Continuously Submerged Cables Design Deficiency

• Green. The inspectors identified a non-cited violation (NCV) of 10CFR Part 50, Appendix B, Criterion III, “Design Control,” in that FENOC failed to maintain safety-related cables in an environment for which they were designed. Since NRC Information Notice 2002-12 was issued, FENOC has had several opportunities to trend as-found data, implement effective maintenance programs, and identify and thoroughly evaluate long-term adverse conditions for underground safety-related cables exposed to continuous submerged environments. Cables affected include those for Unit 1 river water and Unit 2 service water. The issue was entered into the licensee’s corrective action program (CR 09-60496) to initiate a review of the current manhole and cable monitoring programs, and to initiate long-term corrective actions.

Failure to maintain safety related cables in an environment for which they were designed is considered a performance deficiency. The finding was more than minor in accordance with IMC 0612, Appendix B (Section 1-3), “Issue Screening,” because if left uncorrected, the performance deficiency has the potential to lead to a more significant safety concern. Specifically, the deficiency did not result in the present loss of operability or functionality and did not represent a risk significant external event such as flooding. The issue was entered into the licensee’s corrective action program (CR 09-60496) to initiate a review of the current manhole and cable monitoring programs, and to initiate long-term corrective actions.

The performance deficiency had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not thoroughly evaluate problems such as resolutions, address causes, and evaluate the effectiveness of corrective actions [IMC 0305 Aspect: P.1 (c)] (Section 40A2.3).

Inspection Report# : [2009003](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Significance: N/A Sep 03, 2009

Identified By: NRC

Item Type: FIN Finding

Beaver Valley 2009 Biennial PI&R Inspection Summary

The inspectors concluded that FENOC was, in general, effective in identifying, evaluating, and resolving problems. Beaver Valley personnel identified problems at a low threshold and entered them into the Corrective Action Program (CAP). The inspectors determined that Beaver Valley personnel screened issues appropriately for operability and reportability, and prioritized issues commensurate with the safety significance of the problems. Root and apparent cause analyses appropriately considered extent of condition, generic issues, and previous occurrences. The inspectors determined that corrective actions addressed the identified causes and were typically implemented in a timely manner. However, the inspectors noted one NCV of very low safety significance in the area of prioritization and evaluation of issues. This issue was entered into FENOC's CAP during the inspection.

FENOC's audits and self-assessments reviewed by the inspectors were thorough and probing. Additionally, the inspectors concluded that FENOC adequately identified, reviewed, and applied relevant industry operating experience (OE) to the Beaver Valley Power Station. Based on interviews, observations of plant activities, and reviews of the CAP and the Employees Concerns Program (ECP), the inspectors did not identify any concerns with site personnel willingness to raise safety issues, nor did the inspectors identify conditions that could have had a negative impact on the site's safety conscious work environment (SCWE).

Inspection Report# : [2009008](#) (*pdf*)

Last modified : May 26, 2010