

Beaver Valley 2 3Q/2014 Plant Inspection Findings

Initiating Events

Significance: G May 20, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INADEQUATE PLANT STARTUP PROCEDURE LEADS TO MANUAL REACTOR TRIP

[DRAFT] A self-revealing Green NCV of 10CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings was identified for FENOC's failure to have an adequate plant startup procedure. Specifically, 2OM-52.4A, Raising Power from 5% to Full Load Operation, did not adequately address plant startup with one condensate pump in operation. This led to an inability to control steam generator level when the second condensate was started which required the operators to trip the reactor. FENOC entered the issue into their corrective action program, condition report (CR) 2014-09256.

The performance deficiency is more than minor because it is similar to example 4.b. of Appendix E of IMC 0612 in that an inadequate procedure led to a reactor trip. The performance deficiency is associated with the procedure quality and human performance attributes of the Initiating Events cornerstone and affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the inadequate procedure led to steam generator (SG) level fluctuations that could not be controlled when the second condensate pump was started and required the operators to trip the reactor. The inspectors determined that this performance deficiency was of very low safety significance (Green), because it did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of a trip to a stable shutdown condition. The finding has a cross-cutting aspect in Human Performance, Challenge the Unknown, because FENOC operators did not stop when faced with uncertain conditions. Specifically, the adequacy of the procedure was not sufficiently questioned when the plant was not in the normal start up configuration of two running condensate pumps nor later when the condensate pump discharge header pressure low alarm occurred (H.11).

Inspection Report# : [2014004](#) (*pdf*)

Mitigating Systems

Significance: G May 19, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE RESULTS IN INOPERABLE SI ACCUMULATOR

A self-revealing NCV of technical specification (TS) 5.4.1 was identified because the unit 2 'B' safety injection (SI) accumulator was made inoperable when FENOC operators did not follow procedural requirements to align nitrogen to the accumulator. Specifically, the operators did not align the nitrogen header to the accumulator prior to opening the valve to repressurize the accumulator. The inspectors noted that this resulted in the accumulator pressure falling below the TS pressure limit which required FENOC to declare the accumulator inoperable. FENOC's corrective actions included immediately realigning the system, restoring accumulator pressure and entering the issue into their corrective

action program, CR 2014-09260.

The performance deficiency is more than minor because it is associated with the configuration control attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, FENOC did not have reasonable assurance that the nitrogen pressure in the 'B' SI accumulator was sufficient to ensure injection into the core during an accident due to the misalignment of the nitrogen header. This finding is of very low safety significance (Green) because the performance deficiency was not a design or qualification deficiency, did not involve an actual loss of safety function, did not represent actual loss of a safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event.

This finding has a cross-cutting aspect in the area of Human Performance, Avoid Complacency, because FENOC operators did not recognize the possibility of mistakes and did not implement appropriate error reduction tools while attempting to re-pressurize the 'B' SI accumulator. (H.12)

Inspection Report# : [2014003](#) (*pdf*)

Significance:  Dec 06, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Untimely Problem Identification and Corrective Action for Degraded Auxiliary Feedwater Pump Steam Supply Valve

The inspectors identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, related to FENOC's problem identification and corrective action to address the November 2011 failure of steam driven auxiliary feedwater (SDAFW) pump steam supply valve 2MSS-SOV105C. Specifically, the inspectors identified that FENOC did not promptly identify and correct the elevated valve temperature condition that led to the coil failure of a solenoid operated steam admission valve for the SDAFW pump. Consequently, 2MSS-SOV105C failed again on June 19, 2012, due to solenoid insulation damage which resulted from elevated valve temperature. FENOC entered this issue into the corrective action program for resolution as condition report 2013-19448, updated procedures to evaluate elevated temperatures on SDAFW pump steam admission valves, and initiated condition report 2013-19250 to evaluate the adequacy of planned maintenance on the valves.

The finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, FENOC did not ensure that adequate operational margin was available when 2MSS-SOV105C steam leak-by caused the valve actuator solenoid temperature to exceed 356F. Consequently, seven months following the valve actuator solenoid coil replacement, coil insulation degraded and rendered 2MSS-SOV105C inoperable and unavailable. In accordance with IMC 0609.04, Initial Characterization of Findings, and IMC 0609, Appendix A, The Significance Determination Process for Findings At-Power, dated June 19, 2012, the inspectors determined that this finding was of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Human Performance, Resources, because FENOC did not ensure that personnel, equipment, procedures, and other resources were available and adequate to support operability of safety-related equipment. Specifically, design margin was not maintained for a safety-related solenoid-operated valve which resulted in its failure and the long-standing equipment issue of leak-by past the valve was not addressed through adequate monitoring and preventive maintenance of the valve solenoid. [H.2 (a)]

Inspection Report# : [2013008](#) (*pdf*)

Barrier Integrity

Significance:  Apr 17, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

REMOVAL OF MISSILE BARRIER RENDERS CONTAINMENT INOPERABLE

The inspectors identified a Green non-cited violation of TS limiting condition for operation (LCO) 3.6.1, "Containment." Specifically, the inspectors determined that FENOC removed the missile barriers for the unit 1 and unit 2 containment equipment hatches while in a mode when containment was required to be operable. As a result FENOC did not have adequate tornado protection for containment and then did not take the actions directed by the LCO action statement when the LCO was not met. FENOC entered the issue into their corrective action program, CR 2014-11878, and placed the procedures to remove the missile barriers on administrative hold.

The performance deficiency is more than minor because it adversely affected the configuration control attribute of the Barrier Integrity Cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. In accordance with IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 3, "Barrier Integrity Screening Questions," this finding screens to Green, very low safety significance.

This finding has a cross-cutting aspect in the area of conservative bias where individuals use decision making-practices that emphasize prudent choices over those that are simply allowable and that a proposed action is determined to be safe in order to proceed, rather than unsafe in order to stop. Specifically, FENOC did not adequately consider the containment operability implications of removing the missile barriers for the unit 1 and unit 2 containment equipment hatches while in a mode where containment is required to be operable. (H14)

Inspection Report# : [2014003](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary.

Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

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