Beaver Valley 1
3Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Apr 30, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
INADEQUATE CONTAINMENT ISOLATION VALVE LEAKAGE TESTING PROCEDURE RESULTS IN RCS PIPING WATER HAMMER
A self-revealing Green NCV of TS 5.4.1, "Procedures", for FENOC's failure to establish adequate procedural guidance for plant conditions for containment isolation valve leakage testing. Specifically, inadequate procedural guidance in BVT-1.47.11, Safety Injection and Charging System Containment Penetration Valve Integrity Test , established plant conditions that resulted in a water hammer event in RCS safety injection piping. FENOC entered this issue into the corrective action program for resolution as (CR 2012-06841).
The inspectors determined the failure to establish adequate procedural guidance for plant conditions for containment isolation valve leakage testing is a performance deficiency that was within FENOC's ability to foresee and correct which contributed to a water hammer event in RCS safety injection piping. The finding is more than minor because it affects the procedure quality attribute of the Initiating Events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors evaluated the finding using "PWR Refueling Operation: RCS level > 23' or PWR Shutdown Operation with Time to Boil > 2 hours and Inventory in the Pressurizer" Checklist 4 of Attachment 1 to Appendix G of IMC 0609. No loss of control occurred and all mitigating capabilities were available, therefore a Phase 2 quantitative assessment was not required, therefore the inspectors determined the finding to be of very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance, Work Control, because FENOC failed to coordinate work activities impacted by changes to the work scope in the plant [H.3(b)].

Inspection Report# : 2012003 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: FIN Finding
FAILURE TO ADEQUATELY CONTROL LOOSE MATERIAL NEAR OFF-SITE POWER TRANSFORMER
The inspectors identified a Green finding (FIN) for FENOC's failure to adequately control loose materials near the 1B System Station Service Transformer (SSST) that provides off-site power. The inspectors determined the failure to secure loose material was a performance deficiency that was within FENOC's ability to foresee and correct. The issue was entered into the licensee's corrective action program for resolution as CR 2012-02958.

The inspectors determined that the finding is not similar to any examples in IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues". The finding was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, the loose material could have affected off-site power during periods of high winds. The inspectors determined this finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Therefore, the finding is considered to be of very low safety significance.

The cause of this finding relates to the cross-cutting aspect of Problem Identification and Resolution, Operating Experience, in that FENOC personnel did not institutionalize operating experience based changes to station procedures regarding material storage in switchyard areas.[P.2(b)]

Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
EXPANSION JOINT DEGRADATION RESULTS IN RIVER WATER INOPERABILITY
The inspectors identified a Green NCV of TS 5.4.1 "Procedures" for FENOC's failure to adequately implement and maintain a replacement program for expansion joints installed in safety related systems. The inspectors determined the procedural inadequacy of the program was within FENOC's ability to foresee and correct, and contributed to the programmatic deficiencies in the deferral of rubber expansion joint replacements. FENOC entered the issue into the licensee's corrective action program under CR 2012-03347.

The finding is more than minor because it is similar to IMC 0612, "Power Reactor Inspection Reports," Appendix E, Examples of Minor Issues," example 4.f in that a condition adverse to quality degraded after initial identification and affected the operability of the river water system. This finding also affects the Initiating Events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors determined the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Therefore, the finding is considered to be of very low safety significance.

This finding has a cross-cutting aspect in the area of Human Performance, Resources, because FENOC failed to ensure procedures supported maintaining long term plant safety by minimizing preventative maintenance deferrals. [H.2(a)]

Inspection Report# : 2012002 *(pdf)*

Mitigating Systems

Significance: G Apr 15, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
INADEQUATE MAINTENANCE RESULTS IN LOW HEAD SAFETY INJECTION SYSTEM EXCEEDING OUTSIDE CONTAINMENT LEAKAGE RATE
A self-revealing Green NCV of License Condition 2.C.6.(2), Outside Containment Leakage Rate, was identified in FENOC's failure to perform adequate maintenance and restoration of the Unit 1 LHSI system. The inspectors determined the failure to adequately perform maintenance and restore the LHSI system to service is a performance deficiency that was within FENOC's ability to foresee and correct which contributed to the inoperability of the LHSI system in November 2011 and exceeding the outside containment leakage rate. FENOC entered this issue into their corrective action program as CR 2010-85863, 2012-05832, and 2012-06658.
This finding is more than minor because it affects the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences

and the Barrier Integrity cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. The inspectors and a Region I Senior Reactor Analyst (SRA) evaluated the finding using Phase 1, "Initial Screening and Characterization" worksheet in Attachment 4 to IMC 0609, "Significance Determination Process." Per Table 4a, under the Mitigating Systems Cornerstone, the inspectors determined this finding was not a design or qualification deficiency resulting in a loss of functionality or operability, did not represent an actual loss of safety function of a system or train of equipment, and was not potentially risk-significant due to a seismic, fire, flooding, or severe weather initiating event. Accordingly, under the Mitigating Systems Cornerstone this finding screens as Green. However, under the Barrier Integrity Cornerstone, the inspectors determined this finding represents an actual open pathway in the physical integrity of reactor containment via a heat removal system and warrants a review per Appendix H, "Containment Integrity Significance Determination Process." The inspectors and SRA determined that this finding is appropriately categorized as a Type A finding, per Appendix H, because the degraded relief valve adversely affects the operability of the LHSI system, a closed system which extends beyond the containment boundary. Based upon the above Mitigation System Cornerstone determination that this finding screens to Green (no significant increase in core damage frequency) and Table 4.1, that categorizes the faulted relief valve, that is connected to a small line (less than 1 to 2 inches in diameter) and connected to a closed system, as a condition that generally does not contribute to LERF, this finding screens per Appendix H, Figure 4.1, as very low safety significance.
This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because FENOC failed to implement operating experience through changes to station procedures and equipment [P.2 (b)].

Inspection Report# : 2012003 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAINTAIN AUXILIARY FEEDWATER OPERABLE DURING MAINTENANCE
The NRC inspectors identified a Green NCV of TS 3.7.5, in that FENOC performed maintenance on the Unit 1 auxiliary feed water (AFW) system that resulted in three inoperable AFW trains due to removing the auto-open feature of the AFW pumps discharge valves. The inspectors determined that maintenance scheduling inadequacy was a performance deficiency which was within FENOC's ability to foresee and correct. FENOC entered the issue into the corrective action program for resolution as CR 2012-01025.

The inspectors determined that the finding is not similar to any examples in IMC 0612, Appendix E, "Examples of Minor Issues." The finding is more than minor because it affects the Mitigating Systems cornerstone. The finding is associated with the configuration control attribute of the Mitigating Systems cornerstone to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences.

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 (Green) because the finding did not result in a loss of safety function.

The cause of this NCV relates to the cross-cutting aspect of Human Performance, Work Control, in that FENOC did not plan and coordinate work activities consistent with nuclear safety. Specifically, FENOC did not plan work activities by incorporating risk insights and job conditions that impact plant structures, systems and components.[H.3 (a)]

Inspection Report# : 2012002 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Oct 25, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
UNANNOUNCED EMERGENCY RESPONSE ORGANIZATION ACTIVATION DRILL FAILURE
A Green, self-revealing non-cited violation (NCV) of 10 CFR 50.47(b)(2) to ensure timely augmentation of response capabilities is available was identified. Specifically, FENOC failed to fully staff two primary Emergency Response Organization (ERO) positions during an unannounced activation drill. This issue was entered into the licensee's corrective action program under CR 2011-04431.

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 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 is more than minor because it affects the Emergency Preparedness cornerstone. The finding is associated with the ERO readiness attribute of the Emergency Preparedness cornerstone to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency.

In accordance with IMC 0609, Appendix B, Sheet 1, "Failure to Comply" flowchart, the performance deficiency screens to green because it is considered a degraded planning standard function.

The cause of this NCV relates to the cross-cutting aspect of Human Performance, Work Practices, in that FENOC personnel did not effectively communicate expectations regarding drill participation and staff did not respond in the required time for ERO positions they had accepted in the call out system [H.4(b)].

Inspection Report# : 2011005 *(pdf)*

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.

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Miscellaneous

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