Beaver Valley 1
1Q/2012 Plant Inspection Findings

Initiating Events

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 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)*

Significance: G Sep 16, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to lmplement Effective Corrective Actions to Prevent Recurrence of Socket-Weld Failures
The inspectors identified a Green, self-revealing, non-cited violation of 10 CFR 50, Appendix B, Criterion XVl, "Corrective Action," in that FENOC failed to take adequate corrective actions to prevent recurrence of a significant condition adverse to quality. Specifically, FENOC's extent of condition review and long-term corrective actions following a residual heat removal socket weld failure, caused by vibration-induced high-cycle fatigue, were inadequate to preclude the recurrence of a similar failure on the auxiliary feedwater system. FENOC entered this issue into their corrective action program as condition report 11-01453 for further review.

The inspectors determined that FENOC's failure to plan or implement adequate corrective actions to prevent recurrence of socket weld failures on safety-related piping was a performance deficiency. This issue was reasonably within FENOC's ability to foresee and correct due to previous opportunities to identify and correct socket weld failures on safety-related systems at Beaver Valley. The inspectors determined that this self-revealing finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors evaluated the significance of this finding using IMC 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," and determined that this finding was of very low safety significance (Green) because the finding was not a design or qualification deficiency, did not represent a loss of safety system function, and did not screen as potentially risk-significant due to external initiating events. This finding had a cross-cutting aspect in the area of problem identification and resolution because FENOC did not thoroughly evaluate a significant condition adverse to quality such that the resolutions address the extent-of-condition. Specifically, FENOC failed to perform an adequate extent of condition review following the failure of the 1RH-200 socket weld which resulted in not developing adequate corrective actions to address socket

welds on the auxiliary feedwater system.[P.1(c)]
Inspection Report# : 2011009 *(pdf)*

Significance: G Jun 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO VERIFY THE DESIGN REQUIREMENTS FOR THE FUEL OIL TRANSFER PUMPS
The team identified a finding of very low safety significance involving a non-cited viotation (NCV) of 10 CFR 50, Appendix B, Criterion lll, "Design Control" because FENOC did not verify or check the adequacy of the Unit 1 emergency diesel generator (EDG) fuel oil transfer system design. Specifically, FENOC did not ensure adequate net positive suction head (NPSH) for the fuel oil transfer pumps during worst case design conditions, and did not evaluate the effect air voids in the suction piping would have on the pumps. FENOC entered the issue into the corrective action program, and performed testing on the fuel oil transfer system and consulted with the pump vendor to determine if the design of the system was adequate. Following completion of the testing and new calculations, FENOC determined that the pumps were operable but degraded.
The team determined that the issue was more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Design Control and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance (Green) because it was a design deficiency confirmed not to result in a loss of operability or functionality. The team determined that there was not a crosscutting aspect associated with this finding because it was not indicative of current performance.
Inspection Report# : 2011007 *(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

Significance: G Jun 30, 2011
Identified By: NRC
Item Type: FIN Finding
Untimely Radiation Monitor Corrective Actions
A Green, NRC identified finding (FIN) was identified in that plans and actions to correct long-standing radiation monitor system instrumentation deficiencies were not accomplished in a timely manner, in accordance with FENOC CAP procedure NOP-LP-2001. Specifically, FENOC failed to correct and return to service radiation monitor instruments for the Unit 1 and Unit 2 RSS HX [RM-1RW-100A,B,C,D and 2SWS-RQ100A,B,C,D], in a timely manner, requiring maintenance of alternate monitoring and challenges to assessing radiation detection and assessment during accident situations. This issue was entered into the licensee's corrective action program under CR(s) 11-91673 and 11-89700.

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 Public Radiation Safety cornerstone. The finding is associated with the attribute of plant equipment and instrumentation (process radiation monitors) attribute of the Public Radiation Safety cornerstone to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation.

In accordance with IMC 0609.04 (Table 3a), "Phase 1 – Initial Screening and Characterization of Findings," the finding was evaluated using IMC 0609 Appendix D, "Public Radiation Safety Significance Determination Process" and determined to be of very low safety significance (Green) because the finding was not a failure to implement the effluent program or cause any public dose to be exceeded.

The cause of this NCV relates to the cross-cutting aspect of Problem, Identification, and resolution, Corrective Action Program, in that FENOC personnel did not take timely corrective actions to develop and implement actions for long-standing radiation monitor deficiencies. [P.1(d)] (Section 4OA2)
Inspection Report# : 2011003 *(pdf)*

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

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