Beaver Valley 1
4Q/2016 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2016
Identified By: NRC
Item Type: FIN Finding
Failure to Appropriately Utilize Multiple and Diverse Indications Results in Plant Transient
A self-revealing finding of NOP-OP-1002, "Conduct of Operations," was identified for FENOC's failure to adequately implement operator fundamentals. Specifically, operators did not appropriately utilize multiple and diverse indications when making the decision to isolate electro-hydraulic control (EHC) to a Unit 1 main turbine governor valve. This resulted in an unanticipated reactor power reduction of 2.7 percent. FENOC's immediate corrective actions included re-opening the governor valve, verifying proper system response, and entering this issue into their corrective action program (CAP) as CR 2015-08263.

The performance deficiency is more-than-minor because if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Additionally, example 4.b from IMC 0612 Appendix E details that a performance deficiency is more-than-minor if it causes a reactor trip or other transient. This finding was determined to be of very low safety significance (Green) since it did not cause both a reactor trip and the loss of mitigation equipment relied upon to transition the plant to a stable shutdown condition. This finding has a cross-cutting aspect in Human Performance, Challenge the Unknown, because individuals did not consult the system expert when confronted with an unexpected condition [H.11].
Inspection Report# : 2016002 *(pdf)*

Mitigating Systems

Significance: G Sep 30, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Identify Conditions Adverse to Quality Leads to Inoperable Emergency Bus Degraded Voltage Relays
The inspectors identified a Green NCV of Title 10 Code of Federal Regulations (CFR) 50, Appendix B, Criterion XVI, "Corrective Action," for FENOC's failure to assure that a condition adverse to quality was promptly identified and corrected. Specifically, FENOC failed to promptly identify and correct a negative trend in setpoint drift and "as found" dropout voltage values in the AB 27N model 411T6375HF 4160 volts alternating current (VAC) and 480 VAC emergency bus degraded voltage relays. FENOC's immediate corrective actions included recalibrating or replacing the relays and entering the issue into their corrective action program (CAP) as condition report (CR) 2016-12018.

The performance deficiency is more than minor because it is associated with the Equipment Performance 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's failure to promptly identify and address a negative trend in dropout voltage setpoint drift and "as found" values resulted in the reduced reliability of safety related bus degraded voltage relays (seven surveillance failures and inoperable degraded bus relays between 2011 and 2016). Inoperable emergency bus degraded voltage relays could lead to damage of safety-related equipment during a loss of offsite power. This finding is of very low safety significance (Green) because it does not represent a loss of system and/or function, an actual loss of function of a single train for greater than its technical specification allowed outage time, an actual loss of function of one non-technical specification trains designated as high safety significant, and did not involve a loss or degradation of equipment designed to mitigate a seismic, flooding, or severe weather initiating event. The finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Trending, because FENOC did not periodically analyze the results of the degraded voltage relay surveillances to provide early indication of a declining trend. [P.4].
Inspection Report# : 2016003 *(pdf)*

Barrier Integrity

Significance: G Mar 31, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Properly Evaluate Control Room Envelope Test Results
The inspectors identified an NCV of Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion XI, "Test Control," for FENOC's failure to properly evaluate the test results of the Control Room Envelope (CRE) unfiltered air in-leakage test performed in December 2015. Specifically, the test results exceeded the acceptance criteria specified in the test procedure and required further engineering evaluation to determine if the control room emergency ventilation system (CREVS) could meet its specified safety function. The inspectors identified that the engineering evaluation of the test results did not account for all of the in-leakage and resulted in a reasonable doubt of operability of CREVS. FENOC's immediate corrective action was to re-evaluate the December 2015 calculation and verify that CREVS remained operable with the increased in-leakage. FENOC entered the issue into their corrective action program, condition report (CR) 2016-03836.

The performance deficiency is more-than-minor because it is associated with the human performance attribute of the Barrier Integrity cornerstone, and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect from radionuclide releases caused by accidents or events. Specifically, FENOC's evaluation did not account for in-leakage from the non-tested portions of the control room radiological barrier, and therefore, did not provide reasonable assurance that the control room dose would not exceed five rem during an uncontrolled release of radioactivity. Additionally, this issue is similar to example 3j and 3k of IMC 0612 Appendix E, "Examples of Minor Issues," in that FENOC's December 2015 engineering evaluation failed to adequately account for CRE in-leakage and resulted in a reasonable doubt of the operability of CREVS. The inspectors determined that this finding was of very low safety significance (Green) because it only represented a degradation of the radiological barrier function provided for the control room. This finding has a cross-cutting aspect in the area of Human Performance, Conservative Bias, because FENOC did not take a conservative approach to decision making, particularly when the in-leakage information was incomplete [H.14].

Inspection Report# : 2016001 *(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.

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

Last modified : February 01, 2017