

Duane Arnold 3Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

LIQUID PENETRANT TESTING PROCEDURES WERE NOT QUALIFIED FOR THEIR FULL APPLICABILITY RANGE.

A finding of very low safety significance (Green) and an associated non-cited violation of Title 10 of the Code of Federal Regulation, Part 50, Appendix B, Criterion IX, "Control of Special Processes," was identified by the inspectors for the failure to properly qualify nondestructive testing procedures in accordance with applicable codes. Specifically, liquid penetrant testing procedures were not qualified for their full applicability temperature ranges in accordance with American Society for Mechanical Engineers (ASME) Code, Section V, "Nondestructive Examination." The licensee entered this issue into the Corrective Action Program as condition report 01950601 and 01999596. As an immediate corrective action, the licensee reviewed completed liquid penetrant examination records and did not find an example where the procedures were implemented at the unqualified temperature range.

The performance deficiency was determined to be more than minor because, if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, since the liquid penetrant testing procedures were not qualified for their full applicability temperature ranges, liquid penetrant examinations were not assured to detect flaws in the unqualified temperature ranges. As a consequence, the potential would exist for a rejectable flaw to go undetected affecting the operability of the affected system. This finding affected the Initiating Event, Mitigating System, and Barrier Integrity cornerstones. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality. The inspectors did not identify a cross-cutting aspect associated with this finding because the inadequate qualifications were performed more than three years ago and was not confirmed to reflect current performance.

Inspection Report# : [2014005](#) (*pdf*)

Mitigating Systems

Significance: G May 01, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

INAPPROPRIATE DIESEL GENERATOR MAINTENANCE PROCEDURE.

The inspectors identified a finding of very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for failure to ensure that activities affecting quality were prescribed by documented procedures of a type appropriate to the circumstances. Specifically, the licensee implemented GENERA-F010-01, "1E053A2 (B2) Flange Inspection," Section W, Revision 5, Step 5.1.3.3.b as a corrective action to NCV 05000331/2014009-02, in order to ensure proper alignment of the 1E053A2 (B2) flange. The procedure was inappropriate for the circumstances because the instructions, as written, in Step 5.1.3.3.b would not result in meeting the acceptance criteria for flange alignment listed in GENERA-F010-01, "1E053A2 (B2) Flange

Inspection,” Section W, Revision 5, Attachment 8. The licensee entered this issue into the CAP as condition report (CR) 02041369.

The inspectors determined the licensee’s failure to provide procedures of a type appropriate to the circumstances to assure that for a significant condition adverse to quality, the cause of the condition was determined and corrective actions were taken to preclude repetition was a performance deficiency warranting further review. The inspectors determined that this finding was more than minor because it affected the Mitigating Systems Cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Misalignment of the flanges could lead to excessive oil leak that rendered the diesel generator inoperable. The inspectors determined the finding was of very low safety significance (Green) because the finding was not a deficiency affecting the design or qualification of a mitigating system, structure or component and did not result in a loss of operability or functionality. In addition, the finding did not represent a loss of system or function, did not represent an actual loss of function of a least a single train for longer than its technical specification allowed outage time, and did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significance. The inspectors determined this finding had a cross cutting aspect in the area of PI&R, specifically resolution, because licensee personnel failed to take effective corrective actions to ensure that the resolutions address causes and extent of conditions commensurate with their safety significance [P.3].
Inspection Report# : [2015007](#) (*pdf*)

Significance: N/A May 01, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO CORRECTLY UPDATE THE UPDATED FINAL SAFETY ANALYSIS REPORT.

The inspectors identified a Severity Level IV NCV of 10 CFR 50.71(e) for failure to assure that the information included in the last update of the updated final safety analysis (UFSAR) report contained the latest information developed. The licensee implemented a change to the UFSAR, in preparation for License Amendment 243 that did not contain the latest information developed. Specifically, Section 5.4.6.1 (page 5.4–30 of Revision 17) was updated with a note that stated the reactor core isolation cooling system was not safety-related. In fact, the reactor core isolation cooling system had always been designated as safety-related. The licensee entered this issue into the CAP as CR 01974995 and prepared an updated final safety analysis report (UFSAR) change that removed the statement that the reactor core isolation cooling system was not safety-related.

The inspectors determined that the update to the UFSAR with incorrect information was a performance deficiency in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” issued on September 7, 2012. The inspectors concluded that traditional enforcement applied because the failure to correctly update the UFSAR impacted the regulatory process. The Enforcement Policy, dated February 4, 2015, Section 6.1.d.3, gave the example that if, “a licensee fails to UFSAR as required by 10 CFR 50.71(e) but the lack of up-to-date information has not resulted in any unacceptable change to the facility or procedures;” then this was a Severity Level IV violation. In this case, the UFSAR was updated incorrectly and did not, “result in any unacceptable change to the facility or procedures.” The inspectors determined this to be a similar example and therefore was more than minor and a Severity Level IV violation. This violation was not associated with a finding that was evaluated by the significance determination process. Therefore, a cross-cutting aspect was not assigned to this traditional enforcement violation.

Inspection Report# : [2015007](#) (*pdf*)

Significance:  Feb 13, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify and Evaluate the Effects of Vessel Overfill Scenario (Section 1R05.6.b)

The inspectors identified a finding of very-low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations (CFR) 50.48(c), and National Fire Protection Association Standard 805, Section 2.4.3.2 for the

licensee's failure to address in the Fire Probabilistic Risk Assessment (PRA) the risk contribution with all potentially risk-significant fire scenarios. Specifically, the licensee did not address potential damage to safety relief valves (SRVs), or the SRV tailpipes as a result from fire induced overfill of the reactor pressure vessel. The licensee entered this issue into their Corrective Action Program to review the multiple spurious operations Expert Panel report, and properly disposition the scenario.

The inspectors determined that the performance deficiency was more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of Protection against External Factors (i.e., fire), and it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the missed failure mechanism for the SRVs had the potential to impact the ability to achieve safe and stable conditions. In accordance IMC 0609, Appendix F, "Fire Protection SDP," Attachment 1, Step 1.6.1, "Screen by Licensee PRA-Based Safety Evaluation," the inspectors were able to use the Licensee's PRA to evaluate the safety significance of the finding. The increase in core damage frequency (CDF) as a result of the identified scenario was found to be approximately $2.6E-7$ per year; therefore, the inspectors concluded that this finding was of very-low safety significance (Green). This finding did not have a cross-cutting aspect because it was not representative of current licensee performance.

Inspection Report# : [2015008](#) (*pdf*)

Significance: **W** Jan 08, 2015

Identified By: Self-Revealing

Item Type: VIO Violation

FAILURE TO INSTALL TORUS COATING IN ACCORDANCE WITH ESTABLISHED PROCESSES.

White. A violation of 10 Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion IX, "Control of Special Processes," was self-revealed for the failure to install the torus coating under suitable controlled conditions. Specifically, inadequate quality controls during the application of the torus coating resulted in unqualified torus coating in excess of the debris loading design margin of the emergency core cooling system (ECCS) suction strainers. This finding was entered into the licensee's Corrective Action Program (CAP) to evaluate and resolve, including removal of the unqualified torus coating in excess of design margin.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating System 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 has been preliminarily determined to be White, a finding of low to moderate safety significance, because it affected the function of the low pressure ECCSs. The team determined that this finding had a cross-cutting aspect in the area of Human Performance because licensee senior managers did not ensure supervisory and management oversight of work activities, including contractors and supplemental personnel.

Inspection Report# : [2014011](#) (*pdf*)

Inspection Report# : [2015011](#) (*pdf*)

Significance: **G** Jan 08, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate Coating Strainer Debris Loading Calculation (Section 40A5.1.d(2))

• Green. The team identified a finding having very-low safety significance and a Non Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to account for all unqualified coating debris available for transport to the ECCS strainers. Specifically, the licensee relied on assumptions that were inconsistent with their licensing basis, resulting in a non conservative unqualified coating debris loading value which was used in the strainer hydraulic calculations. This finding was entered into the licensee's CAP to evaluate and resolve, including

correction of the affected calculations.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating System 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 screened as very-low safety significance (Green) because it did not result in the loss of operability or functionality. Specifically, the licensee removed conservatisms from the calculations, added the additional unqualified coating debris loading, and reasonably determined the system remained operable. The unqualified torus coating debris associated with the apparent violation did not affect this finding. The team did not identify a cross-cutting aspect associated with this finding because it was not indicative of current licensee performance due to the age of the performance deficiency. (Section 40A5.1.d(2))

Inspection Report# : [2014011](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

THE CONSTRUCTION CODE USED DURING A REPLACEMENT ACTIVITY WAS NOT RECONCILED WITH THE OWNER'S REQUIREMENTS.

A finding of very low safety significance (Green) and an associated non-cited violation of Title 10 of the Code of Federal Regulations, Section 50.55a, "Codes and Standards," was identified by the inspectors for the failure to reconcile the construction code and owner's requirements when replacing rod hangers associated with the high pressure coolant injection (HPCI) system. The licensee subsequently performed a code reconciliation and concluded the applicable construction code requirements were met. The licensee captured this issue in its Corrective Action Program as condition report 01999594.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of HPCI to respond to initiating events to prevent undesirable consequences. Specifically, the failure to reconcile the construction code and owner's requirements when replacing HPCI support rod hangers reduced confidence in the system's capability to meet its mitigating function consistent with its design basis. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality. This finding had a cross-cutting aspect of procedure adherence in the area of Human Performance because the licensee failed to follow American Society for Mechanical Engineers Section XI, Administrative Manual for Repair, Replacement, and Modification.

Inspection Report# : [2014005](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO ACCOMPLISH PROCEDURE FOR LEAKING PIPE SNUBBER.

A finding of very low safety significance and an associated non-cited violation of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the licensee's failure to accomplish procedure EN-AA-203-1001, "Operability Determinations/Functionality Assessments." Specifically, on May 8, 2014, the licensee failed to properly evaluate functionality of a leaking pipe snubber associated with the "A" core spray subsystem, the resultant operability impact on the Technical Specification affected systems, and the extent of condition. The licensee entered the inspectors' concerns into the Corrective Action Program as condition report 02003867 and 02010686. Corrective actions included coaching/training of licensed operators during requalification training and management review committee members, and changes to applicable snubber program procedures.

The performance deficiency was determined to be more than minor because it impacted the Mitigating System cornerstone attribute of equipment performance, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Because the finding did not involve the total loss of any safety function, the finding screened as very low safety significance (Green). This finding was associated with the cross-cutting aspect of consistent process in the area of Human Performance, because the licensee's inconsistent application of the systematic operability/functionality determination process to evaluate the leaking snubber led to prolonged exposure of the extent of cause that affected several safety-related systems.

Inspection Report# : [2014005](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO EVALUATE SEVERAL SAFETY RELATED RELAYS INSTALLED BEYOND THEIR DESIGN LIFE.

A finding of very low safety significance and an associated non-cited violation of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the licensee's failure to accomplish procedure EN-AA-203-1001, "Operability Determinations/Functionality Assessments," when new degraded or non-conforming conditions adverse to quality were identified. Specifically, the licensee failed to evaluate operability and the acceptability for continued operation when an extent of condition review identified several safety-related time delay relays installed beyond the vendor recommended design life. The licensee documented the inspector's concerns in condition report 02015742. The affected relays were immediately declared operable but non-conforming, and a prompt operability determination and apparent cause evaluation to determine corrective actions were in progress at the end of the inspection period.

The performance deficiency was determined to be more than minor because, if left uncorrected, failing to properly assess the operability of degraded or non-conforming conditions and evaluating the necessity for compensatory measures would have the potential to lead to a more significant safety concern. Because the finding was a qualification deficiency confirmed not to result in loss of operability, the finding screened as very low safety significance (Green). This finding was associated with the cross-cutting aspect of identification in the area of Problem Identification & Resolution because the licensee did not identify or capture the extent of the relay aging condition within the corrective action program to ensure that new conditions adverse to quality were properly screened for significance and potential operability impacts.

Inspection Report# : [2014005](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO TEST OR EVALUATE THE SEISMIC CRITICAL CHARACTERISTIC FOR A COMMERCIAL GRADE CIRCUIT BREAKER.

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to verify commercial grade circuit breakers were suitable for use in safety-related applications. Specifically, the licensee failed to verify, either through seismic testing or justification, that the circuit breakers being dedicated on purchase order 02309726 would be able to perform their intended safety function during a seismic event. The licensee entered this finding into their Corrective Action Program as condition report 01986727 and 01987616. An extent of condition review was performed and concluded that these circuit breakers were not yet installed at Duane Arnold and a seismic test would be performed on these types of breakers prior to installation.

The performance deficiency was determined to be more than minor because, if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Because the finding did not represent an actual loss of function (circuit breakers were not currently installed), the finding screened as very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of licensee's current performance.

Inspection Report# : [2014005](#) (*pdf*)

Barrier Integrity

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO ACCOMPLISH A PROCEDURE FOR AN ACTIVITY AFFECTING QUALITY IN A MANNER APPROPRIATE TO THE CIRCUMSTANCES.

A finding of very low safety significance and an associated NCV of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the licensee's failure to identify a degraded condition warranting compensatory measures/actions for assuring operability, as required by Section 4.3.12 of procedure EN-AA-203-1001, "Operability Determinations/Functionality Assessments." Specifically, on April 29 and April 30, 2015, the licensee failed to accomplish procedure EN-AA-203-1001 in a manner appropriate to the circumstances to assess equipment operability following the identification of an unexpected condition associated with the flow indication controller (FIC) on the "B" Standby Gas Treatment (SBGT) subsystem. Following completion of the surveillance testing, the "B" SBGT system was initially declared operable and fully qualified. In response to questions from the inspectors, the licensee subsequently declared the "B" SBGT system operable but degraded. The licensee entered the issues associated with the FIC into the Corrective Action Program (CAP) as condition report (CR) 02044191 and CR 02044702, and entered the inspectors' concerns into the CAP as CR 02052508.

The performance deficiency was determined to be more than minor safety significance in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because if left uncorrected, failing to properly assess operability as required by procedure could potentially result in incorrect/untimely operability conclusions, and the failure to take action to correct degraded or deficient conditions as required by the Technical Specifications. Specifically, the performance deficiency resulted in not properly assessing operability of the "B" SBGT subsystem that resulted in the failure to implement appropriate compensatory measures/actions to assure operability until final corrective actions were taken. The performance deficiency is associated with the Barrier Integrity attribute of systems, structures, and components and Barrier Performance associated with standby gas trains, which adversely affects the cornerstone objective. (To provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events.) The inspectors applied IMC 0609, Attachment 4, "Initial Characterization of Findings," issued June 19, 2012, to this finding. The inspectors answered "No" to all questions within Table 3, "[Significance Determination Process] SDP Appendix Router," and transitioned to IMC 0609, Appendix A, "The SDP for Findings At-Power," issued June 19, 2012. Per Exhibit 3, "Barrier Integrity Screening Questions," the inspectors determined that because the finding only represented a degradation of the radiological barrier function provided by the SBGT system, the finding screened as very-low safety significance (Green). This finding was associated with the cross-cutting aspect of conservative bias in the area of Human Performance, because the licensee did not use decision-making practices that emphasize prudent choices over those that are simply allowable. Specifically, the licensee's decision making practices in implementing EN-AA-203-1001

were non-conservative, and failed to identify the FIC-5828B process deviation as a degraded condition warranting compensatory measures/actions which resulted in incorrectly declaring the “B” SBT subsystem operable and fully qualified.

Inspection Report# : [2015002](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO EVALUATE MAINTENANCE ACTIVITIES FOR PRECONDITIONING.

A finding of very low safety significance and an associated non-cited violation of Technical Specification 5.4.1.a, “Procedures,” was identified by the inspectors for the licensee’s failure to maintain maintenance planning procedures appropriate for the circumstances that could affect performance of safety related equipment. Specifically, procedure MA-AA-203-1001, “Work Order Planning,” did not ensure that maintenance activities performed on secondary containment components between surveillance testing intervals (2012 and 2014) was properly evaluated for the potential for preconditioning. The licensee entered the inspectors’ concerns into the Corrective Action Program as condition report 02008529. Corrective actions included the performance of a condition evaluation to evaluate the work that had been done over the previous cycle for preconditioning and an apparent cause evaluation for the work planning procedural gap with respect to preconditioning and its possible impact on work activities.

The performance deficiency was determined to be more than minor because the finding impacted the Barrier Integrity cornerstone attribute of procedural quality, and adversely affected the 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 and events. Furthermore, the finding was determined to be more than minor because if left uncorrected, failing to properly and consistently evaluate the potential for unacceptable preconditioning would have the potential to lead to a more significant safety concern. The inspectors applied IMC 0609, Attachment 4, “Initial Characterization of Findings,” issued June 19, 2012, to this finding. The inspectors answered “No” to all questions within Table 3, “Significance Determination Process Appendix Router,” and transitioned to IMC 0609, Appendix A, “The Significance Determination Process for Findings At-Power,” June 19, 2012. The inspectors answered “No” to questions C.1 and C.2 in Exhibit 3, “Barrier Integrity Screening Questions.” Therefore, the finding was screened as very low safety significance (Green). This finding was associated with the cross-cutting aspect of work management in the area of Human Performance because the licensee’s work order planning process was not appropriate for the circumstances to evaluate the impact of maintenance activities on Technical Specification equipment and surveillance test results.

Inspection Report# : [2014005](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

INADEQUATE CONTAINMENT ISOLATION VALVE LEAK TIGHTNESS TEST PROCEDURE.

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Title 10 of the Code of Federal Regulation, Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to establish an adequate procedure for an activity affecting quality for a system penetrating the primary containment pressure boundary. Specifically, Surveillance Test Procedure STP 3.6.1.1-09, “Containment Isolation Valve Leak Tightness Test – Type C Penetrations – TIP [traversing in-core probe] Valves,” Revision 4, failed to include leak rate testing instructions for all of the fittings inboard of the outboard TIP valves tested, which constituted part of the primary containment pressure boundary. The licensee entered the issue in their Corrective Action Program as condition report 02003580. As part of their corrective actions, the licensee re-performed a local leakage rate test to verify the fittings were leak tight.

The inspectors determined that the finding was more than minor because it was associated with the Barrier Integrity cornerstone attribute of procedure quality and adversely affected the 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. As it related to the finding, procedure STP 3.6.1.1-09 lacked adequate instructions to ensure no leakage of a system penetrating the primary containment pressure boundary. The finding was of very low safety significance (Green) because it did not represent an actual open pathway of reactor containment and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The finding was associated with the cross-cutting aspect of resources in the area of Human Performance because STP 3.6.1.1-09 did not include testing of the fittings inboard of the outboard TIP valve as required.
Inspection Report# : [2014005](#) (*pdf*)

Emergency Preparedness

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO CLASSIFY AND DECLARE A NOTIFICATION OF UNUSUAL EVENT.

The inspectors identified a finding of very-low safety significance (Green) and an associated NCV of Title 10 of the Code of Federal Regulations (CFR) 50.54(q)(2), and 10 CFR 50.47(b)(4) for the failure of the licensee to classify and declare a Notification of Unusual Event. Specifically, on June 30, 2014, the licensee failed to classify and declare a Notification of Unusual Event after a control room instrument peaked at a wind speed that exceeded the Unusual Event Emergency Classification Level threshold for 4 seconds. The licensee entered the issue into the corrective action program (CAP) as condition report (CR) 01975495. Corrective actions included procedure changes to ensure available indications for wind speed are monitored during high wind events.

The failure to classify and declare a Notice of Unusual Event when conditions warranted was a performance deficiency. The finding was more than minor because it adversely affected the emergency response organization (ERO) performance attribute of the Emergency Preparedness (EP) cornerstone objective to ensure that licensees are capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Because the finding only involved a failure to declare a Notification of Unusual Event, the finding screened as being of very low safety significance (Green). This finding was associated with the cross-cutting aspect of avoid complacency in the area of Human Performance, because control room operators did not walk-down instrumentation that was available to them in the control room.

Inspection Report# : [2015001](#) (*pdf*)

Occupational Radiation Safety

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO MAINTAIN BREATHING AIR QUALITY REQUIREMENTS FOR SCBA's.

The inspectors identified a finding of very-low safety significance (Green), and an associated NCV of 10 CFR

20.1703, "Use of Individual Respiratory Protection Equipment," for the licensee's failure to supply breathing air in accordance with manufacturer requirements, which voided the National Institute for Occupational Safety and Health (NIOSH) approval of their self-contained breathing apparatuses (SCBAs). This issue was entered into the licensee's CAP as CR 2056826. Corrective actions included obtaining an air sample to be sent for analysis and ensuring that the required dew point would be maintained in compliance with the manufacture's specifications.

The performance deficiency was determined to be of more than minor safety significance in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because, if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, the introduction of excessive moisture to the SCBA could have resulted in the sudden loss of all breathing air to the individual. The removal of the SCBA in this occurrence could have led the individual to be exposed to both radiological and non-radiological airborne hazards. The inspectors also reviewed IMC 0612, Appendix E, "Examples of Minor Issues," dated August 11, 2009, but did not identify any similar examples. The finding was assessed using IMC 0609, Appendix C, "Occupation Radiation Safety SDP," dated August 19, 2008, and determined to be of very-low safety significance (Green) because it was not an as-low-as-reasonably-achievable planning issue, there were no overexposures, nor substantial potential for overexposures, and the licensee's ability to assess dose was not compromised. The inspectors determined that the cause of the issue had a cross-cutting aspect of resources in the human performance area. Specifically, the licensee did not ensure that procedures for testing breathing air quality were in compliance with manufacturer requirements, and therefore, the NIOSH approval for the SCBAs was void.

Inspection Report# : [2015002](#) (pdf)

Significance: N/A Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO REPORT REQUIRED MONITORING RESULTS TO THE NRC.

The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 20.2206 for the licensee's failure to report results of individual radiation exposure monitoring for individuals required to be monitored by 10 CFR 20.1502. Specifically, on or before April 30, 2014, the licensee failed to report results for all individuals requiring monitoring for the calendar year 2013 to the NRC's Radiation Exposure Information and Reporting System (REIRS) database. The issue was entered into the licensee's CAP as CR 02028468. Immediate corrective actions included the resubmittal of radiation exposure data to the REIRS database, which included radiation exposure for all individuals that were required to be monitored.

The violation of 10 CFR 20.2206 was assessed in accordance with the traditional enforcement path in IMC 0612, Appendix B, "Issue Screening." The inspectors determined that traditional enforcement did apply because reporting failures impact the regulatory process. In accordance with the NRC Enforcement Policy, Section 6.9(d)(2), failures to make a timely written report as required by 10 CFR 20.2206 are categorized as SL IV violations. Cross-cutting aspects are not assigned to traditional enforcement violations.

Inspection Report# : [2015001](#) (pdf)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO DETERMINE DOSE RATES PRIOR TO ENTRY INTO A HIGH RADIATION AREA.

. A finding of very low safety significance and an associated non-cited violation of Technical Specification 5.7.1.e was identified by the inspectors following entry into the fuel pool heat exchanger room which was a high radiation area (HRA). The inspectors determined that the licensee failed to determine the radiological conditions in the HRA in accordance with the Technical Specifications and plant procedures to ensure the workers were accurately briefed on the current conditions prior to entry. As a result, an individual was permitted entry into areas with greater than expected dose rates. This issue was entered into the licensee's Corrective Action Program as condition report

02000258. The licensee subsequently performed a follow-up survey of the HRA and coached the individual that performed the brief.

The performance deficiency was more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, worker entry into HRAs without knowledge of the radiological conditions placed them at increased risk for unnecessary radiation exposure. The finding was determined to be of very low safety significance (Green) because the performance deficiency was not an as-low-as-reasonably-achievable (ALARA) planning issue; there was neither an overexposure nor a substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. The finding was associated with the cross-cutting aspect of challenge the unknown in the area of Human Performance because the licensee failed to challenge the adequacy of the January 19, 2014, radiological survey as the fuel pool cooling heat exchanger room contained equipment that continuously transported radioactive liquid and was subject to changing radiological conditions.

Inspection Report# : [2014005](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

INEFFECTIVE RADIOLOGICAL ENGINEERING CONTROLS RESULTED IN UNPLANNED AND UNINTENDED RADIOLOGICAL INTAKES TO WORKERS.

A finding of very-low-safety significance and an associated non-cited violation of Title 10 of the Code of Federal Regulation, Section 20.1701 was self-revealed during work activities associated with the failure to implement effective radiological engineering controls during reactor pressure vessel (RPV) disassembly that resulted in personal contaminations and unplanned and unintended radiological intakes to workers. Specifically, on October 5, 2014, several individuals working on the refuel floor were contaminated and several received small intakes of radioactive material while venting the RPV head. The licensee entered the issue into the Corrective Action Program as condition report 01996216. Corrective actions included revising applicable procedures for RPV flood-up with the RPV vented to atmosphere on the refuel floor.

The finding was more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the failure to implement effective radiological engineering controls during RPV disassembly resulted in personal contaminations and low dose intakes to several workers. The inspectors also concluded that the radiological hazards had the potential to result in higher exposures to the individuals had the circumstances been slightly altered. The finding was determined to be of very-low- safety significance because it was not an ALARA planning issue; there was neither overexposure nor a substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross- cutting aspect of operating experience in the area of Problem Identification and Resolution because the licensee did not systematically implement relevant external operating experience in a timely manner.

Inspection Report# : [2014005](#) (*pdf*)

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

Last modified : January 06, 2016