Byron 1
1Q/2016 Plant Inspection Findings

Initiating Events

Significance: N/A Mar 31, 2016
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Entry into Mode 3 with Turbine trip Function of SSPS Disabled
Green. A finding of very low safety significance and associated non-cited violation (NCV) of Technical Specification (TS) Limiting Condition for Operation (LCO) 3.0.4 was self-revealed when the licensee transitioned Unit 1 to Mode 3 with the turbine trip function of the Solid State Protection System (SSPS) disabled although the turbine trip function was required by TS LCO 3.3.2 to be operable in Mode 3. Upon identification, the licensee immediately manually tripped the turbine and restored the automatic turbine trip function. The licensee entered the issue into the corrective action program (CAP) and initiated actions to revise the mode change checklist and affected surveillance procedures.

The inspectors determined that the finding was of more than minor safety significance because it was associated with the Configuration Control aspect of the Initiating Events Cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety funcitons. The finding was Green because the manual turbine trip and main steam isolation functions were not affected by the finding. The inspectors determined that the finding had a cross-cutting aspect of Work Management in the areal of Human Performance (H.5) because the licensee failed to plan, control, and execute work activities such that nuclear safety was the overriding priority. {Section 4OA3.1}
Inspection Report# : 2016001 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Implement Protective Tagging Procedure Requirements
Green: A finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1.a, "Procedures," was self-revealed during the Unit 1 refueling outage that ended on October 2, 2015, as a result of the licensee's failure to implement the requirements of OP-AA-109-101, "Clearance and Tagging Program." Two instances of personnel failing to implement the procedural requirements were identified. First, on September 18, 2015, workers in the switchyard performed a preventative maintenance task to replace the breaker and removed the old breaker with the danger tag still attached. Additionally, on September 28, a deficient clearance order for the Unit 1 polar crane was put in place to support maintenance, and the clearance order did not incorporate temporary plant configuration changes. The licensee entered both issues in the Corrective Action Program (CAP). The site performed a work stand down with switchyard workers to reinforce the procedural requirements following the first issue and with all operators qualified to prepare and approve clearance orders to communicate the second event, potential consequences, and procedural implementation shortfalls. The site also performed a review of all open temporary configuration changes with clearances to ensure equipment was properly tagged out.
The inspectors determined that the licensee's failure to implement the requirements of OP-AA-109-101, "Clearance and Tagging Program," was a performance deficiency. The inspectors reviewed IMC 0612, Appendix B, "Issue Screening," and determined that the issue was more than minor because, if left uncorrected, the performance deficiency could result in a more significant safety concern. Specifically, failure to implement the requirements of the protective tagging program could result in a direct challenge to nuclear safety through an initiating event, barrier

degradation or damage to equipment necessary to mitigate an event. The inspectors determined that while the Initiating Events Cornerstone attributes of Equipment Performance and Human Error best addressed the specific performance deficiencies identified, more than one cornerstone was potentially affected since the performance deficiency affected programmatic control of equipment configuration. The inspectors utilized IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," dated May 9, 2015 to evaluate the significance. After evaluating plant conditions at the time the examples occurred, the inspectors used Attachment 1, "Phase 1 Initial Screening and Characterization of Findings," Exhibit 2, "Initiating Events Screening Questions," and answered all of the questions such that the issue was screened as Green or very low safety significance. The common element to these two examples was the lack of familiarity of the individuals with the process and their understanding of the indications present. As a result, inspectors assigned a Human Performance cross-cutting aspect of Training (H.9). [Section 1R20]

Inspection Report# : 2015004 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2015
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Mispositioned Valve in Diesel Fuel Oil Transfer Pump Recirculation Flow Path
• Green. A finding of very low safety significance (Green) and an associated NCV of Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings was self-revealed on October 7, 2015, when the Unit 1 diesel oil storage tank (DOST) high level alarm and 1B DOST sump high-high alarms actuated as a result of a mispositioned valve in the diesel fuel oil (DO) system. Specifically, when administrative controls were removed from two valves in the DO system, one of the valves was not placed in its standby position resulting in fuel oil trains being cross-tied across divisions. The licensee entered this issue into its CAP. Corrective actions included closing the mispositioned valve and restoring fuel oil storage tank levels in both trains. The operators were briefed on the requirement to use controlled documents and using human performance error reduction techniques when identifying the restoration position of components under administrative controls.
The inspectors evaluated the performance deficiency in accordance with IMC 0612, Appendix B, "Issue Screening," and characterized the issue as more than minor because the performance deficiency is associated with the Mitigating Systems Cornerstone objective attribute of Configuration Control of operating equipment, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems to respond to an initiating event. Specifically, mispositioning the 1DO055A so that the fuel oil trains were cross-tied created a flow path during operation of the 1A DG that transferred fuel oil out of the "A" train tanks to the "B" train tanks. In this instance, tank low level alarms were received and the senior reactor operators declared the 1A DG inoperable, but operators were able to terminate the event before the tank level reached actual TS minimum level. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with IMC 0609, Significance Determination Process, Attachment 4, "Initial Screening and Characterization of Findings," dated June 19, 2012, and IMC 0609, Appendix A, "The SDP for Findings At-Power," dated June 19, 2012, Exhibit 2 – Mitigating Systems Screening Questions Section A. All questions were answered "No." Therefore, the finding screened as Green. The inspectors determined that this finding had an associated cross-cutting aspect in the area of Human Performance – Design Margins in that the supervisor assumed the open position was changed by the modification and did not use the appropriate rigor to identify the required position using controlled documents and thereby implementing the design requirements to maintain margin (H.6). [Section 1R19]

Inspection Report# : 2015004 *(pdf)*

Significance: G Sep 18, 2015
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Evaluate the Impact of a FLEX-Related Configuration Change on Available DG Fuel Oil Margin.
A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when the licensee failed to adequately consider the potential impact that a modification would have on the safety-related emergency diesel generator (DG) fuel oil supply credited for design basis events. Specifically, the DG fuel oil system was modified in a manner that reduced the DG fuel oil system train separation from two isolation valves to one isolation valve. The adverse impact of a leaking single isolation valve following the implementation of a diverse and flexible coping capability (FLEX) modification resulted in the IB DG fuel oil transfer pump(s) pumping fuel oil not only into its associated IB DG fuel oil day tank but also into the IA DG diesel oil storage tank (DOST). The safety-related 1B DG fuel oil system was categorized as a low margin system, and the inspectors identified that the licensee did not adequately follow the considerations provided in the design change process for a low margin sytem. In addition to entering this issue into their CAP, immediate corrective actions included restoring the fuel oil configuration to the previous dual isolation configuration until long-term corrective actions could be developed.

The inspectors determined that the performance deficiency 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 (i.e., core damage). The finding was of very low safety significance (Green) because the issue did not prevent the 1B DG from being able to operate for its mission time. The finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area because the licensee failed to recognize that the configuration change resulted in the licensee operating the DG fuel oil system in a configuration that it had not routinely operated in, exposing previously unidentified deficiencies (H.12).
Inspection Report# : 2015007 *(pdf)*

Significance: G Sep 18, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Operability and Reportability in Accordance with the Issue Report Screening Procedure.
The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings", when the licensee failed to adequately evaluate an issue entered into the CAP for operabilitiy and associated reportability. Specifically, the licensee failed to evaluate operatility and reportability after DG fuel oil was identified to be unexpectedly overflowing into an "A train" DOST when a "B train" DG fuel oil transfer pump was operating. The licensee did not readily recognize that this issue impacted the mission time of the 1B DG system due to fuel oil leaving the associated fuel oil train. In addition to entering this issue into their CAP, corrective actions included a review of past operability and submitting a Licensee Event Report (LER).

The inspectors determined that the performance deficiency 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 (i.e., core damage). The finding was of very low safety significance (Green) because the issue did not impact the operability of the DG for more than its Technical Specification (TS) allowed outage time (AOT). The finding had a cross-cutting aspect in the Teamwork component of the Human Performance cross-cutting area because individuals within the Operations department, as well as other workgroups within the licensee's organization, failed to communicate to ensure the safety impact of the leaking valve was adequately understood (H.4).
Inspection Report# : 2015007 *(pdf)*

Significance: G Jun 19, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate the Adverse Effects of Sharing the RWSTs of Both Reactor Units
The team identified a Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," and an associated finding of very low safety significance (Green) for the licensee's failure to perform a written safety evaluation that provided the bases for the determination that a change which resulted in the sharing of the refueling water storage tanks (RWSTs) of both reactor units did not require a license amendment. Specifically, the licensee did not evaluate the adverse effect of reducing reactor unit independence. The licensee captured this issue into their CAP with a proposed action to revise the associated calculation to remove the dependence on the opposite unit, and/or review the implications of crediting the opposite unit RWST under their 10 CFR 50.59 process.
The performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of design control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. In addition, it was associated with the Barrier Integrity cornerstone attribute of design control, and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. In addition, the associated traditional enforcement violation was more than minor because the team could not reasonably determine that the changes would not have ultimately required NRC prior approval. The finding screened as very low safety significance (Green) because it did not result in the loss of operability or functionality, and it did not represent an actual open pathway in the physical integrity of the reactor containment. Specifically, the licensee reviewed the affected calculation and reasonably determined that enough conservatism existed such that adequate net positive suction head (NPSH) could be maintained without sharing the RWSTs of both reactor units. The team did not identify a cross-cutting aspect associated with this finding because it was confirmed not to be reflective of current performance due to the age of the performance deficiency.
Inspection Report# : 2015008 *(pdf)*

Significance: G Jun 19, 2015
Identified By: NRC
Item Type: FIN Finding
Failure to Evaluate the Adverse Effects of Sharing the RWSTs of Both Reactor Units
The team identified a Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," and an associated finding of very low safety significance (Green) for the licensee's failure to perform a written safety evaluation that provided the bases for the determination that a change which resulted in the sharing of the refueling water storage tanks (RWSTs) of both reactor units did not require a license amendment. Specifically, the licensee did not evaluate the adverse effect of reducing reactor unit independence. The licensee captured this issue into their CAP with a proposed action to revise the associated calculation to remove the dependence on the opposite unit, and/or review the implications of crediting the opposite unit RWST under their 10 CFR 50.59 process.
The performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of design control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. In addition, it was associated with the Barrier Integrity cornerstone attribute of design control, and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. In addition, the associated traditional enforcement violation was more than minor because the team could not reasonably determine that the changes would not have ultimately required NRC prior approval. The finding screened as very low safety significance (Green) because it did not result in the loss of operability or functionality, and it did not represent an actual open pathway in the physical integrity of the reactor containment. Specifically, the licensee reviewed the affected calculation and reasonably determined that enough conservatism existed such that adequate net positive suction head (NPSH) could be maintained without sharing the RWSTs of both reactor units. The team did not identify a cross-cutting aspect associated with this finding because it was confirmed

not to be reflective of current performance due to the age of the performance deficiency.

Inspection Report# : 2015008 *(pdf)*

Significance: G Jun 19, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Adequately Implement a Design Change Associated with the RWSTs
The team identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to translate applicable design basis into Technical Specifications (TSs) Surveillance Requirement 3.5.4.2 implementing procedures. Specifically, these procedures did not verify the RWST vent line was free of ice blockage at the locations, and during all applicable MODEs of reactor operation assumed by the ECCS and containment spray (CS) pump NPSH calculation. The licensee captured this issue into their CAP to reconcile the affected procedures and calculation.
The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of design control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. Additionally, it was associated with the Barrier Integrity cornerstone attribute of design control, and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding screened as very low safety significance (Green) because it did not result in the loss of operability or functionality, and it did not represent an actual open pathway in the physical integrity of reactor containment. Specifically, the licensee performed a historical review of the last 3 years of operation, and did not find any instances in which the vent path temperature fell below 35 degrees Fahrenheit. The inspectors did not identify a cross-cutting aspect associated with this finding because it was confirmed not to be reflective of current performance due to the age of the performance deficiency.

Inspection Report# : 2015008 *(pdf)*

Significance: G Jun 19, 2015
Identified By: NRC
Item Type: FIN Finding
Failure to Evaluate the Adverse Effects of Changing the SXCT Tornado Analysis as Described in the UFSAR
The team identified a Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," and an associated finding of very low safety significance (Green) for the licensee's failure to perform a written evaluation that provided the bases for the determination that the changes to the emergency service water cooling tower (SXCT) tornado analysis as described in the UFSAR did not require a license amendment. Specifically, the associated 10 CFR 50.59 Evaluation did not address the introduction of a new failure mode, the resulting loss of heat removal capacity during worst postulated conditions, and addition of operator actions that have not been demonstrated can be completed within the required time to restore the required SXCT heat removal capacity during worst case conditions. The licensee captured this issue in their CAP with a proposed action to revise the 10 CFR 50.59 Evaluation and submit a Licensee Amendment Request.
The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of protection against external events, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. In addition, the associated tradition enforcement violation was determined to be more than minor because the team could not reasonably determine that the changes would not have ultimately required prior NRC approval. The finding screened as of very low safety significance (Green) using a detailed evaluation because a loss of SXCT during a tornado event would degrade one or more trains of a system that supports a risk significant system or function. The bounding change to the core damage frequency was less than 5.4E-8/year. The team did not identify a

cross cutting aspect associated with this finding because the finding was not representative of current performance due to the age of the performance deficiency.

Inspection Report# : 2015008 *(pdf)*

Significance: G Jun 19, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Provide Proper Direction for Low Level Isolation of the RWST in EOPs
The team identified a finding of very low safety significance and an associated NCV of TS 5.4, "Procedures," for the failure to maintain emergency operating procedures (EOPs) for transfer to cold leg recirculation. Specifically, the EOPs for transfer to cold leg recirculation did not contain instructions for transferring the ECCS and CS systems to the recirculation mode that ensured prevention of potential pump damage when the RWST is emptied. The licensee captured this finding into their CAP to create a standing order instructing operators to secure all pumps aligned to the RWST when it is emptied, and implement long term corrective actions to restore compliance.
The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of procedure quality, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. In addition, it was associated with the Barrier Integrity cornerstone attribute of procedure quality, and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems, represent an actual open pathway in the physical integrity of reactor containment, and involved an actual reduction in function of hydrogen igniters in the reactor containment. Specifically, the incorrect caution would only be used in the event that transfer to sump recirculation was not completed prior to reaching tank low level, or if the RWST suction isolation valves fail to close. With respect to transfer to sump recirculation prior to reaching tank low level, a review of simulator test results reasonably determined that operators reliably complete the transfer to sump recirculation prior to reaching this set point. With respect to the failure of the RWST suction isolation valves, a review of quarterly test results reasonably determined the valves would have isolated the tank when required. The team did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance due to the age of the performance deficiency.

Inspection Report# : 2015008 *(pdf)*

Significance: G Jun 19, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Promptly Correct and NRC-Identified NCV Associated with the Capability to Detect and Isolate ECCS Leakage
The team identified a finding of very-low safety significance (Green), and an associated cited violation of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to correct a Condition Adverse to Quality (CAQ). Specifically, on June 15, 2012, the U.S. Nuclear Regulatory Commission (NRC) issued a Non-Cited Violation (NCV) for the failure to provide means to detect and isolate a leak in the Emergency Core Cooling System (ECCS) within 30 minutes as described in the Updated Final Safety Analysis Report (UFSAR), which is a CAQ. As of May 22, 2015, the licensee had not corrected the CAQ. This violation is being cited because the licensee had not restored compliance, or demonstrated objective evidence of plans to restore compliance in a reasonable period following the identification of the CAQ. The licensee captured this finding into their Corrective Action Program (CAP) to promptly restore compliance.
The performance deficiency was determined to be more than minor because it was associated with the Mitigating

Systems cornerstone attribute of procedure quality, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. In addition, it was associated with the Barrier Integrity cornerstone attribute of procedure quality, and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding screened as very low safety significance (Green) because it did not result in the loss of operability or functionality, and it did not represent an actual pathway in the physical integrity of reactor containment. Specifically, the licensee reasonably demonstrated that an ECCS leak could be detected and isolated before it could adversely affect long term cooling of the plant. The team determined that the associated finding had a cross cutting aspect in the area of human performance because the licensee did not use a consistent and systematic approach to make decisions. Specifically, the creation and management of the associated corrective action assignments were not consistent with the instructions contained in their CAP procedure. [H.13]
Inspection Report# : 2015008 *(pdf)*

Significance: G Jun 19, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Operability Evaluation Relied on Probabilities of Occurrence of the Associated Event
The team identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to make an operability determination without relying on the use of probabilistic tools. Specifically, an operability evaluation for an SXCT degraded condition used probabilities of occurrence of tornado events which was contrary to the requirements of the licensee procedure established for assessing operability of structures, systems, and components (SSCs). The licensee captured the team's concern in their CAP to revise the affected operability evaluation without using probability of occurrence of tornado events.
The performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of protection against external events, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. The finding screened as of very-low safety significance (Green) using a detailed evaluation because a loss of SXCT during a tornado event would degrade one or more trains of a system that supports a risk-significant system or function. The bounding change to the core damage frequency was less than 5.4E-8/year. The team determined that this finding had a cross-cutting aspect in the area of human performance because the licensee did not ensure knowledge transfer to maintain a knowledgeable and technically competent workforce. Specifically, the licensee did not ensure personnel were trained on the prohibition of the use of probabilities of occurrence of an event when performing operability evaluations, which was contained in licensee procedure established for assessing operability of SSCs. [H.9]

Inspection Report# : 2015008 *(pdf)*

Barrier Integrity

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: FIN Finding
Inaccurate Technical Basis for Operability Evaluation of Reactor Head Flange Damage
Green. The NRC inspectors identified a finding of very low safety significance (Green) when licensee personnel failed to ensure accuracy of calculations used to support an operability evaluation of the Unit 1 reactor vessel head

flange for the impression caused by an allen wrench trapped between the stud tensioner and the head flange during stud de-tensioning. The licensee entered this issue in its CAP as Issue Report 02559542. Corrective actions included a significant revision to the Operability Evaluation to address each of the inspector's concerns.
The finding was determined to be more than minor because it was associated with the Reactor Coolant System (RCS) Equipment and Barrier Performance attribute of the Barrier Integrity Cornerstone, and adversely affected the cornerstone objective of providing reasonable assurance that physical barriers RCS protect the public from radionuclide releases caused by accidents or events. Additionally, More than Minor Example 3.a of IMC 0612, Appendix E, "Examples of Minor Issues," was used to answer this more than minor screening question. Specifically, the licensee used incorrect area in the bearing stress calculation that, at the time of discovery, resulted in reasonable doubt of the operability as the bearing stress exceeded the allowable stress value used in the evaluation to preclude plastic deformation. In accordance with IMC 0609, "Significance Determination Process," Attachment 4, "Initial Characterization of Findings," dated June 19, 2012, Table 2, the RCS boundary issues need to be considered under the Initiating Event Cornerstone. Using Table 3, the inspectors determined the finding pertained to an event or degraded condition while the plant was in shutdown and, therefore, used IMC 0609, Appendix G "Shutdown Operations Significance Determination Process," dated May 9, 2014, for significance determination. The finding did not represent a loss of level control per the Criteria in Appendix G, Attachment 1. The inspectors reviewed Appendix G, Attachment 1, Exhibit 2, "Initiating Events Screening Questions." The inspectors answered "No" to Question A.1, and found all other questions to be not applicable and, therefore, concluded that the finding was of very low safety significance (Green). This finding had a cross-cutting aspect in Human Performance – Avoid Complacency because the licensee reviewer, expecting acceptable results, did not use appropriate rigor in evaluating possible errors. Specifically, the licensee did not expect a numerical error in the evaluation performed by the vendor and did not take expected actions to verify accuracy. (H.12) [Section 1R08]

Inspection Report# : 2015004 *(pdf)*

Significance: G Sep 18, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Analyze RHUT Inlet Piping Loads
The inspectors identified a finding of very low safety significance (Green) and an associated VIO of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," when licensee personnel failed to evaluate the effect of dynamic loads on inlet piping from Unit 1 and Unit 2 residual heat removal (RHR) suction relief valves that discharged to the recycle holdup tank (RHUT). The NRC previously issued two NCVs regarding this issue and corrective actions to date have been incomplete. In addition to entering this issue into their CAP, planned corrective actions included the installation of approximately 20 pipe supports.

The inspectors determined that the performance deficiency was more than minor, because it was associted with the Barrier Integrity Cornerstone attribute of Design Control and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee's existing design and piping configuration had not addressed water hammer effects when the Unit 1 and Unit 2 RHR suction relief valves were aligned to discharge to the RHUT. A ruptured RHUT and/or associated piping outside of containment could adversely affect on-site and offsite dose consequences. An NRC Senior Reactor Analyst (SRA) performed a detailed risk evaluation and determination that the finding was of very low safety significance (i.e., Green). The finding had a cross-cutting aspect in the Resources component of the Human Performance cross-cutting area because leaders at the station did not ensure that personnel, equipment, procedures, and other necessary resources were availalbe and adequate to correct the condition adverse to quality (H.1).
Inspection Report# : 2015007 *(pdf)*

Significance: G Jun 19, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Maintain the Instrument Loops Used to Verify Compliance with the Containment Average Air Temperature TS Limit
The team identified a finding of very-low safety significance, and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to have procedures to maintain the accuracy within necessary limits of the instrument loops used to verify compliance with the containment average air temperature TS limit of 120 degrees Fahrenheit. Specifically, in 2007, the licensee cancelled the periodic preventive maintenance (PM) intended to maintain the necessary instrument loops accuracy. The licensee entered this issue into their CAP and reasonably established that the 120 degrees Fahrenheit limit was not exceeded by reviewing applicable historical records from 2002 to time of this inspection.
The performance deficiency was determined to be more than minor because it was associated with the configuration control attribute of the Barrier Integrity Cornerstone, and adversely affected the cornerstone objective to ensure that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding screened as very-low safety significance (Green) because it did not represent an actual open pathway in the physical integrity of reactor containment or involved an actual reduction in hydrogen igniter function. Specifically, the containment integrity remained intact and the finding did not impact the hydrogen igniter function. The team determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not identify issues completely and accurately in accordance with the CAP. Specifically, on January 15, 2015, the licensee captured the lack of periodic PM activities for the containment air temperature instrument loops in the CAP. However, the licensee failed to completely and accurately identify the issue in that it was not treated as a CAQ. As a consequence, no corrective actions were implemented. [P.1]
Inspection Report# : 2015008 *(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

Last modified : July 11, 2016