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## Braidwood 1 – Quarterly Plant Inspection Findings

### 3Q/2017 – Plant Inspection Findings

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#### Initiating Events

**Significance:** G Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

#### **INADEQUATE CONTROL OF WELDING DURING FW SYSTEM PIPE REPLACEMENT**

A finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion IX, "Control of Special Processes," was identified by the inspectors for the licensee's failure to assure that thermocouple (TC) attachment welding was controlled and accomplished by qualified personnel using qualified procedures and to assure that the post-TC attachment weld removal non destructive examination (NDE) was incorporated into Work Order (WO) 01836557 that provided instructions to replace a pipe segment in the safety related portion of the feedwater (FW) system. The licensee corrective actions for this finding included documenting this issue as a potential violation of NRC requirements in Issue Report (IR) 02728742, removal of the unqualified welds, and issuing revisions to WO 01836557 that included licensee approved weld procedures and surface examinations of FW pipe affected by unqualified TC welds. This finding was determined to be of more than minor significance because it affected the Reactor Safety Initiating Events Cornerstone attribute of Equipment Performance and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. In particular, if left uncorrected this issue would have the potential to lead to a more significant safety concern because it increased the likelihood of an operational challenge to the plant caused by a FW system line break induced by cracking initiated from unqualified welds. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At Power," Exhibit 1, "Initiating Events Screening Questions." Under Part B, "Transient Initiators," of the Exhibit 1 questions, the inspectors answered 'No' because the finding did not result in a reactor trip and/or loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. Therefore, this finding was screened as having very low safety significance (Green). This finding had a cross-cutting aspect of Field Presence in the cross-cutting area of Human

Performance since licensee managers failed to provide adequate oversight of site and vendor personnel to assure that the TC attachment welding was controlled and accomplished by qualified personnel using qualified procedures and to assure that the post-TC attachment weld removal NDE was incorporated into WO 01836557  
Inspection Report# : 2016004 (*pdf*)

## Mitigating Systems

**Significance:**  Jun 30, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Adequately Implement Surveillance Frequency Program for the Deferral of a Technical Specification Surveillance**

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.5.19.b, "Surveillance Frequency Program," were identified by the inspectors for the failure to implement the requirements contained in the surveillance frequency control program when making a change to the specified frequency of TS Surveillance Requirement (SR) 3.3.1.11. On May 3, 2017, the licensee improperly deferred a TS required surveillance through the preventive maintenance deferral process due to a belief that it was a preventive maintenance activity and not an activity supporting a TS SR. The licensee captured this issue in their corrective action program (CAP) as Issue Report (IR) 4009050 with an action to reestablish the surveillance at an 18 month frequency and to perform it before the end of the Unit 2 refueling outage (RFO) A2R19.

The performance deficiency was determined to be of more than minor safety significance because if left uncorrected it could lead to a more significant safety concern. The finding screened as being of very low safety significance (Green) because it did not result in the loss of operability or functionality of any system, structure, or component (SSC). The inspectors determined that this finding had a cross-cutting component in the area of human performance, work management aspect, because the licensee had failed to utilize a work process that included proper coordination with different groups or job activities. Specifically, licensee personnel conducting the deferral did not coordinate the activity with personnel in either the operations or regulatory assurance departments. Knowledgeable personnel in either of these station organizations could have identified that the wrong process for deferral was being utilized.

Inspection Report# : 2017002 (*pdf*)

**Significance:**  Jun 30, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Adequately Implement Technical Specification Surveillance Frequency Requirements into Implementing Procedures**

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," were identified by the inspectors for the licensee's failure to have appropriate implementing procedures for TS SR 3.9.3.2. Specifically, procedure BwIS NR 203, "Post Accident Neutron Monitoring System Discriminator Adjustment," did not provide for determining and checking the discriminator voltage for the system at an 18 month frequency, as specified by TS SR 3.9.3.2. The licensee captured this issue into their CAP as IR 4010147 with an action to revise the surveillance frequency to every 18 months for each channel.

The performance deficiency was determined to be more than minor because it impacted the procedure quality attribute of the Mitigating Systems Reactor Safety Cornerstone. The finding screened as being of very low safety significance (Green) because it did not result in the loss of operability or functionality of any SSC. The licensee performed a review of the records associated with the last three years of operation and did not find any instances in which the post accident neutron monitors (PANMs) were used to satisfy TS 3.9.3, "Nuclear Instrumentation," requirements. No cross-cutting aspect was associated with this finding because it was confirmed not to be reflective of current licensee performance

due to the age of the performance deficiency.

Inspection Report# : 2017002 (*pdf*)

## **Barrier Integrity**

## **Emergency Preparedness**

## **Occupational Radiation Safety**

## **Public Radiation Safety**

**Significance:** G Jun 30, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Adequately Implement and Maintain the Radiological Environmental Monitoring Program by Collecting Representative Samples from the Principal Food Pathways**

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix I, Section IV(B), were identified by the inspectors for the licensee's failure to establish an appropriate surveillance and monitoring program in order to provide data on measurable levels of radiation and radioactive materials in the environment to evaluate the relationship between quantities of radioactive material released in effluents and resultant radiation doses to individuals from principal pathways of exposure. This was an NRC identified finding for failure to implement and maintain the licensee's radiological environmental monitoring program (REMP) by collecting representative samples from the highest deposition coefficient (D/Q) quadrant locations during annual REMP sampling and collections of food products in 2015. On May 25, 2016, during a review of the station's annual radiological environmental operating report for 2015, the inspectors noted that the licensee documented missed samples in three out of four quadrants where the principal food pathways were grown within the 10 kilometers from the station and missed milk samples. The licensee's corrective actions included, but were not limited to, revising the applicable REMP procedures and investigating the possibility of growing the principal food pathways on the licensee's owner controlled area or other approved licensee property within the 10 kilometer site radius.

The performance deficiency was determined to be of more than minor safety significance because it impacted the program and process attribute of the Public Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of the public from radiation. Specifically, the licensee failed to implement effective sample collection from sample locations for food products from three of the major quadrants during annual REMP sampling and collections in 2015. The licensee's Offsite Dose Calculation Manual (ODCM), as written, did not meet 10 CFR Part 50, Appendix I, which requires the licensee to establish and provide data on measurable levels of radiation and radioactive materials in the site environs. The finding was determined to be of very low safety significance in accordance with IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," because it only involved the licensee's REMP. The inspectors concluded that the cause of the issue involved a cross cutting component in the area of human performance, change management aspect, because the licensee did not use a systematic process for evaluating and implementing changes in their REMP sampling and collection program. Inspection Report# : 2017002 (*pdf*)

## **Security**

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

**Miscellaneous**

Current data as of : November 29, 2017

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