U.S.NRC
United States Nuclear Regulatory Commission
*Protecting People and the Environment*



# Saint Lucie 1 – Quarterly Plant Inspection Findings

## 2Q/2017 – Plant Inspection Findings

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## Initiating Events

**Significance:**  Dec 31, 2016
Identified By: Self-Revealing
Item Type: FIN Finding
**Failure to Maintain Component Configuration Control Resulted in a Complicated Reactor Trip**
(WHITE). A self-revealing finding was identified for the licensee's failure to maintain configuration control of the inadvertent energization lockout relay manual synchronization circuitry as required by licensee procedures MA-AA-100 and ADM-08.12, during the October 2013 modification to the Unit 1 automatic main generator synchronization circuit.

The performance deficiency was more than minor because it was associated with the human performance attribute of the Initiating Events Cornerstone and it adversely affected the associated cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions because it resulted in an actual plant trip.

The inspectors screened the finding under the initiating events cornerstone using Attachment 4 (October 7, 2016) and Appendix A (June 19, 2012) of Inspection Manual Chapter 0609, "Significance Determination Process" (April 29, 2015). The inspectors determined the finding required a detailed risk evaluation because the finding caused a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition (e.g. loss of condenser and loss of feedwater).

The NRC reviewed and analyzed the information provided in support of each of the cases that your staff presented at the Regulatory Conference held on March 21, 2017. When evaluated collectively, the risk results remained greater than 1E-6 ?CDF (White). We determined that this did not change the preliminary significance provided in our previous correspondence dated February 2, 2017. Therefore the NRC has determined the final significance of the performance deficiency was greater than 1E-6 ?CDF or White.

The finding involved the cross-cutting area of human performance associated with the cross-cutting aspect of avoiding complacency because the individuals involved failed to recognize and plan for the possibility of mistakes, latent issues, and inherent risk and failed to implement human error reduction tools associated with configuration control. (H.12)

Inspection Report# : 2016012 *(pdf)*
Inspection Report# : 2017011 *(pdf)*

## Mitigating Systems

**Significance:** G Apr 01, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
**Inadequate Procedure Results in Adding an Incorrect Lubrication Oil to the 1B CS Motor Inboard Bearing**
Green: An NRC-identified Green, non-cited violation (NCV) of Technical Specification (TS) 6.8.1, "Procedures and Programs," was identified for the licensee's failure to establish, implement, and maintain written procedures covering activities referenced in NRC Regulatory Guide 1.33, Revision 2, dated February 1978. Specifically, the licensee's failure to maintain a plant lubrication manual with correct lubrication oil specifications for the 1B containment spray (CS) pump motor resulted in adding unacceptably low viscosity lubrication oil to the inboard bearing of the 1B CS pump motor. Immediate corrective actions included restoring the 1B CS pump inboard bearing with the correct lubrication oil and placing the issue in the licensee's corrective action program.
The licensee's failure to correctly specify the 1B CS pump motor inboard bearing lubrication requirements in licensee general maintenance procedure GMP-22 was a performance deficiency (PD). The PD was more than minor because it was associated with the procedure quality attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the inadequate procedure resulted in adding the incorrect lubrication oil to the 1B CS pump motor bearing, causing the pump to be declared inoperable for approximately 56.5 hours. The finding screened to Green because the failure did not: (1) affect the design or qualification of the systems, structures and components, (2) represent an actual loss of function, and (3) represent an actual loss of function of at least a single train for greater than its TS allowed outage time. The finding involved the cross-cutting area of human performance, in the aspect of avoid complacency, in that, the individuals involved with the procedure revision did not implement appropriate error reduction tools to ensure the procedure was appropriately changed to reflect the new lubrication oil requirement [H.12].
Inspection Report# : 2017001 *(pdf)*

## Barrier Integrity

**Significance:** G Sep 30, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
**Reactor Coolant System Leakage Technical Specification Violation**
Green: An NRC-identified Green non-cited violation (NCV) of Unit 1 Technical Specification 3.4.6.2 "Reactor Coolant System Leakage" was identified. Specifically, the licensee failed to enter TS 3.4.6.2 Action 'c" for reactor coolant system pressure isolation valve (V3217) when the valve experienced operational seat leakage of approximately 30 gpm during flushing and cooling the shutdown cooling system. Immediate corrective actions were not required since the valve was later determined to be inoperable and repaired. The licensee entered this issue into the licensee's corrective action program.

The licensee's failure to recognize that gross seat leakage from check valve V3217 indicated of a major problem with

valve seat alignment and that higher differential pressure would not help seat the valve was a performance deficiency (PD). The performance deficiency is more than minor because it is associated with the barrier integrity cornerstone attribute of human performance and adversely affected the cornerstone objective of providing reasonable assurance that physical barriers such as the containment, protected the public from radionuclide releases caused by accidents or events. The PD resulted in 46 additional hours of operation with V3217 seat leakage outside of TS acceptance criteria which required the unit to be in cold shutdown. The finding involved the cross-cutting area of human performance and specifically within that area was associated with conservative bias because the operability evaluation did not demonstrate it was safe to proceed with valve V3217 experiencing gross seat leakage [H.14].

Inspection Report# : 2016003 *(pdf)*

## Emergency Preparedness
## Occupational Radiation Safety
## Public Radiation Safety
## 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 : August 03, 2017

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