

La Salle 2

3Q/2013 Plant Inspection Findings

Initiating Events

Significance: **W** Apr 25, 2013

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Follow Procedures Led to Scram with Complications

A self-revealed finding was identified for the licensee's failure to follow procedure LOP-CW-10, "Dewatering the Circulating Water System," Revision 32, on Unit 2. Specifically, on April 25, 2013, while operating at 56 percent power, operators appointed to plan and execute the waterbox dewatering evolution did so in a manner inconsistent with procedural guidance by manually adjusting the circulating water isolation valves while the manways were still open. The subsequent loss of isolation led to the flooding of the condenser pit and a resultant circulating water pump trip, loss of the normal heat sink, and reactor scram. The licensee entered this issue into its corrective action program as AR 01506809 and performed a root cause analysis to identify the root and contributing causes of the event as well as to determine the appropriate corrective actions, such as training and procedure revision.

The inspectors determined that the licensee's failure to follow the prescribed steps of procedure LOP-CW-10 was a performance deficiency warranting a significance determination. The inspectors used Inspection Manual Chapter (IMC) 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power" Exhibit 1, dated June 19, 2012, for the Initiating Events cornerstone. 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, a detailed risk evaluation was required. The Senior Reactor Analysts (SRAs) used the LaSalle Standardized Plant Analysis Risk (SPAR) model to perform the detailed risk evaluation. In accordance with Risk Assessment of Operational Events (RASP) handbook guidance, the initiating event "Loss of Condenser Heat Sink" was set to 1.0 using the events and condition assessment (ECA) module of the Systems Analysis Program for Hands-On Integrated Reliability Evaluations (Saphire), version 8. The calculated CCRP for the event was 1.6E-6, which represents a finding of low to moderate safety significance (White). The finding had a cross cutting aspect in the area of human performance, decision making, because the licensee failed to use conservative assumptions when planning and executing the dewatering evolution. Specifically, the incorrect assumption that this at power evolution could be treated the same as when performed in a shutdown condition allowed operators to stray from strict procedure adherence and into knowledge space [H.1(b)].

Inspection Report# : [2013004](#) (*pdf*)

Mitigating Systems

Significance: **G** Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Procedures Led to Pin Hole Leaks in High Pressure Core Spray Piping

A self revealed finding of very low safety significance and associated non cited violation of Title 10 CFR Part 50,

Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was identified for the failure to have procedures adequate for the circumstances during long-term operation of the high pressure core spray (HPCS) system on minimum flow. Specifically, three small holes developed in the Unit 2 HPCS minimum flow line elbow due to cavitation and other flow related wear caused by inconsistent procedural guidance regarding operation in the minimum flow mode.

The licensee promptly repaired the system leak and entered the issue into its CAP as ARs 1503825 and 1530682, which included the performance of an apparent cause evaluation. Further corrective actions included the revision of the affected procedures.

The finding was determined to be more than minor because it was associated with the Mitigating Systems and Barrier Integrity cornerstone attributes of Procedure Quality and adversely affected the cornerstone objectives of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences and providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the procedural guidance given to operate the HPCS system was inadequate to prevent long-term operation of the system in the minimum flow mode of operation, which led to cavitation and flow-induced wear, causing the failure of the Unit 2 HPCS minimum flow line and inoperability of the HPCS system as well as the primary containment boundary. The inspectors determined that the finding could be evaluated in accordance with

IMC 0609, Appendix A, “The Significance Determination for Findings At Power,” and Appendix H, “Containment Integrity Significance Determination Process.” Further, it was determined that a phase two risk assessment was necessary because the finding impacted suppression pool integrity, and through that process, this issue screened as Green. The inspectors did not identify a cross-cutting aspect associated with this finding.

Inspection Report# : [2013004](#) (pdf)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Implement Steps Outlined in Technical Specification Surveillance Procedure

A finding of very low safety significance and associated NCV of Technical Specification 5.4.1, “Procedures,” was self-revealed on March 14, 2013, when an unexpected isolation of the Reactor Core Isolation Cooling (RCIC) system occurred as a result of the licensee’s failure to properly implement the steps outlined in Technical Specification Surveillance Procedure LIS-RI-201, “Unit 2 RCIC Steam Line High Flow Isolation Calibration.” Specifically, during performance of the surveillance for the testing and calibration of RCIC instrumentation, a conditional step was inappropriately answered which led to bypassing the remaining sections in the applicable surveillance procedure for resetting the RCIC high steam flow isolation signal and resulted in the Unit 2 RCIC steam supply outboard isolation valve (2E51-F008) going shut upon closure of its associated breaker, 2AP71E-B4.

The finding was determined to be more than minor because the performance deficiency of failing to properly implement the steps in the procedure impacted the Mitigating Systems Cornerstone attribute of equipment performance and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance, work practices, for failing to communicate human error prevention techniques, such as, performing the proper self and peer checks. Specifically, the licensee committed a human performance error by inappropriately performing a procedural step without performing the proper self and peer checks, which resulted in an isolation of the RCIC system.

Inspection Report# : [2013002](#) (pdf)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Take Prompt Corrective Actions to Address a Safety Related Degraded Component

A finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors for the licensee's failure to take prompt corrective actions to address the degraded condition of a safety-related component associated with the auxiliary electrical equipment room (AEER) ventilation (VE) system's "A" train emergency makeup (EMU) low flow alarm function. Specifically, the licensee failed to resolve the degraded condition of the 0FY-VE027 low flow alarm component at the earliest available opportunity and was unable to provide appropriate justification to allow the condition to persist with a scheduled correction date of 21 months after its initial discovery, without any compensatory measures in place. Upon notification to the licensee of the inspectors' concern regarding the apparent lack of promptness of the corrective actions, the licensee entered the issue into the corrective action program and put in place a number of compensatory measures. Additionally, based on the engagement of the inspectors, the licensee reprioritized the repair schedule of the 0FY-VE027 component and completed its repair on December 13, 2012, which restored compliance.

The finding was determined to be more than minor because the performance deficiency of failing to promptly correct conditions adverse to quality, if left uncorrected, could lead to a more significant safety concern. The finding was determined to be of very low safety significance (Green). This finding has a cross cutting aspect in the area of problem identification and resolution, corrective action program, for failing to appropriately evaluate problems, and failing to properly classify and prioritize them. Specifically, the licensee inappropriately assigned a very low priority to the degraded alarm component, which allowed the degraded condition to persist beyond the point of timeliness (P.1 (c)).

Inspection Report# : [2012005](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Radiological Surveys to Ensure Appropriate Control and Access to a High Radiation Area

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 20.1501, and licensee Technical Specification(TS) 5.4, "Procedures." Specifically, the licensee failed to adequately identify, plan, evaluate, and control the radiological conditions and potential hazards associated with the system flow paths created by the reverse flow flushing of the Unit 2 low pressure core spray (LPCS) / emergency core cooling system (ECCS) in accordance with licensee procedures RP AA 401, "Operational ALARA Planning and Controls," and RP-AA-401-1002, "Radiological Risk Management." As an immediate corrective action, the licensee instituted appropriate controls and initiated an apparent cause evaluation of the event. The licensee documented the issue in its corrective

action program (CAP) as action report (AR) 01475014.

The licensee's failure to plan, identify, assess, and control radiological hazards associated with the LPCS/ECCS system reverse flushing was a performance deficiency. The finding was more than minor because, if left uncorrected, the performance deficiency could have led to a more significant safety concern. Specifically, not evaluating the radiological impact and controlling personnel exposures associated with the LPCS/ECCS reverse flow flushing resulted in unnecessary and unplanned elevation of ambient radiation fields where workers were present. The transiting radioactive particle(s) caused unexpected dose rate alarms on electronic dosimeters worn by station personnel. The inspectors concluded that the finding was of very low safety significance (Green) using Inspection Manual Chapter 0609, Appendix C, as guidance. This finding had a cross-cutting aspect in the area of human performance, work-control for failing to appropriately plan work activities when developing the work package and authorizing the work. Specifically, the licensee assumed that the radiological conditions associated with reverse flow flushing of the LPCS/ECCS would have a nominal impact on general area radiation fields in the reactor building and the reactor drywell.

Inspection Report# : [2013002](#) (*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

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