

La Salle 1

3Q/2014 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adhere to Postings Led to Prohibited Items Being Left in ECCS Corner Rooms

Inspectors identified a finding of very low safety significance (Green) and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to follow written instructions, prominently displayed on signs and placards near the entrances of the emergency core cooling systems corner rooms, which prohibit the storage of items that can potentially clog the floor drains and adversely affect the systems' ability to maintain a water level below the maximum safe operating level during a flooding event, as specified in LGA-002, "Secondary Containment Control." Specifically, upon numerous occasions, inspectors identified materials that were placed either on the floor or on a surface that was below the maximum safe operating water level for the room, such that the materials would have posed a potential clogging hazard for the floor drains during a flooding event. Upon notification by the inspectors of the presence of prohibited materials, the licensee promptly removed the prohibited items from the areas. The most recent occurrence was entered into the licensee's corrective action program as Action Request 01661788, and a number of interim compensatory measures, such as shiftly walkdowns by operations and radiation protection, were implemented to ensure that the areas remain clear of prohibited items until more permanent corrective actions are developed and put in place. At the time of this report, an apparent cause evaluation was in progress to evaluate the underlying cause of the performance deficiency, and to develop appropriate corrective actions.

The finding was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to adhere to the written instructions of the postings in the emergency core cooling systems corner rooms led to the storage of prohibited items within those areas, which could have potentially challenged equipment availability during a flooding event. The finding was determined to be of very low safety significance (Green) in accordance with the Significance Determination Process because the performance deficiency did not result in the inoperability of any structures, systems, or components. This finding had a cross cutting aspect in the area of Human Performance, Training, because the organization did not ensure that the appropriate knowledge was transferred to the staff. Specifically, the staff was not effectively trained on the features of the emergency core cooling systems corner rooms, such that the importance of keeping prohibited items out of the area for flood mitigation purposes was not sufficiently understood.

Inspection Report# : [2014003](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow the Drywell Closeout Procedure when Declaring Primary Containment Ready for Power Operations

The inspectors identified a finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the licensee's failure to conduct primary containment (drywell) close-out activities in accordance with site procedures. Specifically, during the NRC's drywell closeout inspection, the inspectors identified that the licensee had not secured the reactor shield steel doors around three of the six feedwater system penetrations into the reactor pressure vessel (RPV). As a result, the steel doors design function to resist transient pressure loadings within the shield annulus would have been impacted. Licensee corrective actions included securing the reactor shield doors prior to power operation and placing the issue into the corrective action program (CAP).

The finding was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," dated February 28, 2005, the finding was determined to be of very low safety significance (Green) because the inspectors qualitatively determined that the finding involved adequate mitigation capability and was not an event that could be characterized as a loss of control. This finding had a cross-cutting aspect in the area of Human Performance, Work Management, because the licensee did not implement a process for controlling and executing work activities such that nuclear safety is the overriding priority. Specifically, the licensee's process did not ensure that the reactor shield was intact prior to the completion of the drywell closeout procedure. [H.5]

Inspection Report# : [2014002](#) (*pdf*)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Winter Operation Preparations Procedure

The inspectors identified a finding of very low safety significance (Green) and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the licensee's failure to follow the procedure for winter operation preparations. Specifically, all the necessary steps of the procedure were not completed prior to declaring Unit 1 ready for winter operation and, as a result, the bypass blade for the 1B diesel generator (DG) ventilation damper was left in the summer position. Corrective actions planned include revising the Winter Operation Preparation procedure to provide further field guidance on the configuration of ventilation dampers.

The finding was determined to be more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, with the bypass blade in the summer position, the 1B DG room had the potential to be exposed to extremely cold temperatures without enough margin to compensate with the needed heat, which in turn impacts the availability of the equipment in that room. Using Exhibit 2 of Inspection Manual Chapter (IMC) 0609, Appendix A, "The SDP for Findings At Power," dated June 19, 2012, the finding was determined to have very low safety significance. This finding had a cross cutting aspect in the area of Human Performance, Work Control, because the licensee did not appropriately coordinate work activities by incorporating actions to address the need to keep personnel apprised of work status. Specifically, the completion and revision of the winter readiness procedure were not sufficiently tracked and, as a result, the licensee missed a procedure step that impacted margin on DG availability (H.3(b)).

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain a Testing Program that Ensured RCIC Components Will Perform Satisfactorily in Service

The inspectors identified a finding of very low safety significance (Green) and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to ensure that the surveillance testing program was sufficient to demonstrate that safety-related reactor core isolation cooling (RCIC) system components would perform satisfactorily in service. Specifically, the Unit 1 and Unit 2 RCIC steam supply differential pressure switches were not tested at a frequency that assured that they could perform satisfactorily in service, as evidenced by the repeated failures of the components at their quarterly surveillance interval. Corrective actions included the adjustment of the testing periodicity to 46 days, and accelerating the timeline for switch design replacements to address the water intrusion issue.

The inspectors determined the finding could be evaluated using the significance determination process (SDP) in accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," Exhibit 2, dated June 19, 2012. The inspectors reviewed the Mitigating Systems screening questions in Appendix A, Exhibit 2 and answered "No" to all the questions, which screened the issue as Green. This finding had a cross cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, for the failure to take appropriate corrective actions to address adverse trends in a timely manner. Specifically, in the three-year period from September 2010 to October 2013, these switches failed their surveillances 18 times, primarily due to water intrusion into the switch housing, and corrective actions to increase the frequency or address the water intrusion problem were not taken in a timely manner, commensurate with the safety significance of the issue (P.1(d)).

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Nov 22, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Pump Test Instruments Were Not Maintained Within Required Accuracy Limits

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the failure to use instrumentation that met the data collection requirements of America Society of Mechanical Engineers Operation and Maintenance Code. Specifically, the licensee did not maintain the pressure instruments used during pump comprehensive in-service testing within the required Code accuracy limits. This finding was entered into the licensee's Corrective Action Program to evaluate operability of the affected pumps and revise the calibration procedures of the affected instruments to reflect the Code accuracy requirements.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, inaccurate test instrumentation could reasonably result in an unrecognized degraded condition of safety equipment. In addition, recent test results required to be reanalyzed taking into account the actual as-left calibration data of the instruments to ensure the affected safety pumps remained operable. The finding screened as of very low safety significance (Green) because it did not result in loss of operability or functionality of mitigating systems. Specifically, the licensee reviewed recent as-found in-service test (IST) calibration data of the affected pumps, adjusted the as-found IST collected data using the actual calibration data, and reasonably determined the applicable IST acceptance criteria were met. In addition, the finding example associated with the spent fuel pool cooling did not result in actual adverse spent fuel pool conditions such as excessive temperatures, fuel clad damage, and inadequate water inventory. The inspectors did not identify a cross-cutting aspect associated with this finding because it did not reflect current performance due to the age of the performance deficiency.

Inspection Report# : [2013008](#) (pdf)

Significance:  Nov 22, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Battery Margin Maintained for Station Blackout

The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to ensure that 5 percent battery margin would be maintained for station blackout (SBO). Specifically, the capacity value used for an acceptance criterion by the battery test procedure did not ensure that battery capacity was sufficient to maintain the required 5 percent remaining battery margin through the next surveillance test. This finding was entered into the licensee's Corrective Action Program. The licensee planned to revise their battery test procedure to ensure the required 5 percent margin would be maintained.

The finding was determined to be more than minor because, if left uncorrected, it would become a more significant safety concern. Specifically, the battery performance test procedure criteria would not ensure that the batteries retained sufficient margin to support SBO loads through the next scheduled surveillance test. The finding screened as of very low safety significance (Green) because it did not result in loss of operability or functionality of mitigating systems. Specifically, the most recent test results showed that the capacity of the battery was sufficient to supply the calculated load demands under SBO conditions at the time of this inspection. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution, operating experience because the licensee did not properly evaluate relevant operating experience, i.e., NRC Information Notice 2013-05, "Battery Expected Life and its Potential Impact on Surveillance Requirements."

Inspection Report# : [2013008](#) (pdf)

Barrier Integrity

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Untimely Test, Evaluation, and Report on Reactor Vessel Surveillance Material

A finding of very low safety significance (Green) and an associated Severity Level IV non-cited violation (NCV) of 10 CFR 50.60 "Acceptance Criteria for Fracture Prevention Measures for Lightwater Nuclear Power Reactors for Normal Operation" was identified by the inspectors for the licensee's failure to conduct a timely test, evaluation and report on the material contained in the 120° reactor vessel (RV) surveillance capsule within one year of capsule withdrawal to validate the RV pressure-temperature (P/T) limits. Specifically, in February 2010, the licensee withdrew the RV capsule at the 120° azimuth and did not report test results until November of 2011, and did not report the impact of these results on P/T limits until January of 2013. The licensee entered this issue into their Corrective Action Program as AR 01598777 and submitted a request for a Technical Specification amendment with revised P/T curves to the NRC for approval that reflected the test results from the 120° azimuth RV surveillance capsule.

This issue was more than minor in accordance with IMC 0612, Appendix B "Issue Screening," dated September 7, 2012, because it adversely affected the Barrier Integrity Cornerstone attribute of Design Control. The finding was determined to be more-than-minor because If left uncorrected, it would have the potential to lead to a more significant

safety concern. Specifically, the failure to conduct a timely test, evaluation and report on the material in the 120° RV surveillance capsule could have resulted in plant operation in an unacceptable region that would increase the possibility of vessel failure by brittle fracture (similar to pressurized thermal shock event for a pressurized water reactor). The inspectors performed a Phase I SDP screening using IMC 0609, Attachment 0609 Appendix A, Exhibit 3-Barrier Integrity Screening Questions, dated June 19, 2012, and selected the box under the Reactor Coolant System Boundary (e.g., pressurized thermal shock issues) which required a detailed risk-evaluation. A Region III Senior Reactor Analyst performed a detailed risk-evaluation of this finding. A potential increase in the probability for RV failure would exist if the plant was inadvertently operated in the unacceptable P/T region. Because the plant was not operated outside analyzed P/T limits for the RV, the driving force for crack propagation (e.g., K1) remained unchanged. However, to bound the delta risk evaluation, it was assumed that the initiating event frequency for a RV failure increased by 10 percent. From the LaSalle Standardized Plant Analysis Risk Model Version 8.21, the initiating event frequency for reactor vessel failure from any cause is 1E-7/yr. Core damage is expected to occur if reactor vessel failure occurs. The exposure time for the finding was the maximum of one year. Thus, a bounding risk assessment yields a delta risk of 1E-8/yr. Therefore, based on the detailed risk-evaluation, this finding is of very low safety significance (Green). This violation was similar to an example of a severity level (SL) IV violation identified in Section 6.9.d.9 of the NRC Enforcement Policy, which identifies an example related to failure to make a required report under 10 CFR 50.72 or 10 CFR 50.73. Because the report timeliness requirements were not met for reporting the 120° RV surveillance capsule results, the NRC did not have the opportunity to review and approve the revised P/T curves prior to the plant exceeding the 21 Effective Full Power Year limit for application of the existing NRC approved P/T curves. Therefore, the failure to provide a timely report on this surveillance capsule had the potential to have impeded the regulatory process. Because of the very low risk significance, this issue was considered similar to an example of a SL IV violation. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with their safety significance. Specifically, the licensee failed to develop a procedure or process for monitoring the timeliness of surveillance capsule testing, analysis and reporting. [P.3]

Inspection Report# : [2014002](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure that Activities Affecting Quality were Performed in Accordance with Current Procedure Revisions

A finding of very low safety significance and associated non-cited violation (NCV) of Technical Specification 5.4.1.a, "Procedures," was identified by inspectors for the licensee's failure to ensure that activities affecting quality were conducted in accordance with current, approved, revisions of procedures as required by licensee procedure HU-AA-104-101, "Procedure Use And Adherence," Revision 4. Specifically, on three separate occasions, inspectors identified that work groups were using superseded procedure revisions in the field and that no supervisory review had been performed to allow the use of those superseded procedures. The licensee entered this issue into its corrective action program (CAP) as action reports (ARs) 01623438 and 01625505, and performed an apparent cause evaluation. Corrective actions to prevent future occurrences of this performance deficiency have been developed and the activities in question were reviewed to ensure that the use of the incorrect procedures had no detrimental effect on the effected systems or components.

The finding was determined to be more than minor because, if left uncorrected, it would become a more significant safety concern. Specifically, failing to ensure that the most up to date procedures are used for a given activity affecting quality, or failing to approve a superseded procedure for execution, could lead to a degraded or non-conforming condition if a crucial procedure step had been significantly revised. Using NRC IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," dated February 28, 2005, the finding was determined to be of very low safety significance (Green) because the inspectors qualitatively determined that the finding involved adequate mitigation capability and was not an event that could be characterized as a loss of control. This finding had a cross-

cutting aspect in the area of Human Performance, Resources, because the licensee supervisors involved did not ensure that the appropriate procedures were available to the workers and adequate to support nuclear safety. Specifically, the cognizant supervisors did not obtain copies of the controlling documents from a controlled document set immediately prior to the performance of the tasks. [H.1]

Inspection Report# : [2014002](#) (*pdf*)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain and Report UFSAR Revisions for Safety Analysis and Methodology Changes

The inspectors identified a finding of very low safety significance (Green) and associated Severity Level IV (SL IV) non-cited violation of 10 CFR 50.71, "Maintenance of records, making of reports." Specifically, 50.71(e) requires that the licensee periodically update the Updated Final Safety Analysis Report (UFSAR), and by letter dated April 12, 2012, the licensee provided the most recent periodic update; however, certain information contained in the update failed to accurately present changes made since the previous submittal and failed to reflect current design and licensing basis. As corrective actions, the licensee has captured the issue in the corrective action program for resolution and plans to review the UFSAR, ensure information is accurately reflected where historical, incorporate the required UFSAR content, and make necessary changes to enhance oversight of future UFSAR revisions.

Consistent with the guidance in Inspection Manual Chapter 0612, "Power Reactor Inspection Reports, Appendix B, "Issue Screening," dated September 7, 2012, because the issue had the potential to affect the NRC's ability to perform its regulatory function, the violation was reviewed under the traditional enforcement process. Consistent with the guidance in Section 6.9, Paragraph d.9, of the NRC Enforcement Policy, the violation associated with this finding was determined to be a SL IV violation. Additionally, the significance of the underlying technical issue (i.e., failure to reflect the current licensing basis in the UFSAR, failure to remove obsolete methodology for determining design and operating limits; and, failure to supervise how individuals control and modify information presented in LaSalle's UFSAR) was evaluated using the Significance Determination Process (SDP). The finding was determined to be more than minor because, if left uncorrected, it could lead to a more significant safety concern. Specifically, methodologies could be utilized without properly performing 50.59 reviews, leading to revisions to operating ranges, such as those found in the power to flow map, which may not have been reflected in the subsequent safety analyses, the failure to update also reduced the ability of the licensee and the NRC to review the station's licensing basis to assess design changes or assess facility safety. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At Power," Exhibit 3, dated June 19, 2012. The inspectors reviewed the Barrier Integrity Screening Questions in Appendix A, Exhibit 3 and answered "No" to all the questions, which screens the issue as Green. The finding had a cross cutting aspect in the area of Human Performance, Work Practices, because the licensee failed to supervise and manage the oversight of UFSAR changes with LaSalle station staff, corporate nuclear fuels, and contractors (H.4(c)).

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Improper Classification of Secondary Containment Doors as Nonsafety-Related

The inspectors identified a finding of very low safety significance (Green) and associated non-cited violation of 10 CFR 50, Appendix B, Criterion II, "Quality Assurance Program," for the licensee's failure to classify secondary containment doors with a quality status of safety related. Specifically, the licensee's failure to classify various secondary containment doors as safety related was contrary to CC-AA-304, "Component Classification," Revision 5, and was a performance deficiency. The licensee's corrective actions were to upgrade the affected doors to the proper safety classification. The licensee entered this issue into its corrective action program as AR 01557738.

The finding was determined to be more than minor because, if left uncorrected, it would become a more significant safety concern. Specifically, by failing to establish and maintain the appropriate quality assurance requirements for these components, the licensee reduced the assurance that initial design, maintenance, and replacement of parts were of sufficient quality to assure reliable service during and following design basis events. The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Appendix A, Exhibit 3, "Barrier Integrity Screening Questions." The inspectors answered both questions in Section C, "No", therefore, the finding screened as Green because the finding was a qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors did not identify a cross cutting aspect associated with this finding because the original classification error occurred more than three years ago and is not representative of current performance.

Inspection Report# : [2013005](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Radiation Work Permit Requirements

The inspector identified a finding of very low safety significance (Green) and associated non-cited violation of Technical Specification (TS) 5.7.1.b for the failure to comply with the requirements of the radiation work permit (RWP) during the loading of the multipurpose canister (MPC) containing spent fuel at the refuel floor. The MPC containing the spent fuel bundles was shielded by a HI TRAC outer shell that also served as the lifting yoke of the loaded MPC. Specifically, the HI TRAC containing the MPC was serviced by the reactor services personnel and during the preparation of non destructive dye penetrant testing process, the trunnions part of the lifting yoke device were removed from the HI TRAC. A worker from the reactor services group on the refuel floor removed the trunnions without the approval of radiation protection (RP) personnel. This constituted a breach of the shielding of the HI TRAC and MPC. As a result, the worker encountered radiation levels greater than those anticipated, and received unintended dose. The licensee's corrective actions included counseling of the involved workers and conducting a stand down with the reactor services department to reinforce radiological requirements along with communication expectations. The licensee completed an apparent cause evaluation to formulate additional actions to prevent recurrence.

The finding was more than minor because it is associated with 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, access into high radiation areas whose radiological conditions were unknown placed the worker at risk for unnecessary radiation exposure. The finding was determined to be of very low safety significance because it was not an as low as is reasonably achievable (ALARA) planning issue, there was no overexposure or substantial potential for an overexposure, and the licensee's ability to assess worker dose was not compromised. The finding involved a cross cutting aspect in the area of Human Performance, Decision-Making, in that, the worker failed to comply with the RWP requirements for RP hold-points for breaching of a system. Specifically, the decision to remove the trunnions was made without the approval by the RP department and validation that the removal of its parts would not have caused unintended consequences, such as radiation levels greater than

anticipated (H.1(b)).

Inspection Report# : [2013005](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Station ALARA Committee With Necessary Information to Ensure Occupational Radiation Exposure Is Maintained ALARA

The inspectors identified a finding of very low safety significance (Green) and associated non-cited violation of NRC requirements for the licensee's failure to provide the Station ALARA Committee with information needed to ensure that occupational radiation exposure was maintained ALARA. Specifically, TS 5.4.1 requires, in part, that the licensee establish, implement, and maintain applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A. Section 7 of Appendix A specifies radiation protection procedures for the implementation of ALARA program. Licensee procedures RP AA 400 1006, "Outage Exposure Estimating and Tracking," and RP AA 401, "Operational ALARA Planning and Controls," required effective reviews of the accumulated dose at prescribed intervals to assess the established ALARA controls and to identify/implement prompt dose reduction strategies to minimize exposure to the workers. Contrary to this, the licensee failed to implement steps in these procedures to review the accumulated dose at prescribed intervals on multiple occasions during the L2R14 refueling outage. Corrective actions included instituting appropriate radiological controls and initiating apparent cause evaluations.

The inspectors reviewed Inspection Manual Chapter 0612, Appendix B, "Issue Screening" and determined that the issue was more than minor because it is associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the associated cornerstone objective, in that, additional radiation exposure was expended during the refueling outage. The inspectors determined that the finding was of very low safety significance in accordance with Inspection Manual Chapter 0609, Appendix C, "Occupation Radiation Safety Significance Determination Process." This finding has a cross cutting aspect in the area of Human Performance, Work Practices, because personnel did not follow procedures (H.4(b)).

Inspection Report# : [2013005](#) (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 : November 26, 2014