



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
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February 9, 2016

Mr. Bryan C. Hanson
Senior VP, Exelon Generation Company, LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2
NRC INTEGRATED INSPECTION REPORT 05000373/2015004;
05000374/2015004

Dear Mr. Hanson:

On December 31, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your LaSalle County Station, Units 1 and 2. On January 5, 2016, the NRC inspectors discussed the results of this inspection with Mr. P. Karaba, and other members of your staff. The results of this inspection are documented in the enclosed report.

Based on the results of this inspection, the NRC has identified four issues that were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that violations are associated with these issues. These violations are being treated as non-cited violations (NCVs), consistent with Section 2.3.2 of the Enforcement Policy. These NCVs are described in the subject inspection report.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to: (1) the Regional Administrator, Region III; (2) the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and (3) the NRC Resident Inspector at the LaSalle County Station.

In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region III, and the NRC Resident Inspector at the LaSalle County Station.

B. Hanson

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In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records System (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Billy Dickson, Chief
Branch 5
Division of Reactor Projects

Docket Nos. 50-373; 50-374
License Nos. NPF-11; NPF-18

Enclosure:
IR 05000373/202015004; 05000374/202015004

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-373; 50-374

License Nos: NPF-11; NPF-18

Report Nos: 05000373/2015004; 05000374/2015004

Licensee: Exelon Generation Company, LLC

Facility: LaSalle County Station, Units 1 and 2

Location: Marseilles, IL

Dates: October 1 through December 31, 2015

Inspectors: R. Ruiz, Senior Resident Inspector
J. Robbins, Resident Inspector
C. Hunt, Acting Resident Inspector
R. Winters, Reactor Engineer
R. Zuffa, Illinois Emergency Management Agency, Resident Inspector
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Approved by: B. Dickson, Chief
Branch 5
Division of Reactor Projects

Enclosure

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SUMMARY

Inspection Report 05000373/2015004, 05000374/2015004; 10/01/2015–12/31/2015; LaSalle County Station, Units 1 & 2; Fire Protection, Operability Determinations and Functional Assessments, and Radiological Hazard Assessment and Exposure Controls.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. Four Green findings were identified by the inspectors. The findings were considered non-cited violations (NCVs) of U.S. Nuclear Regulatory Commission (NRC) regulations. The significance of inspection findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," dated April 29, 2015. Cross-cutting aspects are determined using IMC 0310, "Aspects Within the Cross-Cutting Areas," effective date December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated February 4, 2015. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," dated February 2014.

Cornerstone: Barrier Integrity

- Green. The inspectors identified a finding of very low safety significance (Green) and an associated NCV of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings" for the licensee's failure to have instructions or procedures that were appropriate to the circumstances for activities affecting quality. Specifically, procedure LAP-900-1, "LaSalle In-Plant Painting," Revision 22, did not contain instructions or limitations to safeguard against the potential overloading of the charcoal absorber beds of the safety-related standby gas treatment (SBGT) system or the control room ventilation/auxiliary electrical equipment room (VC/VE) due to the volatile organic compounds (VOC) present in painting products (e.g., paint, primer, thinner, etc.).

The performance deficiency was determined to be more than minor because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to limit the quantity or type of paint used within the ventilation boundaries of the safety-related SBGT or VC/VE emergency filtration systems could have caused those systems to be unable to perform their safety function in the presence of uncontrolled quantities of VOC. In accordance with IMC 0609, Appendix H, "Containment Integrity Significance Determination Process," the inspectors determined the finding to have very low safety significance (Green). This finding has a cross-cutting aspect in the area of Human Performance, Design Margins, because design margins were not carefully guarded with special attention placed on safety-related equipment. Specifically, licensee staff failed to recognize the importance of understanding the VOC loading limitations of the SBGT and VC/VE systems with respect to operability, given the large scale of the painting activities throughout the plant [H.6]. (Section 1R15.1)

Cornerstone: Mitigating Systems

- Green. The inspectors identified a finding of very low safety significance (Green) and an associated NCV of LaSalle Units 1 and 2 operating licenses, NFP-11 section 2.C.(25) and NFP-18 section 2.C.(15), respectively, for failing to ensure that the inspection requirements of National Fire Protection Association (NFPA) 10 for portable fire extinguishers were satisfied. Specifically, on two separate occasions, the licensee failed

to perform the required monthly inspection on all applicable portable fire extinguishers in the reactor building due to a deficiency in station procedure, LMS-FP-21, "Monthly Inspection of Portable Fire Extinguishers." The licensee entered this issue into the corrective action program (CAP) as action requests (ARs) 02574270, 02574457, and 02604244.

The failure to meet the inspection requirements of NFPA-10 for portable fire extinguishers was a performance deficiency. The performance deficiency was determined to be more than minor because it is associated with the Mitigating Systems cornerstone attribute of protection against external factors, including fire, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, this performance deficiency could have led to the failure of a fire extinguisher to perform when called upon by station personnel or the fire brigade. The inspectors determined the finding was of very low safety significance (Green) in accordance with IMC 0609 Appendix F, "Fire Protection Significance Determination Process." This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because the licensee failed to initially evaluate the issue thoroughly in order to determine the root cause and extent of condition to prevent subsequent inspections from being missed after the issue was brought to their attention by the NRC inspectors [P.2]. (Section 1R05.1)

Cornerstone: Occupational Radiation Safety

- Green. The inspectors identified a finding of very low safety significance (Green), and an associated NCV of Technical Specification (TS) requirements for the failure to perform leak tests required by station procedures. The inspectors identified multiple discrepancies with the records that are required to demonstrate that sealed radioactive sources were leak tested to prevent the spread of radioactive contamination.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening." Specifically, if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern, in that, the failure to ensure that the sources are free of external contamination could spread radioactive contamination, including alpha contamination that is not readily detected by personnel monitoring equipment, and result in increased exposure to radiation. The inspectors concluded that this activity was within the licensee's ability to foresee and should have been prevented. This finding was not subject to traditional enforcement since the incident did not result in a significant safety consequence, did not impact the NRC's ability to perform its regulatory function, and was not willful. The finding was assessed using the Occupational Radiation Safety Significance Determination Process, and was determined to be of very low safety significance (Green) because the problem was not an as-low-as-reasonably-achievable (ALARA) planning issue, there were no overexposures nor substantial potential for overexposures, and the licensee's ability to assess dose was not compromised. The inspectors determined that the finding involved a cross-cutting component in the area of problem identification and resolution. Specifically, the licensee did not conduct self-critical and objective assessment of the program and practice [P.6]. (Section 2RS1.1)

- Green. The inspectors reviewed a finding of very low safety significance (Green) with an associated NCV of TS 5.7.1, which was self-revealed when a worker received a dose rate alarm from an electronic dosimeter when he entered an area with an unknown dose rate.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening." Specifically, the performance deficiency impacted the program and process attribute of the Occupational Radiation Safety Cornerstone, and adversely affected the cornerstone objective of ensuring adequate protection of worker's health and safety from exposure to radiation, in that, the unauthorized entry into an area where the dose rates were unknown removed a barrier intended to prevent the worker from receiving unexpected dose. The inspectors concluded that this activity was within the licensee's ability to foresee and should have been prevented. This finding was not subject to traditional enforcement since the incident did not result in a significant safety consequence, did not impact the NRC's ability to perform its regulatory function, and was not willful. The finding was assessed using the Occupational Radiation Safety Significance Determination Process, and was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue, there were no overexposures nor substantial potential for overexposures, and the licensee's ability to assess dose was not compromised. The inspectors concluded that the issue involved a cross-cutting component in the human performance area of teamwork due to communication issues that were reported by the licensee during the pre-job brief for the job [H.4]. (Section 2RS1.2)

REPORT DETAILS

Summary of Plant Status

Unit 1

The unit began the inspection period operating at full power. On November 14, 2015, power was reduced to approximately 75 percent for a control rod sequence exchange and scram time testing. Unit 1 was restored to full power the next day. Additionally, on December 19, power was again reduced to approximately 80 percent for a control rod sequence exchange and scram time testing. The reactor was restored to full power that same day and continued to operate at full power for the rest of the inspection period.

Unit 2

The unit began the inspection period operating at full power. On October 15, 2015, power was reduced to approximately 90 percent due to an emergent directive given by the grid operator in order to enhance grid stability due to an off-site issue unrelated to the station. Reactor power was restored to full power later that day. On December 5, power was reduced to approximately 70 percent for a control rod sequence exchange and scram time testing. The reactor was restored to full power that same day and continued to operate at full power for the rest of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Impending Adverse Weather Condition—Level K-9 Geomagnetic Solar Storm

a. Inspection Scope

Since geomagnetic disturbances with potential impacts on the power grid components were forecast in the vicinity of the facility for December 21, 2015, the inspectors reviewed the licensee's overall preparations/protection for the expected solar weather conditions. On December 21, the inspectors walked down licensee's emergency alternating current (AC) power systems, because their safety-related functions could be required as a result of a loss of offsite power caused by a geomagnetic storm-induced grid disturbance. The inspectors evaluated the licensee staff's preparations against the site's procedures and determined that the staff's actions were adequate. During the inspection, the inspectors focused on plant-specific design features and the licensee's procedures used to respond to specified adverse weather conditions. The inspectors evaluated operator staffing and accessibility of controls and indications for those systems required to control the plant. Additionally, the inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant specific procedures. The inspectors also reviewed a sample of CAP items to verify that the licensee identified adverse solar weather issues at an appropriate

threshold and dispositioned them through the CAP in accordance with station corrective action procedures. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one readiness for impending adverse weather condition sample as defined in Inspection Procedure (IP) 71111.01–05.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- Unit 2 high pressure core spray (HPCS) with reactor core isolation cooling (RCIC) system inoperable; and
- Unit 1 RCIC.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, UFSAR, TS requirements, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

These activities constituted two partial system walkdown samples as defined in IP 71111.04–05.

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

On December 16, 2015, the inspectors performed a complete system alignment inspection of the Unit 1, Divisions 1, 2, and 3 core standby cooling system (CSCS) to verify the functional capability of the system. This system was selected because it was

considered both safety significant and risk significant in the licensee's probabilistic risk assessment. The inspectors walked down the system to review mechanical and electrical equipment lineups; electrical power availability; system pressure and temperature indications, as appropriate; component labeling; component lubrication; component and equipment cooling; hangers and supports; operability of support systems; and to ensure that ancillary equipment or debris did not interfere with equipment operation. A review of a sample of past and outstanding work orders (WOs) was performed to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the CAP database to ensure that system equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment to this report.

These activities constituted one complete system walkdown sample as defined in IP 71111.04–05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- Fire zone 2H2 Unit 1 694' 6" HPCS cubicle; and
- Fire zone 2I2 Unit 1 673' 6" HPCS cubicle.

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan.

The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. Using the documents listed in the Attachment to this report, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's CAP. Documents reviewed are listed in the Attachment to this report.

These activities constituted two quarterly fire protection inspection samples as defined in IP 71111.05–05.

b. Findings

Failure to Perform Required Monthly Fire Extinguisher Inspections per National Fire Protection Association Code

Introduction: The inspectors identified a finding of very low safety significance (Green) and an associated NCV of the LaSalle County Station Unit 1 and Unit 2 operating licenses, NFP-11 and NFP-18, respectively, for failing to ensure that the inspection requirements of NFPA-10 for portable fire extinguishers were satisfied. Specifically, on two separate occasions, the licensee failed to perform the required monthly inspection on all applicable portable fire extinguishers in the reactor building.

Description: On October 21, 2015, the inspectors noted during a quarterly fire protection walk down that fire extinguisher #304 was not being inspected monthly per the licensee procedure LMS-FP-21, "Monthly Inspection of Portable Fire Extinguishers". Separately, on October 21, 2015, the licensee documented Action Request (AR) 02574270, which identified extinguishers #299, 332, and 259, in the reactor building that were also not being inspected monthly. The inspectors discussed the issue with the site fire marshal and the cognizant maintenance supervisor. They determined that two of the fire extinguishers in question were annotated in LMS-FP-21 as being in high radiation areas. The licensee stated that fire extinguishers located in high radiation areas were only required to be inspected every 24 months per deviation number 10-7 from the licensee's NFPA Code of record as documented in the LaSalle County Station Fire Protection Report. The stated purpose for this deviation was to allow the licensee to save dose by not entering high radiation areas monthly but rather every 24 months.

The details of the licensee's analysis were outlined in AR 1190691-02 and were also noted in the licensee's procedure. The inspectors pointed out that the two extinguishers (#259 and #304) labelled as being in high radiation areas in LMS-FP-21 were not actually physically located in high radiation areas in the reactor building and, therefore, were subject to monthly inspections per NFPA-10. The third extinguisher (#299) was not located in a high radiation area, nor was it labelled as such in LMS-FP-21. The licensee documented the inspectors' concerns in AR 02574457 and initiated an action for the materials maintenance division, with assistance from the radiation protection group, to evaluate if any changing radiation conditions had made extinguishers or fire hoses accessible or inaccessible for the monthly inspection prior to the next surveillance starting. This action was documented as complete on December 9, 2015.

On December 14, 2015, the inspectors followed up with this issue and noted that fire extinguisher #304 and #328 had not had the monthly inspection completed for the month of December. The inspectors reviewed the completed surveillance, which was completed on December 4, 2015, and noted both extinguishers were annotated as being in a high radiation area and the performer had marked them "N/A" according to procedure although neither extinguisher was physically located in a high radiation area. The inspectors brought the issue up to licensee management and the licensee initiated AR 02604244, with actions to re-verify the radiological environment of the 50 fire extinguishers that were annotated as being in high radiation areas in LMS-FP-21. Upon further evaluation, the licensee discovered 11 of the 50 extinguishers annotated were no longer located in high radiation areas.

Analysis: The failure to meet the inspection requirements of NFPA-10 for portable fire extinguishers was a performance deficiency. Specifically, on two separate occasions,

the licensee failed to perform the required monthly inspection on all applicable portable fire extinguishers in the reactor building, including some fire extinguishers that are in place in case of fire in safety-related areas, such as outside emergency core cooling system corner rooms. The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of protection against external factors, including fire, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, had a fire occurred in one of the effected fire zones containing safety-related mitigation equipment (e.g., residual heat removal pump room) and a licensee responder attempted to use an extinguisher that may not be functional due to an unknown degradation allowed to exist because it had not received its monthly inspections, the fire could progress further and render the mitigating system inoperable.

The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," issued on June 19, 2012. Using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," issued September 20, 2013, Attachment 1, "Fire Protection Significance Determination Process Worksheet," the finding screened as of very low safety significance (Green) because the inspectors answered 'Yes' to question 1.4.6. A, "Is the fire finding associated with portable fire extinguishers not used for hot work fire watches."

This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because the organization did not thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance (P.2). Specifically, the licensee failed to effectively evaluate the issue to identify the deficiency in their fire extinguisher inspection procedure, despite having been given a previous opportunity by the inspectors who questioned the procedure's reliance on a snapshot in plant radiological conditions. The licensee's failure to adequately evaluate the deficiency directly led to additional failures to perform subsequent monthly inspections and would have allowed the deficient procedure to continue to exist, absent NRC intervention.

Enforcement: The LaSalle County Station Unit 1 and Unit 2 operating licenses, NFP-11 section 2.C.(25), "Fire Protection Program", and NFP-18 section 2.C.(15), "Fire Protection Program", require in part, that the licensee implement and maintain all provisions of the approved Fire Protection Program as described in the site's UFSAR. The UFSAR references the LaSalle County Station Fire Protection Report, which states that the code of record for portable fire extinguishers for LaSalle County Station is NFPA-10 1975. NFPA-10, section 4-3.1, "Frequency", states in part, that extinguishers shall be inspected monthly, or at more frequent intervals when circumstances require.

Contrary to the above, on October 21, 2015, and again on December 14, 2015, the licensee failed to implement the Fire Protection Program to ensure the requirements of NFPA-10 for portable fire extinguishers were satisfied. Specifically, on those two occasions, the licensee failed to perform the required monthly inspection on all applicable portable fire extinguishers in the reactor building. The licensee failed to verify that the portable fire extinguishers annotated as being in high radiation areas in the monthly surveillance procedure were actually located in high radiation areas. Therefore, three of the extinguishers in question were incorrectly annotated and thus procedurally

allowed to be inspected on a 24 month frequency, which exceeded the monthly inspection requirement of NFPA–10.

At the time of this report, the licensee had revised procedure LMS–FP–21, “Monthly Inspection of Portable Fire Extinguishers” to require a review of the radiological conditions of extinguisher locations prior to performance of the monthly inspections. Because this violation was of very low safety significance and was entered into the licensee’s CAP as AR 02604244, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (**NCV 05000373/2015004-01; 05000374/2015004-01 Failure to Perform Required Monthly Fire Extinguisher Inspections per National Fire Protection Association Code**).

1R06 Flooding (71111.06)

.1 Internal Flooding

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the UFSAR, engineering calculations, and abnormal operating procedures to identify licensee commitments. The specific documents reviewed are listed in the Attachment to this report. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the circulating water systems. The inspectors also reviewed the licensee’s CAP documents with respect to past flood-related items identified in the CAP to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following plant areas to assess the adequacy of watertight doors and verify drains and sumps were clear of debris and were operable, and that the licensee complied with its commitments:

- Unit 1/2 Division III CSCS pump rooms

Documents reviewed during this inspection are listed in the Attachment to this report. This inspection constituted one internal flooding sample as defined in IP 71111.06–05.

b. Findings

No findings were identified.

.2 Underground Vaults

a. Inspection Scope

The inspectors selected underground bunkers/manholes subject to flooding that contained cables whose failure could disable plant equipment. The inspectors determined that the cables were not degraded. In those areas where dewatering devices were used, such as a sump pump, the device was functional and level sensors were set appropriately to ensure that the cables would not be excessively wetted. The inspectors also reviewed the licensee’s CAP documents with respect to past submerged cable issues identified in the CAP to verify the adequacy of the corrective actions. The

inspectors performed a review of photos from the most recent licensee inspection of manholes 1 and 5, which are subject to flooding. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one underground vaults sample as defined in IP 71111.06–05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On November 12, 2015, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification training. The inspectors verified that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and that training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator requalification program simulator sample as defined in IP 71111.11–05.

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation During Periods of Heightened Activity or Risk (71111.11Q)

a. Inspection Scope

On November 15, 2015, the inspectors observed control room activities during a downpower to approximately 80 percent power. This was an activity that required

heightened awareness or was related to increased risk. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms (if applicable);
- correct use and implementation of procedures;
- control board (or equipment) manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications (if applicable).

The performance in these areas was compared to pre-established operator action expectations, procedural compliance and task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator heightened activity/risk sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

.2 Annual Operating Test Results (71111.11A)

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the Annual Operating Test, administered by the licensee from October 12, 2015, through November 20, 2015, required by 10 CFR 55.59(a). The results were compared to the thresholds established in IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process," to assess the overall adequacy of the licensee's Licensed Operator Requalification Training (LORT) program to meet the requirements of 10 CFR 55.59. (02.02)

This inspection constituted one annual licensed operator requalification examination results sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

.3 Biennial Review (71111.11B)

a. Inspection Scope

The following inspection activities were conducted during the week of November 16, 2015, to assess: (1) the effectiveness and adequacy of the facility licensee's implementation and maintenance of its systems approach to training (SAT) based LORT program, put into effect to satisfy the requirements of 10 CFR 55.59; (2) conformance with the requirements of 10 CFR 55.46 for use of a plant referenced

simulator to conduct operator licensing examinations and for satisfying experience requirements; and (3) conformance with the operator license conditions specified in 10 CFR 55.53. The documents reviewed are listed in the Attachment to this report.

- Licensee Requalification Examinations (10 CFR 55.59(c); SAT element 4 as defined in 10 CFR 55.4): The inspectors reviewed the licensee's program for development and administration of the LORT biennial written examination and annual operating tests to assess the licensee's ability to develop and administer examinations that are acceptable for meeting the requirements of 10 CFR 55.59(a).
 - The inspectors conducted a detailed review of four biennial requalification written examination versions to assess content, level of difficulty, and quality of the written examination materials. (02.03)
 - The inspectors conducted a detailed review of twenty Job Performance Measures (JPMs) and four simulator scenarios to assess content, level of difficulty, and quality of the operating test materials. (02.04)
 - The inspectors observed the administration of the annual operating test to assess the licensee's effectiveness in conducting the examinations, including the conduct of pre-examination briefings, evaluations of individual operator and crew performance, and post-examination analysis. The inspectors evaluated the performance of one operating crew (2 simulator crews) in parallel with the facility evaluators during four dynamic simulator scenarios, and evaluated various licensed crew members concurrently with facility evaluators during the administration of several JPMs. (02.05)
 - The inspectors assessed the adequacy and effectiveness of the remedial training conducted since the last requalification examinations and the training planned for the current examination cycle to ensure that they addressed weaknesses in licensed operator or crew performance identified during training and plant operations. The inspectors reviewed remedial training procedures and individual remedial training plans. (02.07)
- Conformance with Examination Security Requirements (10 CFR 55.49): The inspectors conducted an assessment of the licensee's processes related to examination physical security and integrity (e.g., predictability and bias) to verify compliance with 10 CFR 55.49, "Integrity of Examinations and Tests." The inspectors reviewed the facility licensee's examination security procedure, and observed the implementation of physical security controls (e.g., access restrictions and simulator I/O controls) and integrity measures (e.g., security agreements, sampling criteria, bank use, and test item repetition) throughout the inspection period. (02.06)
- Conformance with Operator License Conditions (10 CFR 55.53): The inspectors reviewed the facility licensee's program for maintaining active operator licenses and to assess compliance with 10 CFR 55.53(e) and (f). The inspectors reviewed the procedural guidance and the process for tracking on-shift hours for licensed operators, and which control room positions were granted watch-standing credit for maintaining active operator licenses. Additionally,

medical records for 12 licensed operators were reviewed for compliance with 10 CFR 55.53(l). (02.08)

- Conformance with Simulator Requirements Specified in 10 CFR 55.46: The inspectors assessed the adequacy of the licensee's simulation facility (simulator) for use in operator licensing examinations and for satisfying experience requirements. The inspectors reviewed a sample of simulator performance test records (e.g., transient tests, malfunction tests, scenario based tests, post-event tests, steady state tests, and core performance tests), simulator discrepancies, and the process for ensuring continued assurance of simulator fidelity in accordance with 10 CFR 55.46. The inspectors reviewed and evaluated the discrepancy corrective action process to ensure that simulator fidelity was being maintained. Open simulator discrepancies were reviewed for importance relative to the impact on 10 CFR 55.45 and 55.59 operator actions as well as on nuclear and thermal hydraulic operating characteristics. (02.09)
- Problem Identification and Resolution (10 CFR 55.59(c); SAT element 5 as defined in 10 CFR 55.4): The inspectors assessed the licensee's ability to identify, evaluate, and resolve problems associated with licensed operator performance (a measure of the effectiveness of its LORT program and their ability to implement appropriate corrective actions to maintain its LORT Program up to date). The inspectors reviewed documents related to licensed operator performance issues (e.g., recent examination and inspection reports (IRs) including cited and non-cited violations; NRC End-of-Cycle and Mid-Cycle reports; NRC plant issue matrix; licensee event reports; licensee condition/problem identification reports including documentation of plant events and review of industry operating experience). The inspectors also sampled the licensee's quality assurance oversight activities, including licensee training department self-assessment reports. (02.10)

This inspection constituted one biennial licensed operator requalification program inspection sample as defined in IP 71111.11-05.

b. Findings

No findings were identified

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant system:

- HPCS (Issue Report 2572186, HPCS exceeds maintenance rule unavailability)

The inspectors reviewed events such as where ineffective equipment maintenance had resulted in valid or invalid automatic actuations of engineered safeguards systems and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule;
- characterizing system reliability issues for performance;
- charging unavailability for performance;
- trending key parameters for condition monitoring;
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- verifying appropriate performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2), or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly maintenance effectiveness sample as defined in IP 71111.12-05.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

.2 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- Emergent work oil circuit breaker 1-2 oil leak w/ RCIC work window; and
- Emergent work line 2 diesel generator (DG)/9BB-2.5" replacement.

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

Documents reviewed are listed in the Attachment to this report. These maintenance risk assessments and emergent work control activities constituted two samples as defined in IP 71111.13-05.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- Review Volatile Organic Compounds (VOC) effect on Standby Gas Treatment (SBGT) and Control Room Ventilation/Auxiliary Electrical Equipment Room Ventilation (VC/VE) due to painting in reactor building; and
- Past operability of line 2HP54BB-2.5".

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and UFSAR to the licensee's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors reviewed a sampling of CAP documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

These operability inspections constituted two samples as defined in IP 71111.15–05.

b. Findings

Failure to Ensure that Painting Instructions were Appropriate to Preclude Challenging the Operability of Standby Gas Treatment and Control Room Ventilation Charcoal Filters

Introduction: The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings" for the licensee's failure to have instructions or procedures that were appropriate to the circumstances for activities affecting quality. Specifically, procedure LAP-900-1, "LaSalle In-Plant Painting," Revision 22, did not contain instructions or limitations to safeguard against the potential overloading of the charcoal adsorber beds of the SBGT or VC/VE systems due to the VOC present in painting products (e.g., paint, primer, thinner, etc.).

Description: On December 30, 2015, in accordance with IP 71111.15, the inspectors performed a review of the ongoing painting activities (WO 01738040) that were a part of a site-wide beautification project, and their potential impact on the operability of SBGT and VC/VE. The inspectors selected this activity for inspection due to the large scale of the licensee's painting activities within the reactor building and auxiliary building, and the

knowledge that painting materials, such as paint, primer, and thinner contain VOC, which is present in the vapors as they dry/cure. Such volatile compounds are known to deposit in charcoal filters in a manner that could preclude the filters from performing their designed safety function. The plant areas under review were either directly in, or in communication with, ventilation zones serviced by the safety related standby ventilation systems of SBGT or VC/VE, which could be called upon at any moment from their standby state to perform their safety functions in the event of a design basis accident. It was also noted that at the time of this inspection, the painting project was over 30 days in progress.

At the onset of this inspection, the inspectors requested of the licensee that they provide any existing evidence showing that the painting project had been previously evaluated for its potential impact on the operability/standby readiness of the SBGT with respect to the potential VOC loading on the charcoal adsorber filters, prior to the onset of in-field painting activities. The licensee was unable to provide such evidence, but did, however, highlight that Section B.7 of LAP-900-1, entitled "Charcoal Filtration System," contained guidance to prevent painting within 24 hours prior to a scheduled run of such systems, and to prevent painting while the systems are running.

The inspectors noted that the licensee's procedure did not contain guidance to limit the amount of VOC present at any given time/location to a quantity that would preclude the overloading of the charcoal filters if those systems were to initiate in response to a design basis event. The inspectors were concerned that the lack of a known operability limit for the vulnerable filtration systems could have allowed for a realistic scenario to occur in which a VOC quantity in excess of the filter's design capabilities could have existed.

In response to this concern, the station initiated AR 0206228, "NRC ID'd Plant Painting Controls Per LAP-900-1," and implemented a standing order to require future painting activities to be pre analyzed against administrative VOC loading limits in the interim while the LAP-900-1 procedure is being revised as a final corrective action. Further, licensee engineering performed an evaluation to show that past operability of the systems was not challenged.

Analysis: The failure of the licensee to ensure that in-plant painting activities (activities affecting quality) would be prescribed by instructions or procedures of a type appropriate to the circumstances (i.e., appropriate to ensure that the quantity/type of painting materials used would not inadvertently render the SBGT or VC/VE systems inoperable due to VOC loading on the charcoal filters, if called upon to perform their safety functions during painting activities) was not in accordance with the requirements of 10 CFR 50, Appendix B, Criterion V, and was a performance deficiency.

The performance deficiency is more than minor because if left uncorrected, the it could lead to a more significant safety concern. Specifically, in-plant painting activities could have led to a situation in which the filtration function of both trains of SBGT or VC/VE could have been defeated if called upon during the worst case painting activities, since there were no such programmatic precautions or limitations in place.

The significance of the finding was determined in accordance with IMC 0609, Appendix H, "Containment Integrity Significance Determination Process," issued on May 6, 2004, because the performance deficiency was considered a programmatic issue associated with containment barrier integrity that could have potentially increased the

large early release frequency (LERF) without affecting the Core Damage Frequency (CDF). The inspectors utilized section 4.2 of Appendix H, "LERF-Based Significance Determination Process," and referred to Table 4.1, "Containment-Related SSCs Considered for LERF Implications." Since the SBGT and VC/VE systems were listed as "Not important to LERF due to unavailability in dominant sequences (e.g., SBO [station blackout]), plugging from high aerosol loadings in severe accident, and other considerations," the finding screened out as Green, or very low safety significance.

The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance, Design Margins, because design margins were not carefully guarded with special attention placed on safety related equipment (H.6). Specifically, the licensee failed to demonstrate their understanding of the potential impact that the large scale, plant-wide painting activities could have on the operability of the SBGT and VC/VE systems from a standby perspective. The inspectors determined this to be a key causal factor in the licensee's failure to control this activity affecting quality in a manner appropriate to the circumstances.

Enforcement: Title 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures or Drawings" states, in part that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances, and shall be accomplished in accordance with these instructions, procedures, or drawings."

Contrary to the above, on December 30, 2015, the licensee's use of station procedure LAP-900-1, "In-Plant Painting," Revision 22—an activity affecting quality—was determined to be inappropriate to the circumstances for repainting major portions of the reactor building and auxiliary building internal surfaces (e.g., floors, walls, equipment, etc.) Specifically, given the large scale of the painting project, and the fact that painting chemicals (e.g., paint, thinner, primer, etc.) contain VOC, the inspectors determined that the lack of prescribed precautions or limitations regarding the potential for overloading the safety related charcoal filters of the SBGT or VC/VE ventilation systems with VOC was inappropriate to the circumstances and could have led to the inoperability of those safety systems.

In response to the inspectors' concern, the licensee captured the issue in AR 02606228, "NRC ID'd Plant Painting Controls per LAP-900-1," and implemented a standing order to require future painting activities to be pre analyzed against administrative VOC loading limits in the interim while the LAP-900-1 procedure is being revised as a final corrective action. Further, licensee engineering performed an evaluation to show that past operability of the systems was not challenged.

Since this issue was entered into the licensee's CAP as AR 02606228, this violation is being treated as an NCV consistent with Section 2.3.2 of the NRC Enforcement Policy (**NCV 05000373/15004-02, 05000374/15004-02, Failure to Ensure that Painting Instructions were Appropriate to Preclude Challenging the Operability of Standby Gas Treatment and Control Room Ventilation Charcoal Filters**).

.2 Annual Sample: Review of Operator Workarounds

a. Inspection Scope

The inspectors evaluated the licensee's implementation of their process used to identify, document, track, and resolve operational challenges. Inspection activities included, but were not limited to, a review of the cumulative effects of operator workarounds on system availability and the potential for improper operation of the system, for potential impacts on multiple systems, and on the ability of operators to respond to plant transients or accidents.

The inspectors performed a review of the cumulative effects of operator workarounds. The documents listed in the Attachment were reviewed to accomplish the objectives of the IP. The inspectors reviewed both current and historical operational challenge records to determine whether the licensee was identifying operator challenges at an appropriate threshold, had entered them into their CAP and proposed or implemented appropriate and timely corrective actions which addressed each issue. Reviews were conducted to determine if any operator challenge could increase the possibility of an Initiating Event, if the challenge was contrary to training, required a change from long-standing operational practices, or created the potential for inappropriate compensatory actions. Additionally, all temporary modifications were reviewed to identify any potential effect on the functionality of Mitigating Systems, impaired access to equipment, or required equipment uses for which the equipment was not designed. Daily plant and equipment status logs, degraded instrument logs, and operator aids or tools being used to compensate for material deficiencies were also assessed to identify any potential sources of unidentified operator workarounds.

This review constituted one operator workaround annual inspection sample as defined in IP 71115-02.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the following post-maintenance testing activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- Unit 0 DG idle start post-maintenance testing; and
- Twelve year Unit 0 DG bus inspection and Megger test.

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as

written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the UFSAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed CAP documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them in the CAP and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two post-maintenance testing samples as defined in IP 71111.19-05.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- Main Steam Isolation Valve (MSIV) scram functional LOS-RP-Q3, (Routine); and
- Turbine Control valve scram functional LOS-RP-Q5, (Routine).

The inspectors observed in-plant activities and reviewed procedures and associated records to determine the following:

- did preconditioning occur;
- the effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the UFSAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current;
- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied;
- test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used;

- test data and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing;
- where applicable for inservice testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted two routine surveillance testing samples as defined in IP 71111.22, Sections–02 and–05.

b. Findings

No findings were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The regional inspectors performed an in-office review of the latest revisions to the emergency plan and emergency action levels.

The licensee transmitted the emergency plan and emergency action level revisions to the NRC pursuant to the requirements of 10 CFR, Part 50, Appendix E, Section V, “Implementing Procedures.” The NRC review was not documented in a Safety Evaluation Report, and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection.

This emergency action level and emergency plan changes inspection constituted one sample as defined in IP 71114.04.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

.1 Training Observation

a. Inspection Scope

The inspector observed a simulator training evolution for licensed operators on November 10, 2015, which required emergency plan implementation by a licensee operations crew. This evolution was planned to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that the licensee evaluators noted the same issues and entered them into the CAP. As part of the inspection, the inspectors reviewed the scenario package.

This inspection of the licensee's training evolution with emergency preparedness drill aspects constituted one sample as defined in IP 71114.06-06.

b. Findings

No findings were identified.

2. RADIATION SAFETY

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

The inspection activities supplemented those documented in IR 05000373/2015003; IR 05000374/2015003, and constituted one complete sample as defined in IP 71124.01-05.

.1 Contamination and Radioactive Material Control (02.04)

a. Inspection Scope

The inspectors reviewed the licensee's procedures and records to verify that the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters. The inspectors assessed whether or not the licensee has established a de facto "release limit" by altering the instrument's typical sensitivity through such methods as raising the energy discriminator level or locating the instrument in a high-radiation background area.

The inspectors selected several sealed sources from the licensee's inventory records and assessed whether the sources were accounted for and verified to be intact.

b. Findings

Failure to Follow Procedure Associated with Sealed Source Inventory and Leak Testing

Introduction: The inspectors identified a finding of very low safety significance (Green) with an associated NCV of TS 5.4.1, for failure to perform leak tests for sealed radioactive sources required by station procedures.

Description: Station radiation safety procedure RP-AA-800, "Control, Inventory, and Leak Testing of Radioactive Sources," established the requirements for the receipt, inventory, storage, issuance, return, transfer, and disposal of radioactive sources. This procedure also established the requirements for the inventory of sources, and the leak testing of sealed sources. Specifically, Step 4.9 required leak testing for sources that contain radioactive material with a half-life greater than 30 days with an activity greater than 100 microcuries of beta/gamma-emitting material or 5 microcuries of alpha or neutron-emitting material.

The inspectors identified discrepancies with the two sources selected for this inspection. Specifically, tests required to prevent the spread of radioactive contamination were either not performed, or performed using analysis that would not detect leakage.

- Source LSL-123, a sealed radioactive source with an activity greater than 5 microcuries of alpha emitting material was not leak tested since acquired in 2003. Although this source was entered and tracked on the source inventory list, the list incorrectly designated that the source did not require to be leak tested. Consequently, the test to verify the integrity of the source was not performed to assure it was not leaking. This error was created a long time ago, and cause is not considered to be indicative of current performance.
- Source LSL-734A, a sealed radioactive source with an activity greater than 100 microcuries of beta/gamma-emitting material was tested using a method that would not detect leakage for two records reviewed. Although this source was entered and tracked on the source inventory list and the list specified that leak testing must be performed using gamma spectroscopy, the licensee performed the test using liquid scintillation. Consequently, the test could not verify the integrity of the source and the records did not assure it was not leaking. The cause of this error was an inadequate review that assumed the samples were analyzed using the method requested (gamma spectroscopy) and did not identify that an inappropriate method (liquid scintillation) was actually used and the individuals did not recognize and plan for the possibility of mistakes.

Analysis: The inspectors determined that the failure to perform leak tests for sealed radioactive sources required by station procedures was the performance deficiency. The performance deficiency was determined to be more than minor in accordance with IMC 0612, Appendix B, issued September 7, 2012, specifically, if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern, in that, the failure to ensure that the sources are free of external contamination could spread radioactive contamination, including alpha contamination that is not readily detected by personnel monitoring equipment, and result in increased exposure to radiation. The significance of the finding was assessed using the Occupational Radiation Safety Significance Determination Procedure, IMC 0609, Appendix C, issued August 19, 2008, and was determined to be of very low safety significance (Green) because the finding was not an ALARA planning issue, there were no overexposures, nor substantial potential for overexposures, and the licensee's ability to assess dose was not compromised.

As described above, the cause of this finding was an inadequate review that assumed the samples were analyzed using the method requested (gamma spectroscopy) and did not identify that an inappropriate method (liquid scintillation) was actually used and the

individuals did not recognize and plan for the possibility of mistakes. Consequently, the inspectors determined that the finding involved a cross-cutting aspect in the area of Problem Identification and Resolution, Self-Assessment, for failing to conduct self-critical and objective assessments (P.6).

Enforcement: Section 5.4.1a. of TS 5.4, "Procedures," requires, in part that written procedures shall be established, implemented and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A. February 1978. Station procedure RP-AA-800, "Control, Inventory, and Leak Testing of Radioactive Sources," Revision 7, Section 7, implemented the requirements of Regulatory Guide (RG) 1.33, Section 7.e.1. Specifically, Step 4.9 required leak testing for sources that contain radioactive material with a half-life greater than 30 days with an activity greater than 100 microcuries of beta/gamma-emitting material or 5 microcuries of alpha or neutron-emitting material to verify the integrity and to assure it was not leaking or spreading contamination.

Contrary to the above, as of August 13, 2015, the licensee did not implement the requirements contained in procedure RP-AA-800 to verify that all of the sources are free of external contamination. Corrective actions included the performance of the required leak test with appropriate analysis techniques. Additionally, the licensee verified the required testing was complete for all of their other sources. Because this violation is of very low safety significance (Green) and was entered into the licensee's CAP as AR 02541180, this violation is being treated as an NCV consistent with Section 2.3.2 of the NRC Enforcement Policy (**NCV 05000373/2015004-03; 05000374/2015004-03, Failure to Follow Procedure Associated with Sealed Source Inventory and Leak Testing**).

.2 Radiological Hazards Control and Work Coverage (02.05)

a. Inspection Scope

The inspectors evaluated the adequacy of radiological controls, such as required surveys, radiation protection job coverage (including audio and visual surveillance for remote job coverage), and contamination controls. The inspectors evaluated the licensee's use of electronic personal dosimeters in high noise areas as high-radiation area monitoring devices.

b. Findings

Entry into an Area with Unknown Dose Rates

Introduction: A finding of very low safety significance (Green) with an associated NCV of TS 5.7.1, "High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation," was self-revealed when a worker received a dose rate alarm from an electronic dosimeter upon entry into an area with an unknown dose rate.

Description: On July 28, 2015, while working on the 2F-CP Pre Filter System, a worker received a dose rate alarm from an electronic dosimeter, while on the first rung of a ladder attempting to climb to the pre filter system. The electronic dosimeter had dose and dose rate alarm set points of 40 mrem and 80 mrem per hour, respectively. When the worker stepped onto the first rung of the ladder and attempted to begin the work on

the 2F-CP Pre Filter System, the electronic dosimeter alarmed. The worker immediately stopped the work in progress, proceeded to exit the area and contacted the Radiation Protection Department. The electronic dosimeter read at 119 mrem per hour at the time of the alarm. The dose to the involved worker was calculated to be 0.3 mrem during the event although the worker could have received a much higher dose if the circumstances were slightly altered.

The inspectors reviewed the licensee's apparent cause evaluation report and determined that the work group failed to persuade their first line supervisor that a high radiation work permit was required for the work and failed to notify radiation protection before climbing the ladder.

Analysis: The inspectors determined that the unauthorized entry into an area with an unknown dose rate was not in compliance with the requirements of TS 5.7.1, and was a performance deficiency. The performance deficiency was determined to be more than minor in accordance with IMC 0612, Appendix B, issued September 7, 2012, in that the finding impacted 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. Specifically, the unauthorized entry into an area where the dose rates were unknown removed a barrier intended to prevent the worker from receiving unintended dose. The finding was assessed using the Occupational Radiation Safety Significance Determination Procedure, IMC 0609, Appendix C, issued August 19, 2008, and was determined to be of very low safety significance (Green) because the finding was not an ALARA planning issue, there were no overexposures, nor substantial potential for overexposures, and the licensee's ability to assess dose was not compromised.

As described above, the cause of this finding was that the work group failed to persuade their first line supervisor that a high radiation work permit was required for the work and failed to notify radiation protection before climbing the ladder. Consequently, the inspectors determined that the finding involved a cross-cutting aspect in the area of Human Performance, Teamwork, due to the work group's failure to communicate and coordinate their activities within and across organizational boundaries to ensure nuclear safety is maintained (H.4).

Enforcement: Technical Specification 5.7.1, "High-Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation," condition e. requires, in part, that "Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them."

Contrary to the above, on July 28, 2015, a worker made an unauthorized entry into an area with unknown dose rates while attempting to access a component in the field by ascending a ladder. Upon identification, the scheduled work was stopped and the Radiation Protection Department was notified immediately. Corrective actions included site-wide communications via handouts to contact radiation protection prior to accessing areas above 7 feet in the radiological controlled area. Because this violation is of very low safety significance (Green) and it was entered into the licensee's CAP as AR 02533591, this violation is being treated as a NCV consistent with Section 2.3.2 of the

NRC Enforcement Policy (NCV 05000373/2015004-04; 05000374/2015004-04, Entry into an Area with Unknown Dose Rates).

2RS3 In-Plant Airborne Radioactivity Control and Mitigation (71124.03)

The inspection activities supplemented those documented in IR 05000373/2014002; IR 05000374/2014002, and constituted one complete sample as defined in IP 71124.03–05.

.1 Engineering Controls (02.02)

a. Inspection Scope

The inspectors reviewed the licensee’s use of permanent and temporary ventilation to determine whether the licensee uses ventilation systems as part of its engineering controls (in lieu of respiratory protection devices) to control airborne radioactivity. The inspectors reviewed procedural guidance for use of installed plant systems, such as containment purge, spent fuel pool ventilation, and auxiliary building ventilation, and assessed whether the systems are used, to the extent practicable, during high-risk activities (e.g., using containment purge during cavity floodup).

The inspectors selected installed ventilation systems used to mitigate the potential for airborne radioactivity, and evaluated whether the ventilation airflow capacity, flow path (including the alignment of the suction and discharges), and filter/charcoal unit efficiencies, as appropriate, were consistent with maintaining concentrations of airborne radioactivity in work areas below the concentrations of an airborne area to the extent practicable.

The inspectors selected temporary ventilation system setups (high-efficiency particulate air/charcoal negative pressure units, down draft tables, tents, metal “Kelly buildings,” and other enclosures) used to support work in contaminated areas. The inspectors assessed whether the use of these systems is consistent with licensee procedural guidance and ALARA concept.

The inspectors reviewed airborne monitoring protocols by selecting installed systems used to monitor and warn of changing airborne concentrations in the plant and evaluated whether the alarms and setpoints were sufficient to prompt licensee/worker action to ensure that doses are maintained within the limits of 10 CFR Part 20 and the ALARA concept.

The inspectors assessed whether the licensee had established trigger points (e.g., the Electric Power Research Institute’s “Alpha Monitoring Guidelines for Operating Nuclear Power Stations”) for evaluating levels of airborne beta-emitting (e.g., plutonium-241) and alpha-emitting radionuclides.

b. Findings

No findings were identified.

.2 Use of Respiratory Protection Devices (02.03)

a. Inspection Scope

For those situations where it is impractical to employ engineering controls to minimize airborne radioactivity, the inspectors assessed whether the licensee provided respiratory protective devices such that occupational doses are ALARA. The inspectors selected work activities where respiratory protection devices were used to limit the intake of radioactive materials, and assessed whether the licensee performed an evaluation concluding that further engineering controls were not practical and that the use of respirators is ALARA. The inspectors also evaluated whether the licensee had established means (such as routine bioassay) to determine if the level of protection (protection factor) provided by the respiratory protection devices during use was at least as good as that assumed in the licensee's work controls and dose assessment.

The inspectors assessed whether respiratory protection devices used to limit the intake of radioactive materials were certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration or have been approved by the NRC per 10 CFR 20.1703(b). The inspectors selected work activities where respiratory protection devices were used. The inspectors evaluated whether the devices were used consistent with their National Institute for Occupational Safety and Health/Mine Safety and Health Administration certification or any conditions of their NRC approval.

b. Findings

No findings were identified.

.3 Self-Contained Breathing Apparatus for Emergency Use (02.04)

a. Inspection Scope

The inspectors determined whether appropriate mask sizes and types are available for use (i.e., in-field mask size and type match what was used in fit-testing). The inspectors determined whether on-shift operators had no facial hair that would interfere with the sealing of the mask to the face and whether vision correction (e.g., glasses inserts or corrected lenses) was available as appropriate.

b. Findings

No findings were identified.

.4 Problem Identification and Resolution (02.05)

a. Inspection Scope

The inspectors evaluated whether problems associated with the control and mitigation of in-plant airborne radioactivity were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee's CAP. The inspectors assessed whether the corrective actions were appropriate for a selected sample of problems involving airborne radioactivity and were appropriately documented by the licensee.

b. Findings

No findings were identified.

2RS4 Occupational Dose Assessment (71124.04)

The inspection activities supplemented those documented in IR 05000373/2014002; IR 05000374/2014002, and constituted one complete sample as defined in IP 71124.04–05.

.1 Special Dosimetric Situations (02.04)

Dosimeter Placement and Assessment of Effective Dose Equivalent for External Exposures

a. Inspection Scope

The inspectors reviewed the licensee's methodology for monitoring external dose in non-uniform radiation fields or where large dose gradients exist. The inspectors evaluated the licensee's criteria for determining when alternate monitoring, such as use of multi-badging, was to be implemented.

The inspectors reviewed dose assessments performed using multi-badging to evaluate whether the assessment was performed consistently with licensee procedures and dosimetric standards.

b. Findings

No findings were identified.

.2 Problem Identification and Resolution (02.05)

a. Inspection Scope

The inspectors assessed whether problems associated with occupational dose assessment are being identified by the licensee at an appropriate threshold and are properly addressed for resolution in the licensee's CAP. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee involving occupational dose assessment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security

40A1 Performance Indicator Verification (71151)

.1 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures performance indicator (MS05) for Units 1 and 2 from the fourth quarter 2014 through the third quarter 2015. To determine the accuracy of the performance indicator (PI) data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73" definitions and guidance, were used. The inspectors reviewed the licensee's operator narrative logs, operability assessments, maintenance rule records, maintenance work orders, issue reports, event reports and NRC Integrated Inspection Reports for the fourth quarter 2014 through the third quarter 2015 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two safety system functional failures samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index—Heat Removal System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) - Heat Removal System performance indicator (MS08) for Units 1 and 2 from the third quarter 2014 through the second quarter 2015. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI 99-02, Revision 7, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, MSPI derivation reports, and NRC Integrated Inspection Reports for the third quarter 2014 through the second quarter 2015 to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two MSPI RCIC heat removal system samples as defined in IP 71151–05.

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index—Cooling Water Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - Cooling Water Systems performance indicator (MS10) for Units 1 and 2 from the third quarter 2014 through the second quarter 2015. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI 99-02, Revision 7, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, MSPI derivation reports, event reports and NRC Integrated Inspection Reports for the third quarter 2014 through the second quarter 2015 to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two MSPI cooling water system samples as defined in IP 71151–05.

b. Findings

No findings were identified.

.4 Reactor Coolant System Specific Activity

a. Inspection Scope

The inspectors sampled licensee submittals for the reactor coolant system specific activity performance indicator (BI01) for LaSalle County Station, Units 1 and 2, for the period from the first quarter 2014 through the fourth quarter 2014. The inspectors used PI definitions and guidance contained in NEI 99-02, Revision 7, to determine the accuracy of the data reported during those periods. The inspectors reviewed the licensee's reactor coolant system chemistry samples, TS requirements, ARs, event reports and NRC Integrated IRs to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator. In addition to record reviews, the inspectors observed a chemistry technician obtain and analyze a reactor coolant system sample. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two reactor coolant system specific activity samples as defined in IP 71151–05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security

.1 Routine Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As part of the various baseline IPs discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's CAP at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Attributes reviewed included: identification of the problem was complete and accurate; timeliness was commensurate with the safety significance; evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's CAP as a result of the inspectors' observations are included in the Attachment to this report.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's CAP. This review was accomplished through inspection of the station's daily condition report packages.

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings were identified.

.3 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening discussed in Section 4OA2.2 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the 6-month period of July 2015 through December 2015, although some examples expanded beyond those dates where the scope of the trend warranted. As part of this review, the inspectors also performed focused CAP text string searches for the following terms: fail; exceed; violate; violation; unacceptable; unsat; trend; trip; drift; and unexpected.

The review also included issues documented outside the normal CAP in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, and quality assurance audit/surveillance reports. The inspectors compared and contrasted their results with the results contained in the licensee's CAP trending reports. Corrective actions associated with a sample of the issues identified in the licensee's trending reports were reviewed for adequacy.

This review constituted one semi-annual trend inspection sample as defined in IP 71152-05.

b. Findings and Observations

In the majority of items reviewed above, no adverse trends were identified; however, in limited instances, any adverse trends that were identified were also already identified by the licensee and appeared to be addressed appropriately. One such trend was that of the station having five configuration control events during the calendar year 2015.

No findings were identified.

.4 Annual Follow-up of Selected Issues: Licensee's Failure to Perform Required Fire Extinguisher Inspections

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors recognized a corrective action item (AR 02574457) documenting fire extinguishers not being inspected per the NFPA-10, 1975, code of record. The inspectors identified this issue concurrently, and coincidentally, with the licensee on October 21, 2015. The inspectors interviewed the station Fire Marshal and the responsible maintenance supervisor to further understand the circumstances surrounding the missed monthly inspections. At that time, the inspectors elected to allow the licensee to maintain credit for identification of the issue, under the assumption that the issue would be resolved and the proposed corrective actions appeared appropriate to prevent repetition. The inspectors allowed some time to pass to allow the licensee to implement changes and to have opportunities to demonstrate that the extinguisher inspection issue was corrected. On December 14, the inspectors performed in-field walkdowns of the previously identified extinguishers that were missed, to verify that the licensee's corrective actions were effective. The

inspectors also followed up to ensure that the licensee had adequately addressed the concern from an extent of condition/extent of cause standpoint.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Findings and Observations

On December 14, 2015, the inspectors once again identified that some fire extinguishers were missing their monthly inspections. The inspectors re-engaged the licensee who captured the concern in AR 02604244.

Inspection Manual Chapter 0612, Section 3.10, states, in part that “NRC-identified findings or violations also include issues initially identified by the licensee to which the inspector has identified a previously unknown weakness in the licensee’s classification, evaluation, or corrective actions associated with the licensee’s correction of a finding or violation (i.e., NRC added value).” Despite previous identification credit being given to the licensee, the inspectors determined that the issue had become NRC-identified because the inspectors added value by identifying a deficiency in the licensee’s evaluation of this issue within their CAP.

See section 1R05 of this report for further detail of this performance deficiency and documentation of an associated finding.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) Licensee Event Report 05000373/374 2013-002-02: Unusual Event Declared Due to Loss of Offsite Power and Dual Unit Scram

On April 17, 2013, both Units 1 and 2 were in Mode 1 at 100 percent power when lightning struck the 138 Kilovolt (kV) Line 0112 resulting in a phase-to-ground fault which cleared but returned 2 minutes later. After the second fault all 345 kV oil circuit breakers in the main switchyard opened, resulting in a loss of offsite power and reactor scrams on both units. All control rods fully inserted, and all systems responded as expected.

The cause of the event and the corrective actions were examined by the NRC under Unresolved Item (URI) 05000373/2013009-01; 05000374/2013009-01, “Review of the Loss of Offsite Power Event Root Cause Evaluation and Switchyard Design Basis,” and in IR 05000373/2015010; 05000374/2015010 which closed the issue using an exercise of Enforcement Discretion. Documents reviewed are listed in the Attachment to this report. This Licensee Event Report (LER) is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.2 (Closed) Licensee Event Report 05000373/374 2014-004: Auxiliary Electric Equipment Room HVAC inoperable Due to Compressor Trip

On August 28, 2014, both Units 1 and 2 were in Mode 1 at 100 percent power. The “B” train of auxiliary electric equipment room ventilation (VE) was inoperable due to an oil leak repair. The main control room ventilation envelope consists of both the main control room and the auxiliary electric equipment room. Both the Control room heating ventilation and air conditioning (HVAC) VC and VE were required to be operable at the

time of the occurrence. Technical Specification (TS) 3.7.5 Required Action A.1 had been entered and the Control Room area ventilation air conditioning subsystem was required to be restored to operable within 30 days.

The "A" train VE compressor was cycling on and off which resulted in the "A" train of VC/VE being declared inoperable. With two control room area ventilation air conditioning subsystems inoperable, TS 3.7.5 Required Action B.1 required verifying control room area temperature less the 90 degrees once every four hours, and Required Action B.2 required to restore one control room area ventilation air conditioning subsystem to operable status within 72 hours. Both trains were repaired and returned to service within approximately 11 hours.

The cause of the event was a strand of wire grounding to the valve case on the liquid line solenoid valve (ORG053A) causing the valve to close, resulting in low suction pressure condition and shutting down the compressor.

Corrective actions were repair and stop the oil leak on train "B" and repair the wiring on the solenoid valve (ORG053A) on train "A". Documents reviewed are listed in the Attachment to this report. This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.3 (Closed) Licensee Event Report 05000373/374 2015-001: Secondary Containment Inoperable Due to Interlock Doors Open

On December 12, 2014, both Units 1 and 2 were in Mode 1 at full power with no fuel movements in progress. It was reported that both air-lock doors on the Unit 2 Reactor Building 710' elevation between the Unit 2 DG corridor and the reactor building were open at the same time for approximately 10 seconds. While both interlock doors were open, TS Surveillance Requirement 3.6.4.1.2 ("Verify one secondary containment access door in each access opening is closed") was not met. Secondary containment was declared inoperable for the time that both interlock doors were open. The inspectors concluded that this was a violation of minor significance because of the short duration of the boundary bypass (for which the licensee has an existing engineering calculation showing that openings of this duration would not challenge the safety function of maintaining a negative pressure within the secondary containment) and the doors were neither blocked nor propped open.

The cause of the event was degradation of the closure mechanism. This malfunction from a less-than-robust design was similar to previous occurrences on February 18, 2014, October 22, 2013, and February 28, 2013.

Corrective actions from the previous occurrences to identify, procure, and install a more robust interlock assembly design were still in progress at the time of the event and actions to perform quarterly inspections of the assemblies and to tighten the fasteners did not prevent this event. Eventually, the door closure mechanism was replaced with a new, more robust design. Documents reviewed are listed in the Attachment to this report. This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.4 (Closed) Licensee Event Report 05000373/374 2015-002: Valve Control Power Breaker-Fuse Coordination Issue Results in Unanalyzed Condition

On December 12, 2014, both Units 1 and 2 were in Mode 1 at full power when the NRC identified that control power supply breakers to the RCIC valves could trip before individual protective fuses opened and removed fault current from the circuits. The NRC issued NVC 05000373/2014008-01 and 05000374/2014008-01 "Failure to Ensure Circuits associated with Alternate Shutdown Capability Free of Fire-Induced Damage." Under a postulated fire-related evacuation of the main control room, the tripped breakers may need to be locally reset before the RCIC could be operated from the reactor safe shutdown panel.

The cause of the event was less-than-rigorous coordination guidelines in the original design.

Corrective actions included issuance of standing orders to reset RCIC valve 250 Vdc breakers after a main control room evacuation due to a fire; revision of procedures to specify resetting the RCIC valve 250 Vdc breakers; and modification of 250 Vdc breakers and/or trip settings for the affected RCIC valves. Documents reviewed are listed in the Attachment to this report. This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.5 (Closed) Licensee Event Report 05000374 2015-001: High Pressure Core Spray Inoperable Due to Division 3 Diesel Generator Cooling Water Pump Casing Leak

On December 29, 2014, both Units 1 and 2 were in Mode 1 at full power with a DG operability test in progress on the 2B DG. During the test, operators noticed a small leak of about one drop per second coming from the 2B HPCS DG cooling water pump. The 2B DG was declared inoperable. TS 3.5.1 Required Action B.1 was entered, which specified to verify the RCIC system operable and B.2 to restore HPCS to operable within 14 days.

The cause of the event was a small leak from the cooling water pump caused by erosion from impeller flow impingement.

Corrective actions replaced the pump and returned HPCS to service approximately 6 days into the 14 day requirement. Documents reviewed are listed in the Attachment to this report. This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.6 (Closed) Licensee Event Report 05000373/374 2015-003: Secondary Containment Inoperable Due to Interlock Doors Open

On February 17, 2015, Unit 1 was in Mode 1 at full power and Unit 2 was in mode 5 with no fuel movements. It was reported that both air-lock doors on the Unit 1 DG corridor and the reactor building were open at the same time for approximately 5 to 10 seconds. While both interlock doors were open, TS Surveillance Requirement 3.6.4.1.2 ("Verify one secondary containment access door in each access opening is closed") was not met. Secondary containment was declared inoperable for the time that both interlock doors were open. The inspectors concluded that this was a violation of minor

significance because of the short duration of the boundary bypass (for which the licensee has an existing engineering calculation showing that openings of this duration would not challenge the safety function of maintaining a negative pressure within the secondary containment) and the doors were neither blocked nor propped open.

The cause of the event was determined to be failure of the controller circuit card in the door interlock logic.

Corrective actions were to replace the controller circuit card, send the vendor the failed card plus other cards that had failed pre-installation bench testing, where analysis identified manufacturing process problems, and to procure a more reliable circuit card for future replacements. Documents reviewed are listed in the Attachment to this report. This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153–05.

4OA6 Management Meetings

.1 Exit Meeting Summary

On January 5, 2016, the inspectors presented the inspection results to the Site Vice-President, Mr. P. Karaba, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- the inspection results for the areas of radiological hazard assessment and exposure controls; in-plant airborne radioactivity control and mitigation; occupational dose assessment; and reactor cooling system specific activity performance indicator verification with Mr. Harold Vinyard, Plant Manager, on November 6, 2015;
- the inspection results for the licensed operator requalification program, presented to Site Vice-President, Mr. P. Karaba, on November 20, 2015; and
- the annual review of emergency action levels and emergency plan changes with the licensee's emergency preparedness manager, Mr. M. Hayworth, on December 17, 2015.

The licensee acknowledged issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary. Proprietary material received during the inspection was returned to the licensee.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

P. Karaba, Site Vice-President
H. Vinyard, Plant Manager
J. Kowalski, Engineering Manager
K. Aleshire, Corporate Emergency Preparedness Manager
V. Cwietniewicz, Corporate Emergency Preparedness Manager
M. Jesse, Corporate Regulatory Assurance Manager
G. Ford, Regulatory Assurance Manager
J. Houston, Nuclear Oversight Manager
J. Moser, Radiation Protection Manager
M. Hayworth, Emergency Preparedness Manager
G. Brumbelow, Emergency Preparedness Coordinator
T. Dean, Operations Training Manager
D. Wright, NRC Examination Coordinator
L. Blunk, Regulatory Assurance
S. Shields, Regulatory Assurance
D. Murray, Regulatory Assurance
B. Hilton, Design Manager
A. Baker, Dosimetry Specialist
J. Bauer, Training Director
J. Shields, Program Engineering Manager
D. Anthony, Non-Destructive Examination
B. Casey, Inservice Inspection
G. Chavez, Dry Cask Storage Senior Project Manager
S. Tutoky, Chemistry Analyst
D. Fuson, ILT Lead Instructor
J. Keenan, Operations Director
J. Lindsey, Corp Licensing
G. Paap, Training Director
A. Vick, Operations Instructor

U. S. Nuclear Regulatory Commission

B. Dickson, Chief, Reactor Projects Branch 5

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000373/2015004-01; 05000374/2015004-01	NCV	Failure to Perform Required Monthly Fire Extinguisher Inspections per National Fire Protection Association Code (Section 1R05.1)
05000373/2015004-02; 05000374/2015004-02	NCV	Failure to Ensure that Painting Instructions were Appropriate to Preclude Challenging the Operability of Standby Gas Treatment and Control Room Ventilation Charcoal Filters (Section 1R15.1)
05000373/2015004-03; 05000374/2015004-03	NCV	Failure to Follow Procedure Associated with Sealed Source Inventory and Leak Testing (Section 2RS1.1)
05000373/2015004-04; 05000374/2015004-04	NCV	Entry into an Area with Unknown Dose Rates (Section 2RS1.2)

Closed

05000373/2015004-01; 05000374/2015004-01	NCV	Failure to Perform Required Monthly Fire Extinguisher Inspections per National Fire Protection Association Code (Section 1R05.1)
05000373/2015004-02; 05000374/2015004-02	NCV	Failure to Ensure that Painting Instructions were Appropriate to Preclude Challenging the Operability of Standby Gas Treatment and Control Room Ventilation Charcoal Filters (Section 1R15.1)
05000373/2015004-03; 05000374/2015004-03	NCV	Failure to Follow Procedure Associated with Sealed Source Inventory and Leak Testing (Section 2RS1.1)
05000373/2015004-04; 05000374/2015004-04	NCV	Entry into an Area with Unknown Dose Rates (Section 2RS1.2)
05000373/374 2013-002-02	LER	Unusual Event Declared Due to Loss of Offsite Power and Dual Unit Scram (Section 4OA3.1)
05000373/374 2014-004	LER	Auxiliary Electric Equipment Room HVAC Inoperable Due to Compressor Trip (Section 4OA3.2)
05000373/374 2015-001	LER	Secondary Containment Inoperable Due to Interlock Doors Open (Section 4OA3.3)
05000373/374 2015-002	LER	Valve Control Power Breaker-Fuse Coordination Issue Results in Unanalyzed Condition (Section 4OA3.4)
05000374 2015-001	LER	High Pressure Core Spray Inoperable Due to Division 3 Diesel Generator Cooling Water Pump Casing Leak (Section 4OA3.5)
05000373/374 2015-003	LER	Secondary Containment Inoperable Due to Interlock Doors Open (Section 4OA3.6)

Discussed

None

LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1R01 Adverse Weather Protection

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
LOA-TRAN-101	Unit 1 Transformer Trouble	24

1R04 Equipment Alignment

FIGURES AND DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
M-101	P&ID Reactor Core Isolation Coolant	BH

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
LOP-HP-02E	Unit 2 High Pressure Core Spray Electrical Checklist	5
LOP-HP-02M	Unit 2 High Pressure Core Spray Mechanical Checklist	18
LOP-RI-01E	Unit 1 Reactor Core Isolation Cooling System Electrical Checklist	11

1R05 Fire Protection

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
FZ 2H2	LaSalle County Generating Station Pre-Fire Plan: RX Bldg 694'-6" Elev. U1 HPCS Cubicle	
FZ 2I2	LaSalle County Generating Station Pre-Fire Plan Layout: Unit 1 Elevation 673'-4" HPCS Cubicle	Rev. 0
LMS-FP-21	Mechanical Maintenance Surveillance: Monthly Inspection of Portable Fire Extinguishers	4/9/2015

1R06 Flood Protection Measures

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
LMS-ZZ-04	Technical Surveillance: Water Tight Door Inspection	6
LOS-PF-M1	ECCS/CSCS Water Tight Door Surveillance	0
LMS-ZZ-04	Water Tight Door Inspection	1

ACTION REQUESTS

<u>Number</u>	<u>Description or Title</u>
2599071	0 DG Cooler Flange Leak Increased When 0 DG Cooling Pump Run
2425069	0 DG Cooler Leaking from North End
1536344	1A RHR WS Strainer Motor Tripped Breaker Thermals
2560456	Engineering Cable Vault Walkdown

FIGURES AND DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
1E-0-3004	Manholes Details and Sections	E
1E-0-3006	Duct Runs Turb. Bldg to Screen HSE.	S
1E-1-3685	Cable Routing Outdoor Area	Z
M-87	P&ID Core Standby Cooling System Equipment Cooling Water System	BC, AT
M-134	P&ID CSCS Equipment Cooling Water System	Q, AL, AV
M-1465	P&ID CSCS Equipment Cooling System	E

WORKING DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
WO 1392083-01	Perform Inspection of Magnetrol for the HPCS Diesel Co.	9/27/2012
WO 1392078-01	Perform Inspection of Magnetrol for the HPCS Diesel Co.	7/24/2012
WO 1564377-01	Water Tight Door Inspection	6/4/2014
WO 1687976-01	Water Tight Door Inspection	10/26/2015
WO 1868681-01	OPS Perform LOS-PF-M1 Att 1A (Week 4, 9, 13)	11/10/2015
WO 1864874-01	OPS Perform LOS-FP-M1 Att 2A (Week 2, 6, 11)	10/23/2015
WO 1870180-01	MH-1/2/3/4/5/6 Manhole Inspection and Pumping if Required	11/6/2015
WO 1870180-01	Work Package Revision 1; Pumped Down for Const Under WO 1586037, Sumps are MT	11/6/2015

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	AR Search Term "manhole"	12/22/2015
LOP-DG-06M	Unit 1 A Diesel Generator Cooling System Mechanical Checklist	12/3/2014
LSCS 9.2--1	LSCS-UFSAR Water Systems	Rev. 20
LSPSA-004	LaSalle Internal Flood Report, Operator Action for	2/14/2013
LOA-FLD-001	Floods, CSCS Pipe Rupture in Div. 3 CSCS Room	
LTA LAS-12-0019	Submerged Cables in Underground Vaults	5/29/2012
Patel/Parin	Underground Cable Submergence--Presentation	1/19/2010

1R11 Licensed Operator Regualification Program

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Sample of Medical Records (12)	Various dates
	Sample of Training Attendance Records	Various dates
	SRO Exam, 2015 NRC Exam Week, Number 1	11/2015
	RO Exam, 2015 NRC Exam Week, Number 1	11/2015
	SRO Exam, 2015 NRC Exam Week, Number 6	11/2015
	RO Exam, 2015 NRC Exam Week, Number 6	11/2015
ESG 104	Startup / Uncoupled Rod / Probable Aircraft Threat / CRD FCV Fails CLOSED / Feedwater Break / RR LOCA / Containment Bypass Path / 'B' RHR Pump TRIPS	2
ESG 120	Station Air Compressor TRIP / Failure of Standby Compressor to Auto-Start / Leak in 1NB10B Inst Line / Fire in Div. 1 / Loss of 141Y / High Main Turbine Vibes / Scram / RPS Fails / 1FW010A Stuck OPEN / "A" TDRFP Discharge Check Stuck OPEN / Div. 3, Fails to Auto-Initiate	0
ESG 44	RCIC Water Leg Pump TRIP / 'B' RR FCV Fails OPEN / 15B LP Heater High Level / Failure of Extraction Steam to Isolate / ATWS / 'B' TDRFP Fails to Trip / Unisolable RCIC Steam Leak / LGA-006 Blowdown	5
ESG 66	APRM Fails DOWNSCALE / Loss of TBCCW Pressure / Loss of 131X/Y / MSL Leak / Fuel Failure / 'A' MSL Fails to Isolate / 1VT79YA/B/C/ Fail / 3 ADS Valves Fail to OPEN	3
JPM A-SRO-57	Complete a Short Duration Timeclock Sheet	0
JPM A-SRO-69	Complete and Transmit an ENS Notification Worksheet	0
JPM P-AP-07	Manually Close Bus 135X 480V Feed ACB Locally IAW LOA-FX-101	1

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
JPM P-IN-01	Replace Nitrogen Bottles on the South ADS Bottle Bank per LOP-IN-05	0
JPM P-PR-03	Perform the Local Actions to Startup the Main Stack WRGM with a Failure of the RM-23 (Alternate Path)	0
JPM P-RD-02	Hydraulically Isolate a CRD HCU	13
JPM P-WR-01	Re-Align the 0WR01P Pump from Unit 1 to Unit 2	0
JPM S-FW-02	Place 1B TDRFP Online per LOP-RL-01 with a Loss of Hydraulic Oil (Alternate Path)	0
JPM S-HG-01	Align Hydrogen Recombiner to Unit 1 per LGA-HG-101 (Alternate Path)	0
JPM S-MS-05	Perform Emergency RPV Blowdown Using MSLs per LGA-MS-102	0
JPM S-RH-12	Lower the Suppression Pool Level IAW LOP-RH-16	11
JPM S-VR-03	Reactor Building Supply Fan Swap/Trip (Alternate Path)	1
LGA-001	RPV Control	15
LGA-002	Secondary Containment Control	7
LGA-003	Primary Containment Control	15
LGA-005	RPV Flooding	13
LGA-006	ATWS Blowdown	8
LGA-009	Radioactivity Release Control	6
LGA-010	Failure to Scram	14
LGA-FC-01	Alternate Vessel or Primary Containment Injection Using B Fuel Pool Emergency Makeup Pump	11
LGA-NB-01	Alternate Rod Insertion	17
LGA-RT-103	Alternate Boron Injection Using RWCU	11
LGA-TSG-001	Technical Support Guidelines Reference Manual	0
LGP-1-1	Normal Unit Startup	111
LGP-3-2	Reactor Scram	72
LOA-AP-101	Unit 1, AC Power System Abnormal	50
LOA-COND-101	Unit 1, Reactor Water-Condensate High Conductivity	7
LOA-CW-101	Unit 1, Circulating Water System Abnormal	20
LOA-CW-201	Unit 2, Circulating Water System Abnormal	20
LOA-DC-101	Unit 1, DC Power System Failure	19
LOA-DG-101	DG Failure	9
LOA-FSG-002	Flex Electrical Strategy	2
LOA-FSG-003	Flex Water Supply Strategy	0
LOA-FSG-007	Flex Spent Fuel Pool Level Indication	0
LOA-FW-101	Reactor Level Feedwater Pump Control Trouble	11
LOA-GC-101	Unit 1 Generator Stator Cooling Abnormal	10
LOA-HY-101	Unit 1, Generator Hydrogen System Abnormal	15
LOA-IA-101	Loss of Instrument Service Air	12
LOA-LOOP-101	Loss of Off-Site Power	4

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LOA-LOOP-201	Loss of Off-Site Power	4
LOA-NR-101	Neutron Monitoring Trouble	19
LOA-PC-101	Primary Secondary Containment Trouble	19
LOA-RH-101	Unit 1, RHR Abnormal	18
LOA-SRV-101	Unit 1, Stuck Open Safety Relief Valve	8
LOA-TRAN-101	Unit 1, Transformer Trouble	24
LOA-WR-101	Loss of Reactor Building Closed Cooling Water	12
LOP-AA-04	Operation of Valves	32
LOP-CM-03	Suppression Chamber Average Water Temperature Determination	13
LOP-CX-06	Primary Containment Isolation Status Display	8
LOP-HS-01	Hydrogen Seal Oil System Startup and Operation	19
LOP-IN-05	Replacing Nitrogen Bottles on Instrument Nitrogen System	25
LOP-LP-03	Shutdown of Low Pressure Core Spray System After an Automatic Initiation	14
LOP-RD-01	Filling, Venting, and Startup of the Control Rod Drive System, Revision 33	
LOP-RD-29	Determination of Control Rod Drive System Problems	4
LOP-RH-13	Suppression Pool Cooling Operation	32
LOP-RR-04	Preparation and Startup of Reactor Recirc Pumps in Slow Speed	50
LOP-RR-06	Start of a Reactor Recirc Pump in Fast Speed	41
LOP-RR-13	Interim Single Loop Operation SLO Baseline Data Gathering and Operability Verification	13
LOP-VG-01M	Unit 1, Standby Gas Treatment System Mechanical Checklist	6
LOP-VG-02	Shutdown of the Standby Gas Treatment System SBGT	17
LOP-WR-02	Startup and Operation of the Reactor Building Closed Cooling Water System	26
LOR 1H13-P602-A302	Div. I, Reactor Recirculation Pumps Trip Anticipate Transient Without Scram Initiated	4
LOR-1H13-P601-A208	Reactor Vessel Water Level 2, LO-LO	3
LOR-1H13-P601-A305	HPCS Pump 1E22-C001, Suction Pressure High-Low	5
LOR-1H13-P601-B206	RHR Valves 1E12-F006B and 1E12-F064B OPEN	3
LOR-1H13-P601-C207	Fuel Pool Cooling System Trouble	3
LOR-1H13-P601-E204	Div. II, Reactor Building Ventilation Radiation High	4
LOR-1H13-P601-E205	Div. II, Fuel Pool Radiation High	4
LOR-1H13-P601-F204	Div. I, Reactor Building Ventilation Radiation High	4
LOR-1H13-P601-F205	Div. I, Fuel Pool Radiation High	4
LOR-1N62-P600-B206	Off Gas Post Treatment Radiation Trouble	5
LOR-1N62-P600-B207	Off Gas Post Treatment Radiation High	6

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LOR-1PM01J-A313	ESS Div. I, 4KV Bus 141Y Feeder Breaker Auto Trip	4
LOR-1PM10J-B401	Fire Protection Header Pressure Low	3
LOR-1PM10J-B407	Fire Protection Intermediate Jockey Pump 0FP027P Running	1
LOR-2H13-P603-B511	Chan A2 and B2 Reactor Vessel Level 1 LO-LO	4
LOS-AA-S101	Unit 1, Shiftly Surveillance	91
LOS-RH-Q1	RHR (LPCI) and RHR Service Water Pump, and Valve Inservice Test for Modes 1, 2, 3, 4, and 5	85
LOS-RP-Q3	Main Steam Isolation Valve Scram Functional Test	24
LOS-RR-SR1	Thermal Hydraulic Stability Surveillance	15
OP-AA-105-101	Administrative Process for NRC License and Medical Requirements	18
OP-LA-101-111-1002	LaSalle Operations Philosophy Handbook	2
OP-LA-102-106	LaSalle Station Operator Response Time Program	5

WORKING DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
WO 1860955-01	Tech Spec Surveillance TSV Scram Functional LOS-RP-Q2-AH1A	11/14/2015
WO 1860948-01	1A TDRFP Surveillance LOS-FW-SR1AH1C	11/15/2015
WO 1860947-01	B TDRFP Surveillance LOS-FW-SR1AH1D	11/15/2015
WO 1860958-01	MSIV Scram Functional LOS-RP-Q4 AH 1H	11/14/2015
WO 1860952-01	TCS Scram Functional LOS-RP-Q5-AH 1H	11/15/2015

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
	ESG 113 Crew Grading Attachment (Crew Failure)	4/7/2014
	L1R15 Ops Mod Book	Undated
	LaSalle Simulator Test Steady 1 100% power, 75% power, 50% power	2/4/2014
	LaSalle Simulator Test Steady 1 100% power, 75% power, 50% power	2/4/2014
	LaSalle Simulator Test Transient 1 Manual Scram	2/4/2014
	LaSalle Simulator Test Transient 10 Simultaneous Closure of all MSIVs Combined with Single Stuck Open SRV, with No Operator Follow-up Action Unless Noted	2/4/2014
	LaSalle Simulator Test Transient 2 Simultaneous Trip of All Feedwater Pumps with No Operator Follow-up Action Unless Noted	2/4/2014

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
	LaSalle Simulator Test Transient 3 Simultaneous Closure of All MSIVs with No Operator Follow-up Action Unless Noted	2/4/2014
	LaSalle Simulator Test Transient 4 Simultaneous Trip of All RR Pumps with No Operator Follow-up Action Unless Noted	2/4/2014
	LaSalle Simulator Test Transient 5 Single RR Pump Trip with No Operator Follow-up Action Unless Noted	2/4/2014
	LaSalle Simulator Test Transient 6 Main Turbine Trip at Maximum Power That Does Not Result in Immediate Scram with No Operator Follow-up Action Unless Noted	2/4/2014
	LaSalle Simulator Test Transient 7 Maximum Rate Power Ramp to Approximately 75% Power and Back to 100% with No Operator Follow-up Action Unless Noted	2/4/2014
	LaSalle Simulator Test Transient 8 Maximum Size Reactor Coolant System Rupture Combined With Loss of All Offsite Power, with No Operator Follow-up Action Unless Noted	2/4/2014
	LaSalle Simulator Test Transient 9 Maximum Size Un-isolable Main Steam Line Rupture, With No Operator Follow-up Action Unless Noted	2/4/2014
	LaSalle Station PRA Results	Undated
	NOS LaSalle Site Status Report	Multiple
	Prompt Investigation: While Performing Switching Orders On Line 0108, A Discrepancy Was Identified Between the Installed Labeling and the Controlling Document (Switching Orders)	05/13/2015
	Prompt Investigation: An Instrument Reference Leg Was Required to Remain in Service	Undated
	Prompt Investigation: An Unusual Event Was Declared When the Control Room Team Was Unable to Verify That No Fire Existed On the U2 RB 807' Elevation	8/25/2014
	Root Cause Investigation: Deltas in Operator Response Strategies During Dual Unit Loss of Off-Site Power	10/3/2013
	TQ-AA-224-F100 Remedial Training Notification and Action on Failure	Multiple
AT 01601318	Root Cause: Fuel Degradation Caused by Debris Fretting in L2C14	2/6/2014
AT 2419110	Root Cause Investigation: Precise Control of Infrequent Manipulations	11/14/2014
AR 02421199	Apparent Cause Investigation: Operator Equipment Burdens	1/15/2015
AR 1594460	Apparent Cause Evaluation: EO Received Accumulated Dose Alarm	12/8/2013
AR 1605841	Apparent Cause Evaluation: U2 APRM Tech Spec Surveillance Requirement Not Met During CRD Sequence Exchange	12/7/2013
AR 1696021	Apparent Cause Investigation: Delayed Fire Alarm Response >15 minutes,	9/8/2014

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
AR 2422142-43	Apparent Cause Investigation Gaps in Performance Improvement Implementations	1/12/2015
AR 2458421	Apparent Cause Investigation: 2h22-P004 Reference Leg Root Valve Found Closed	3/19/2015
AR 2500352	Apparent Cause Investigation: Configuration Control Event during L0108 Switching Activities,	6/12/2015
AR 2544219	Apparent Cause Investigation: OPS L2M18 Performance	9/9/2015
AR 1655617	Apparent Cause Investigation: Alternate Vessel Level Indication During Head Installation	5/27/2014
AR 2422142-02	Apparent Cause Investigation Report: Gaps in Operator Knowledge	1/12/2015
ARs 1623438 & 1625505A	Apparent Cause Investigation Incorrect Procedure Revisions Being Used in L1R15	3/5/2014

1R12 Maintenance Effectiveness

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
ER-AA-310	Implementation of the Maintenance Rule	9
ER-AA-310-1004	Maintenance Rule Performance Monitoring	13
ER-AA-310-1005	Maintenance Rule–Dispositioning Between (a)(1) and (a)(2)	7

ACTION REQUESTS

<u>Number</u>	<u>Description or Title</u>
2572186	HPCS Maintenance Rule Unavailability Criteria Exceeded
2562778	1B DG Work Window Extension

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Dates</u>
LAS-1-HP-03	MR Function Evaluation	9/2015, 10/2015, 11/2015, 12/2015

1R13 Maintenance Risk Assessments and Emergent Work Control

ACTION REQUESTS

<u>Number</u>	<u>Description or Title</u>
2573697	Temperature Anomaly and Oil Leak Noted on OCB 1–2
2591542	NRC Identified–Work Week Summary Risk Level Question
2589901	Degraded Condition Observed on CSCS Piping Line 2DG19BB-2.5”
2451812	2DG05A Pipe Leak in “B” RHR Corner Room

WORKING DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
EC 392331	RCIC Room Heatup for Extended Loss of AC Power (ELAP) in Support of FLEX	000

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
Table 2-6	LaSalle Dependency Matrices Notebook, Summary of Component and Room Cooling Information for Key Systems	11/23/2015
	Paragon Safety System, Safety System Configuration Data	11/2015

1R15 Operability Determinations and Functional Assessments

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EC 403264		0
EC 345926	Evaluate Effect of Painting/Sealants (VOCS) on Charcoal Filters	11/22/2004

ACTION REQUESTS

<u>Number</u>	<u>Description or Title</u>
2595411	Degraded Condition Observed on CSCS Piping Line 2HP54BB-2.5"

FIGURES AND DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
M-930	Core Standby Cooling System Piping	AH
M-134	P&ID Core Standby Cooling System Equipment Cooling Water System	Q

CALCULATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
WO 1810785-02	Report 15-172 Ultrasonic Thickness Calibration Sheet (ER-AA-335-004) for Olympus 38DL Plus Metal Piping	12/3/2015

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
WO 1810785-02	Evaluation of Past Operability of Line 2HP54BB-2.5"	Undated

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
Case N-513-2	Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 or 3 Piping Section XI, Division 1	2/12/2004
	Engineering Notes: Computation of VOC Content in Reactor Building Based on Worst Day Estimates	12/2015

1R19 Post-Maintenance Testing**PROCEDURES**

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
LEP-AP-101	Unit 1 Non-Segregated Phase Bus Duct Preventive Maintenance Inspection	19
MA-AA-773-045	Attachment 1 High Potential Testing Data Sheet	6
LEP-AP-101	Unit 1 Non-Segregated Phase Bus Duct Preventive Maintenance Inspection	19

ACTION REQUESTS

<u>Number</u>	<u>Description or Title</u>
2588931	0 DG Bus Duct Cover Found with Peeled paint

FIGURES AND DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
1E-1-4000PG	Relaying & Metering Diagram 4160V Switchgear 141Y	P
1E-1-4000AK	Key Diagram 4160V SwitchGear 141Y (1AP04E)	E
1E-1-4000F	Phasing Diagram Generator Main Transformer 6.9 & 4.16Kv Auxiliary Power Part 1	F

WORKING DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
WO 1768868-01	0 DG (U2 DIV 1) Bus Duct Inspection Per LEP-AP-101	11/18/2015
WO 1768157-01	DG 0 (0DG Room & Corridor) Bus Duct Inspection per LEP-AP-10	12/17/2015

1R22 Surveillance Testing**MISCELLANEOUS**

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
LOS-RP-Q3-AH 1H	Tech Spec Surveillance: MSIV Scram Functional	11/14/2015

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
LOS-RP-Q5-AH 1H	Tech Spec Surveillance: TCV Scram Functional	11/15/2015

1EP4 Emergency Action Level and Emergency Plan Changes**PROCEDURES**

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
EP-AA-1000	Exelon Nuclear Standardized Radiological Emergency Plan	26
EP-AA-1002	Addendum 3; Emergency Action Levels for LaSalle Station	0
EP-AA-1005	Addendum 1; LaSalle Station On-Shift Staffing Technical Basis	1
EP-AA-1005	Addendum 2; Evacuation Time Estimates for LaSalle County	1
EP-AA-1005	Generating Station Plume Exposure Pathway Emergency Planning Zone	1
EP-AA-1005	Exelon Nuclear Radiological Emergency Plan Annex for LaSalle Station	38
EP-AA-120	Emergency Plan Administration	17
EP-AA-120-1001	10CFR50.54(q) Change Evaluation	7

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
14-108	50.54(q) Evaluation; EP-AA-1000, "Exelon Nuclear Standardized Radiological Emergency Plan" (Rev. 26) Evaluation and Effectiveness Review	12/08/14
14-122	50.54(q) Evaluation; EP-AA-1002 Addendum 1, "LaSalle Station On-Shift Staffing Technical Basis" Evaluation and Effectiveness Review	11/06/14
15-06	50.54(q) Evaluation; EP-AA-1000, "Exelon Nuclear Standardized Radiological Emergency Plan" (Rev. 27) Evaluation and Effectiveness Review	04/30/15
15-70	50.54(q) Evaluation; EP-AA-1000, "Exelon Nuclear Standardized Radiological Emergency Plan" (Rev. 28) Evaluation and Effectiveness Review	07/01/15

2RS1 Radiological Hazard Assessment and Exposure Controls

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
RPAA-700-1239	Operation and Calibration of the Model SAM-12 Small Articles Monitors	2

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
2533591	Apparent Cause Investigation Report: Dose Rate Alarm Received During Scheduled Work on 2F Condensate Polisher	9/30/15

2RS3 In-Plant Airborne Radioactivity Control and Mitigation

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision or Date</u>
RP-AA-870-1001	Set-Up and Operation of Portable Air Filtration Equipment	3
RP-AA-870-1003	Testing Portable HEPA Filter Units	3
RP-AA-220	Intake Investigation Form; Brock4934	10/06/15
RP-AA-825-1014	Operation and Inspection of the 3M VERSAFLO TR-300 PAPR System	3
RP-AA-825-1014 -F-01	Use of the 3M S-403 VERSAFLO Economy Hood; NIOSH TC-021-0852	0
RP-AA-825-1014 -F-02	Use of the 3M S-100 Series VERSAFLO Face-shield; NIOSH TC 21C-MMMM551	0

2RS4 Occupational Dose Assessment

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision or Date</u>
RP-AA-220	Bioassay Program, Rev. 10	4/28/2015
RP-AA-222	Method for Estimating Internal Exposure from In-Vivo and In-Vitro Bioassay Data	5
RP-AA-210	Dosimetry Issue, Usage and Control	25
RP-AA-210-1001	Dosimetry Logs and Forms	9

WORKING DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
RP-AA-203-1001	Personnel Exposure Investigation, Rev. 8, AXMAC6058	4/28/2015
RP-AA-203-1001	Personnel Exposure Investigation, Rev. 8, SETZE8513A	4/28/2015
RP-AA-203-1001	Personnel Exposure Investigation, Rev. 8, APHILL4100	4/28/2015
RP-AA-203-1001	Personnel Exposure Investigation, Rev. 8, REINM7690	4/28/2015
RP-AA-203-1001	Personnel Exposure Investigation, Rev. 8, 665150	4/28/2015

40A1 Performance Indicator Verification**WORKING DOCUMENTS**

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
	Monthly Data Elements for NRC RCS Specific Activity	2014
CY-LA-110-201	Dose Equivalent Iodine Sample Panel Sampling; Rev. 10; Attachment 2; 2PL14J Reactor Building Sample	11/04/15

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	MSPI and WANO Reporting, LaSalle County Generating Station–Heat Removal System (RCIC)	7/2014 – 6/2015
	MSPI and WANO Reporting, LaSalle County Generating Station–Core Standby Cooling System (CSCS)	7/2014 – 6/2015
LER 2015-001-00	High Pressure Core Spray Inoperable Due to Division 3 Diesel Generator Cooling	2/27/2015
LER 2015-002-00	Two Main Steam Safety Relief Valves Failed Inservice Lift Inspection Pressure	4/15/2015
LER 2015-002-01	Two Main Steam Safety Relief Valves Failed Inservice Lift Inspection Pressure	7/15/2015
LER 2015-003-00	Reactor Recirculation Loop Discharge Isolation Valve Vent Line Leak Due to Weld	10/6/2015
LS-AA-2090	Monthly Data Elements for NRC Reactor Coolant System Specific Activity	Rev. 4

4OA2 Identification and Resolution of Problems

ACTION REQUESTS

<u>Number</u>	<u>Description or Title</u>
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02574457	NRC Id Fire Extinguisher 304 Not Checked On Monthly Tag
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ACTION REQUESTS GENERATED FROM NRC OR IEMA INSPECTION

<u>Number</u>	<u>Description or Title</u>
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02555366	NRC Id: LOS-RI-Q5 Enhancement
02557318	NRC-Question On MA-AA-716-234 Risk Screening
02557359	NRC Identified-Cable Tray 2wp Cover Not Secured/Missing.
02560658	NRC Identified-Location Error In LOP-SC-01E
02563147	IEMA Id: 3/4" Clamp For Copper Air Line Is Bent
02563865	NRC Id: Corrosion On Leaking Valve, 2DG011
02563882	NRC Id: Corrosion On The Baseplate, 2E12-C300D
02563894	NRC Id: Dirt And Corrosion Inside Air Intakes On 2DG01P
02563899	NRC Id: Corrosion On Casing Of 2E12-C300A
02563905	NRC Id: Corrosion On Leaking Valve, 2E12-F336A
02563912	NRC Id: Oil Dripping From Valve Operator, 2E12-F336A
02563914	NRC Id: Possible Corrosion On Sump Discharge Piping 2DT16B-3
02563987	NRC Identified Crushed Insulation On 0WS009A WS Check Valve
02564001	NRC Id Lake Screen House Exposed FDN. Wall Dowels Safety
02564441	NRC Identified LSH Fire Header Test Line Surface Corrosion
02564544	NRC Identified LSH Groundwater Seepage
02564548	NRC Identified General Corrosion Of 0FP26P FF Jockey Pump BA
02564702	IEMA - Cable Tray Cover Missing Or Not Properly Secured
02570025	NRC Questions On PLR Exposure
02570776	NRC Identified 2 Broken Cable Ties During NRC Walkdown Of SBLC
02571210	NRC Id'd Update To LTS-600-8 Required
02571451	NRC Identified Debris Present In Floor Drains
02571951	NRC Questioned Missing Concrete With Exposed Rebar In SWT
02574457	NRC Id Fire Extinguisher 304 Not Checked On Monthly Tag
02574742	NRC Id'd Seal Material Degraded Door 20
02574760	NRC Id'd: NXX Identified Items During Plant Walk Down
02574916	NRC Id'd Door 20 Inspection Before Maintenance.
02582235	NRC Id: Discrepancy Between Design Calc And GL 89-13 PBD
02591542	NRC Identified-Work Week Summary Risk Level Question
02591546	NRC Identified Question On RCIC/LPCS Availability
02592464	IEMA Notified The MCR That ELBP 2-64 Has Low Electrolyte Level
02594216	IEMA Id: 1FT-VG009 EQ Qualification Question
02595358	NRC Id RCA Boundary Violation
02600046	IEMA Identified U1 RR HPU A1 Subloop Level Sight Glass Leak
02601432	NRC Identified Plant Walkdown Issues
02606228	NRC Id'd Plant Painting Controls per LAP-900-1

4OA3 Followup of Events and Notices of Enforcement Discretion

ACTION REQUESTS

<u>Number</u>	<u>Description or Title</u>
2421318	NRC ID 250 Vdc Breaker–Fuse Coordination
2421318	NRC Identified 250 V Breaker–Fuse Coordination (Update)

LIST OF ACRONYMS USED

AC	Alternating Current
ADAMS	Agencywide Documents Access Management System
ALARA	As-Low-As-Reasonably-Achievable
APRM	Average Power Range Monitor
AR	Action Report (sometimes known as IRs or Issue Reports)
ATWS	Anticipated Transient without Scram
CAP	Corrective Action Program
CDF	Core Damage Frequency
CFR	Code of Federal Regulations
CRD	Control Rod Drive
CSCS	Core Standby Cooling System
DG	Diesel Generator
HPCS	High Pressure Core Spray
HVAC	Heating Ventilation and Air Conditioning
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
JPM	Job Performance Measure
kV	Kilovolt
LER	Licensee Event Report
LERF	Large Early Release Frequency
LOOP	Loss of Off-site Power
LORT	Licensed Operator Requalification Training
mrem	Millirem
MSPI	Mitigating System Performance Index
MSIV	Main Steam Isolation Valve
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NFPA	National Fire Protection Association
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
PI	Performance Indicator
RCIC	Reactor Core Isolation Cooling
RG	Regulatory Guide
RHR	Residual Heat Removal
SAT	Systems Approach to Training
SBGT	Standby Gas Treatment
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
VC	Control Room Ventilation
Vdc	Volts Direct Current
VE	Auxiliary Electrical Equipment Room Ventilation
VOC	Volatile Organic Compounds
WO	Work Order
WRGM	Wide Range Gas Monitor

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Sincerely,

/RA/

Billy Dickson, Chief
Branch 5
Division of Reactor Projects

Docket Nos. 50-373; 50-374
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