



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

January 25, 2012

Mr. Michael J. Pacilio  
Senior Vice President, Exelon Generation Company, LLC  
President and Chief Nuclear Officer (CNO), Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

**SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2 - NRC INTEGRATED  
INSPECTION REPORT 05000373/2011005 AND 05000374/2011005**

Dear Mr. Pacilio:

On December 31, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your LaSalle County Station, Units 1 and 2. The enclosed report documents the inspection results which were discussed on January 4, 2012, with the Site Vice President, Mr. D. Rhoades, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Two NRC-identified findings of very low safety significance (Green) were identified during this inspection.

These findings were determined to involve violations of NRC requirements. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest 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 Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the LaSalle County Station.

If you disagree with the cross-cutting aspect assignment 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 LaSalle County Station.

M. Pacilio

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In accordance with 10 CFR 2.390 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 Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Document 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/*

Michael Kunowski, Chief  
Branch 5  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000373/2011005; 05000374/2011005  
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 05000373; 05000374  
License Nos: NPF-11; NPF-18

Report No: 05000373/2011005; 05000374/2011005

Licensee: Exelon Generation Company, LLC

Facility: LaSalle County Station, Units 1 and 2

Location: Marseilles, IL

Dates: October 1, 2011 – December 31, 2011

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Branch 5  
Division of Reactor Projects

Enclosure

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## SUMMARY OF FINDINGS

IR 05000373/2011005; 05000374/2011005; 10/01/2011 – 12/31/2011; LaSalle County Station, Units 1 & 2; Maintenance Effectiveness and Plant Modifications.

This report covers a three-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. Two Green findings were identified by the inspectors. The findings were considered non-cited violations (NCVs) of NRC regulations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP); cross-cutting aspects were determined using IMC 0310, "Components Within the Cross-Cutting Areas." Findings for which the SDP does not apply may be Green or be assigned a severity level (SL) after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

### A. NRC-Identified and Self-Revealed Findings

#### **Cornerstone: Mitigating Systems**

- Green. A finding of very low safety significance and associated NCV of Title 10 of the Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors for the failure to promptly identify and correct a condition adverse to quality. Specifically, on November 8, 2011, the inspectors identified that the oil reservoir on the Unit 1 high pressure core spray (HPCS) waterleg pump was empty, with a soiled oil-absorbent pad positioned beneath it. The licensee had previously identified a leak from the reservoir and placed the pad beneath it, but did not enter the problem into the corrective action program (CAP) and did not repair the leak. Upon notification of the condition by the inspectors, the licensee immediately entered this issue into the CAP, verified operability of the HPCS system, restored the oil level, established a special log to monitor the leak, and shortly thereafter replaced the waterleg pump. Additionally, the licensee was conducting an apparent cause evaluation to determine the causes of the occurrence and to develop additional corrective actions.

The finding was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of equipment performance and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences.

The finding was determined to be of very low safety significance because there was no design deficiency, no actual loss of safety function, no single train loss of safety function for greater than the technical specification (TS) allowed outage time, and no risk significance due to external events. This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, for the failure to maintain a low threshold for identifying issues within the CAP commensurate with their safety significance (P.1(a)). (Section 1R12)

#### **Cornerstone: Barrier Integrity**

- SL-IV/Green. A finding of very low safety significance and associated SL-IV NCV of 10 CFR 50.59(c)(2) was identified by the inspectors for the licensee's failure to perform an adequate 10 CFR 50.59 screening when evaluating if the implementation of Racklife

to monitor Unit 2 spent fuel pool (SFP) rack degradation was a departure from a method of evaluation described in the Updated Final Safety Analysis Report (UFSAR). Specifically, when evaluating in 2005, if the proposed activity involved the use of an alternative evaluation methodology that is used in establishing the design bases or used in the safety analyses, the licensee dismissed the screening question as not applicable to the circumstances. As a result, the inspectors could not reasonably determine that the changes would not have ultimately required prior NRC approval. The licensee entered this issue into its CAP as AR 1294090. Since the licensee recently completed the installation of neutron absorbing inserts in the entire Unit 2 SFP, as referenced in License Amendment No.186, the use of Racklife to monitor its degradation will no longer be necessary.

The inspectors determined that the performance deficiency is greater than minor because it was associated with the Barrier Integrity Cornerstone attribute of configuration control (reactivity control) and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The inspectors performed a Phase 1 SDP review of this finding using the guidance provided in IMC 0609, and the finding screened as Green because all the questions in the Barrier Integrity Cornerstone column of IMC 0609's Table 4a were answered "no." Because violations of 10 CFR 50.59 can affect the NRC's ability to perform its regulatory function, they are dispositioned using the traditional enforcement process. The inspectors used the NRC's Enforcement Policy to determine that the violation was a SL-IV violation because the resulting changes were evaluated by the SDP as having very low safety significance. The inspectors did not identify a cross-cutting aspect associated with the underlying finding because the finding was not representative of current performance. (Section 1R18)

**B. Licensee-Identified Violations**

No violations were identified.

## REPORT DETAILS

### Summary of Plant Status

#### **Unit 1**

The unit began the inspection period operating at full power. On December 4, 2011, power was reduced to approximately 80 percent for control rod sequence exchange. The unit was returned to full power that same day. On December 18, power was reduced to approximately 65 percent for control rod sequence exchange, scram time testing, and channel distortion testing. In addition, main steam isolation valve and turbine control valve surveillances were performed. Unit 1 was restored to full power on December 18 where it remained for the rest of the inspection period.

#### **Unit 2**

The unit began the inspection period operating at full power. On October 2, 2011, power was reduced to approximately 80 percent due to the failure of the 24A heater emergency drain valve level controller. Following repairs, the unit was restored to full power on October 3.

On December 11, power was reduced to approximately 55 percent for control rod pattern adjustments, sequence exchange, scram time testing, and channel distortion testing. Unit 2 was restored to 100 percent power on December 12 where it remained 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 Winter Seasonal Readiness Preparations

##### a. Inspection Scope

The inspectors conducted a review of the licensee's preparations for winter conditions to verify that the plant's design features and implementation of procedures were sufficient to protect mitigating systems from the effects of adverse weather. Documentation for selected risk-significant systems was reviewed to ensure that these systems would remain functional when challenged by inclement weather. During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the UFSAR and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant specific procedures. Cold weather protection, such as heat tracing and area heaters, was verified to be in operation where applicable. The inspectors also reviewed CAP items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their CAP in accordance with station corrective action procedures. Specific documents reviewed during this inspection are listed in the Attachment to this report. The inspectors' reviews focused specifically on the following plant systems due to their risk significance or susceptibility to cold weather issues:

- emergency diesel generators (DGs);
- auxiliary building ventilation; and
- lake screen house.

This inspection constituted one winter seasonal readiness preparations 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 1 HPCS system;
- Unit 1 low pressure core spray (LPCS) system; and
- Unit common DG with Unit 2A DG out-of-service.

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, outstanding work orders (WOs), condition reports, 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 three partial system walkdown samples 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:

- Units 1 Cable Spreading Room 4D1;
- Units 2 Cable Spreading Room 4D2; and
- observation of control room operators/fire brigade leader response to actual, unplanned, plant fire alarm.

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 three quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings were identified.

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 area 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:

- core standby cooling system (CSCS) below 710' elevation.

Documents reviewed 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.

1R08 Inservice Inspection Activities (71111.08P)

From February 17 through 25, 2011, the inspectors conducted a review of the implementation of the licensee's inservice inspection (ISI) program for monitoring degradation of the Unit 2 reactor coolant system, emergency feedwater systems, risk-significant piping and components, and containment systems.

The inspections described in Sections 1R08.1 and 1R08.2 below constitute one inspection sample as defined in IP 71111.08.

.1 Piping Systems Inservice Inspection

a. Inspection Scope

The inspectors observed the following nondestructive examinations required by the American Society of Mechanical Engineers (ASME) Section XI Code and/or 10 CFR 50.55a; evaluated compliance with the applicable ASME Code Case and Section V requirements; and, if any indications were detected, determined if these were dispositioned in accordance with the ASME Code or an NRC-approved alternative requirement.

- ultrasonic examination of the six N4 feedwater nozzles;
- magnetic particle examination of residual heat removal (RHR) system lugs, RH 53-2836X and RH 53-2847X; and
- ultrasonic examination of RHR system weld RH-2005B.

The inspectors reviewed the following examination records with relevant/recordable conditions/indications identified by the licensee to determine if acceptance of these indications for continued service was in accordance with the ASME Section XI Code or an NRC-approved alternative:

- Report No. L1R13-APR-001, HPCS Safe End to Nozzle Weld;
- Report No. L1R13-APR-006, HPCS Safe End Extension to Safe End Weld;
- Report No. L1R13-APR-002, LPCS Safe End to Nozzle Weld;

- Report No. L1R13-APR-007, LPCS Safe End Extension to Safe End Weld;
- Report No. L1R13-APR-003, RHR Safe End to Nozzle Weld;
- Report No. L1R13-APR-008, RHR Safe End Extension to Safe End Weld; and
- Report No. L1R13-016, Reactor Pressure Vessel Nozzle to Flange Weld.

The inspectors reviewed the following pressure boundary welds completed for risk-significant Unit 2 systems to determine if the licensee applied the pre-service non-destructive examinations and acceptance criteria required by the construction Code, ASME Section XI Code, and NRC-approved Code Cases. Additionally, the inspectors reviewed the welding procedure specification and supporting weld procedure qualification records to determine if the weld procedures were qualified in accordance with the requirements of the ASME Section IX Code.

- Weld fabrication during replacement of valve 2E12-FO64B of the RHR system; and
- Weld fabrication during the installation of 16 strain gauges on the Main Steam lines.

b. Findings

No findings were identified.

.2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors performed a review of ISI-related problems entered into the licensee's CAP and conducted interviews with licensee staff to determine if:

- the licensee had established an appropriate threshold for identifying ISI-related problems;
- the licensee had performed a root cause (if applicable) and taken appropriate corrective actions; and
- the licensee had evaluated operating experience and industry generic issues related to ISI and pressure boundary integrity.

The inspectors performed these reviews to evaluate compliance with 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements. Documents reviewed are listed in the Attachment to this report.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program (71111.11)

.1 Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope

On October 31, 2011, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator regualification examinations to verify that operator

performance was adequate, evaluators were identifying and documenting crew performance problems, and 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 sample as defined in IP 71111.11.

b. Findings

No findings were identified.

.2 Biennial Written and Annual Operating Test Results (71111.11B)

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the Biennial Written Examination, and the Annual Operating Test, administered by the licensee from October 10, 2011, through November 18, 2011, 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.

This inspection constituted one biennial licensed operator requalification inspection sample as defined in IP 71111.11A.

b. Findings

No findings were identified.

.3 Biennial Review (71111.11B)

a. Inspection Scope

The following inspection activities were conducted during the weeks of October 17 and 24, 2011, 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. Documents reviewed are listed in the Attachment to this report.

- Facility Operating History and Licensee Training Feedback System (10 CFR 55.59(c); SAT Element 5 as Defined in 10 CFR 55.4): The inspectors evaluated the licensee's ability to assess the effectiveness of its LORT program and its ability to implement appropriate corrective actions to maintain its LORT Program up-to-date. The inspectors reviewed documents related to the plant's operating history and associated responses (e.g., plant issue matrix and performance review reports; recent examination and inspection reports; licensee event reports (LERs)). The inspectors reviewed the use of feedback from operators, instructors, and supervisors as well as the use of feedback from plant events and industry experience information. The inspectors reviewed the licensee's quality assurance oversight activities, including licensee training department self-assessment reports.
- Licensee Regualification 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 reviewed the methodology used to construct the examination, including content, level of difficulty, and general quality of the examination/test materials. The inspectors also assessed the level of examination material duplication from week-to-week for both the operating tests conducted during the current year, as well as the written examinations administered in 2011. The inspectors reviewed a sample of the written examinations and associated answer keys to check for consistency and accuracy.
  - 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 two crews in parallel with the facility evaluators during two dynamic simulator scenarios, and evaluated various licensed crew members concurrently with facility evaluators during the administration of several Job Performance Measures.
  - 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.

- 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 input/output controls) and integrity measures (e.g., security agreements, sampling criteria, bank use, and test item repetition) throughout the inspection period.
- Conformance with Simulator Requirements (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.
- 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(i).

This inspection constituted one biennial licensed operator requalification inspection sample as defined in IP 71111.11B.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations (71111.12Q)

a. Inspection Scope

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

- RHR system; and
- Unit 1 HPCS system.

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 two quarterly maintenance effectiveness samples as defined in IP 71111.12-05.

b. Findings

Failure to Promptly Identify and Correct an Oil Leak on the HPCS Waterleg Pump

Introduction: A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors for the failure to promptly identify and correct an oil leak from the HPCS waterleg pump, a condition adverse to quality.

Description: During a system walkdown on November 8, 2011, the inspectors identified that the oil reservoir (bubbler) on the Unit 1 HPCS waterleg pump was empty. The inspectors noted a soiled oil-absorbent pad positioned beneath the bubbler. The inspectors also noted that the pump had just been replaced in October and that the leak had not been entered into the CAP, contrary to station procedure LS-AA-120, "Issue Identification and Screening Process." Had the oil leak been entered into the CAP, corrective actions could have been taken before the inspectors identified that the oil bubbler was completely empty. The inspectors immediately notified the Operations Shift Manager of the degraded condition and observed the licensee's immediate followup actions.

Upon responding to the waterleg pump location, an operator removed the bubbler and verified that oil was still present within the connecting line, thereby confirming that the pump's bearings were never without oil. Further, the licensee performed a vibrational analysis of the pump's operation. With no other apparent degraded conditions present on the waterleg pump, or on the HPCS system in general, the system was confirmed by the licensee to have maintained operability despite the empty bubbler. The operator then refilled and reinstalled the bubbler and proceeded to replace the oil absorbent pad

with a fresh pad. Then, as a result of the inspectors' observations, the licensee entered the issue into the CAP for the first time.

Analysis: The inspectors determined that failing to enter a known condition adverse to quality into the CAP was contrary to a station procedure and was a performance deficiency.

The finding was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, i.e., core damage. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The finding was determined to be of very low safety significance because there was no design deficiency, no actual loss of safety function, no single train loss of safety function for greater than the TS allowed outage time, and no risk significance due to external events.

This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, for the failure to maintain a low threshold for identifying issues within the CAP commensurate with their safety significance (P.1(a)).

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

Contrary to the above, between October 2011 (when the HPCS waterleg pump was replaced and returned-to-service) and November 8, 2011, the licensee failed to promptly identify and correct a condition adverse to quality regarding an oil leak on the HPCS waterleg pump. Specifically, the licensee failed to enter the oil leak into the CAP at the time that it became necessary to place an oil-absorbent pad on the pump. Because the condition was not identified within the CAP, the leak was not promptly corrected and continued until the NRC inspectors identified that the oil bubbler was empty. Upon the inspectors' identification of the empty oil bubbler, the system's condition was such that operability was in question. As part of the corrective actions taken by the licensee, operability of the HPCS system was verified, oil level was restored, and a special log to monitor the leak was established until the waterleg pump was ultimately replaced in December 2011. The licensee is in the process of performing an apparent cause evaluation to determine future corrective actions to address the cause(s) of the violation. Because this violation was of very low safety significance and it was entered into the CAP, as ARs 01287679 and 01301053, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (NCV 05000373/2011005-01, Failure to Promptly Identify and Correct an Oil Leak on the HPCS Waterleg Pump).



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

.1 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:

- Unit 1 Yellow risk during Division III work window;
- Unit 1 Yellow risk during Division I CSCS work window; and
- Unit common B control room ventilation/auxiliary electrical equipment room ventilation emergent repairs and emergent reactor water cleanup leak repair.

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 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 three 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:

- 1B DG lube oil leak (AR 1273465); and
- Operability Evaluation 04-006 (AR 0236085).

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 TSs 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.

This operability inspection constituted two samples as defined in IP 71111.15-05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 (Closed) Unresolved Item (URI) 05000374/2010005-06, Implementation of the Racklife Computer Model to Monitor Unit 2 Spent Fuel Pool Storage Racks Degradation

a. Inspection Scope

The inspectors' review of this issue focused on the application of NRC regulations associated with changes, tests, and experiments to the licensed facility as a result of the implementation of the Racklife computer model to monitor Unit 2 SFP storage rack degradation. In addition to interviewing licensee staff, the inspectors reviewed various documents such as 50.59 screening forms, change request forms, ARs, and UFSAR change request forms. Additionally, the inspectors consulted Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Implementation," Revision 1, which contains NRC-endorsed guidance on the process by which licensees may make changes to their facilities. Additional documents reviewed are listed in the Attachment to this report.

This review of a plant modification issue constituted one sample as defined in IP 71111.18-02.

b. Findings

Failure to Perform an Adequate 10 CFR 50.59 Screening for the Use of Racklife Spent Fuel Pool Monitoring Computer Model

Introduction: The inspectors identified a finding of very low safety significance and associated SL-IV NCV of 10 CFR 50.59, "Changes, Tests, and Experiments," for the failure in 2005 to perform an adequate 10 CFR 50.59 screening when implementing the Racklife computer model to monitor Unit 2 SFP storage rack degradation.

Description: On June 26, 1996, the NRC published Generic Letter 96-04, "Boraflex Degradation in Spent Fuel Pool Storage Racks." The licensee was required to respond to this letter since the SPF for Unit 2 used Boraflex as a neutron absorber. The response was to include an assessment of the capability of Boraflex to maintain five percent sub-criticality margin and a description of the proposed actions if this margin could not be maintained by Boraflex. The licensee responded on November 6, 1996, with an assessment. The assessment was based on coupon testing, rack exposure management, and the margin to criticality existing at the time. In the response,

Racklife was mentioned as an Electrical Power Research Institute-sponsored calculational model that was under development and the licensee stated that the Racklife model's predictions would be used in the future to support the Unit 2 SFP rack management strategy and to identify the need for additional activities to offset any degradation.

In 2005, through a 10 CFR 50.59 screening, the licensee revised UFSAR Section 9.1.2.2, "Unit 2 Spent Fuel Pool," to describe a comprehensive Boraflex monitoring program that included Boraflex coupon surveillance (onsite and offsite). In addition, the change to the UFSAR added periodic neutron blackness testing (Badger testing) and the use of the Racklife computer code to model Boraflex degradation. Subsequently, in 2006, an additional 10 CFR 50.59 screening was performed to again revise Section 9 of the UFSAR to specify that the licensee would conduct Badger testing every three years for as long as Boraflex was credited to help control the Unit 2 SFP reactivity.

In accordance with licensee TS 4.3.1, a  $K_{\text{eff}}$  ( $K$  effective, a criticality multiplication factor) of less than 0.95 must be maintained to ensure operability of the SFP. The Racklife computer model was not part of the criticality analysis that was used to meet the TS limit. However, Racklife provided data that allowed the licensee to manage the storage capacity of the Unit 2 SFP and was used to determine if spent fuel could be stored in any particular cell. Using industry guidance provided in NEI 96-07, Revision 1, "Guidelines for 10 CFR 50.59 Implementation," the inspectors determined that implementing the use of Racklife was a departure from a method of evaluation described in the UFSAR. By implementing Racklife to help manage the Unit 2 SFP storage capacity, the licensee changed to a method of evaluation different from the one described in the UFSAR. This new method has not been approved by the NRC. The licensee's 50.59 screening document, LS-AA-104-1003, "50.59 Screening Form," Revision 1, dismissed the applicable screening question (Does the proposed activity involve an adverse change to an element of a UFSAR described evaluation methodology, or use of an alternative evaluation methodology, that is used in establishing the design bases or used in the safety analyses?) as a "No." Had the licensee appropriately answered "Yes" to this screening question, a full 10 CFR 50.59 Evaluation would have been required to determine if the proposed change required NRC approval via a license amendment.

Analysis: The inspectors determined that the licensee's failure to perform an adequate screening for using Racklife was contrary to 10 CFR 50.59(c)(2) and was a performance deficiency. Using the guidance in IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, the inspectors determined that, in addition to evaluating it with the ROP Significant Determination Process, the performance deficiency should also be evaluated using the traditional enforcement process since it had the potential to impact the agency's ability to perform its regulatory function.

The performance deficiency is greater than minor because it was associated with the Barrier Integrity Cornerstone attribute of configuration control (reactivity control) and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. However, the finding did not result in the compromise of the TS-required limit of  $K_{\text{eff}}$  less than 0.95 in the Unit 2 SFP. Using Table 4a of IMC 0609.04

and answering the questions on the column for the Barrier Integrity Cornerstone as "No," the finding screened as Green.

Since violations of 10 CFR 50.59 are dispositioned using the traditional enforcement process, the inspectors used the NRC's Enforcement Policy to determine the severity of the violation. Using the violation examples of the Enforcement Policy in Section 6.1, "Reactor Operations," the inspectors determined that the violation is a SL-IV violation because the resulting changes were evaluated by the SDP as having very low safety significance.

The inspectors did not identify a cross-cutting aspect associated with the underlying finding because the finding was not representative of current performance.

Enforcement: Title 10 CFR 50.59, "Changes, Tests, and Experiments," Section (d)(1) requires the licensee to maintain records of changes in the facility, of changes in procedures, and of tests and experiments made pursuant to 10 CFR 50.59(c). Title 10 CFR 50.59 (c)(2) states, in part, that a licensee may make changes in the facility as described in the UFSAR without obtaining a license amendment if the change, test, or experiment does not result in a departure from a method of evaluation described in the UFSAR used in establishing the design basis or in the safety analysis.

Contrary to the above, in November 2005, when the licensee performed a 10 CFR 50.59 screening to evaluate the implementation of Racklife computer model to monitor degradation of the Unit 2 SFP storage racks, it did not consider this as a change to a method of evaluation described in the UFSAR.

The violation is associated with a reactor oversight process (ROP) finding that has been evaluated by the SDP and communicated with an SDP color reflective of the safety impact of the deficient licensee performance. The SDP, however, does not specifically consider the regulatory process impact. Thus, although related to a common regulatory concern, it is necessary to address the violation and finding using different processes to correctly reflect both the regulatory importance of the violation and the safety significance of the associated ROP finding.

Because this violation was of very low safety significance, was not repetitive or willful, and it was entered into the licensee's CAP, as AR 1294090, the issue is being treated as a SL-IV NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (NCV 05000374/2011005-02, Failure to Perform an Adequate 10 CFR 50.59 Screening for the Use of Racklife Spent Fuel Pool Monitoring Computer Model).

The underlying finding aspect of a violation is evaluated separately from the traditional enforcement violation and, therefore, the underlying finding is being assigned a separate tracking number (FIN 05000374/2011005-03, Failure to Perform an Adequate 10 CFR 50.59 Screening for the Use of Racklife Spent Fuel Pool Monitoring Computer Model).

Since the licensee recently completed the installation of the neutron absorbing inserts (NETCO Snap-In® Inserts) in the entire Unit 2 SFP as referenced in License Amendment No.186, dated January 28, 2011, the use of Racklife to monitor its degradation is no longer needed by the licensee.

This URI is considered closed.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

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

- Unit 1 primary containment ventilation system;
- Unit 2 RHR minimum flow bypass valve; and
- Unit 2 RHR A suppression chamber spray valve.

These activities were selected based upon the SSC'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 PMTs 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 three PMT 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:

- LOS-RP-Q3 Main Steam Isolation Valve Scram Functional Test (Routine); and
- LOS-RD-M3 Control Rod Monthly Surveillance (Routine).

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

- did preconditioning occur;
- were the effects of the testing adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- were acceptance criteria clearly stated, demonstrated operational readiness, and 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 ASME Section XI 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 71111.22-02 and -05.

b. Findings

No findings were identified.

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

.1 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

Since the last NRC inspection of this program area, emergency action level and Emergency Plan Revision 32 was implemented based on the licensee's determination, in accordance with 10 CFR 50.54(q), that the changes resulted in no decrease in effectiveness of the Plan, and that the revised Plan, as changed, continues to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50.

The inspectors conducted a sampling review of the Emergency Plan changes and a review of the Emergency Action Level changes to evaluate for potential decreases in effectiveness of the Plan. However, these reviews do not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety.

This emergency action level and emergency plan changes inspection constituted one sample as defined in IP 71114.04-05.

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 October 31, 2011, which required emergency plan implementation by a licensee operations crew. This evolution was planned to be evaluated and included in performance indicator (PI) 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 and other documents listed in the Attachment to this report.

This inspection of the licensee's training evolution with emergency preparedness drill aspects constituted one sample as defined in IP 71114.06-05.

b. Findings

No findings were identified.

## 2. RADIATION SAFETY

### Cornerstones: Occupational Radiation Safety and Public Radiation Safety

#### 2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

The inspection activities supplement those documented in Inspection Report 05000373/2011002; 05000374/2011002, and constitute one complete sample as defined in IP 71124.01-05.

##### .1 Radiation Worker Performance (02.07)

###### a. Inspection Scope

The inspectors reviewed radiological problem reports since the last inspection that found the cause of the event to be human performance errors. The inspectors evaluated whether there was an observable pattern traceable to a similar cause. The inspectors assessed whether this perspective matched the corrective action approach taken by the licensee to resolve the reported problems. The inspectors discussed with the radiation protection manager any problems with the corrective actions planned or taken.

###### b. Findings

No findings were identified.

##### .2 Radiation Protection Technician Proficiency (02.08)

###### a. Inspection Scope

The inspectors reviewed radiological problem reports since the last inspection that found the cause of the event to be radiation protection technician error. The inspectors evaluated whether there was an observable pattern traceable to a similar cause. The inspectors assessed whether this perspective matched the corrective action approach taken by the licensee to resolve the reported problems.

###### b. Findings

No findings were identified.

#### 2RS4 Occupational Dose Assessment (71124.04)

The inspection activities supplement those documented in Inspection Report 05000373/2010003; 05000374/2010003, and constitute one complete sample as defined in IP 71124.04-05.



.1 Special Dosimetric Situations (02.04)

Declared Pregnant Workers

a. Inspection Scope

The inspectors assessed whether the licensee informed workers, as appropriate, of the risks of radiation exposure to the embryo/fetus, the regulatory aspects of declaring a pregnancy, and the specific process to be used for (voluntarily) declaring a pregnancy.

The inspectors selected individuals who had declared pregnancy during the current assessment period and evaluated whether the licensee's radiological monitoring program (internal and external) for declared pregnant workers was technically adequate to assess the dose to the embryo/fetus. The inspectors reviewed exposure results and monitoring controls employed by the licensee and with respect to the requirements of the 10 CFR Part 20.

b. Findings

No findings were identified.

Shallow Dose Equivalent

%\_ Inspection Scope

The inspectors reviewed shallow dose equivalent dose assessments for adequacy. The inspectors evaluated the licensee's method (e.g., VARSKIN or similar code) for calculating shallow dose equivalent from distributed skin contamination or discrete radioactive particles.

b. Findings

No findings were identified.

Neutron Dose Assessment

a. Inspection Scope

The inspectors evaluated the licensee's neutron dosimetry program, including dosimeter types and/or survey instrumentation.

The inspectors reviewed neutron exposure situations (e.g., independent spent fuel storage installation operations or at-power containment entries) and assessed whether: (a) dosimetry and/or instrumentation was appropriate for the expected neutron spectra; (b) there was sufficient sensitivity for low dose and/or dose rate measurement; and (c) neutron dosimetry was properly calibrated. The inspectors also assessed whether interference by gamma radiation had been accounted for in the calibration and whether time and motion evaluations were representative of actual neutron exposure events, as applicable.

b. Findings

No findings were identified.

## Assigning Dose of Record

### a. Inspection Scope

For the special dosimetric situations reviewed in this section, the inspectors assessed how the licensee assigned dose of record for total effective dose equivalent, shallow dose equivalent, and lens dose equivalent. The inspector assessed external and internal monitoring results, supplementary information on individual exposures (e.g., radiation incident investigation reports and skin contamination reports), and radiation surveys and/or air monitoring results when dosimetry was based on these techniques.

### b. Findings

No findings were identified.

## 2RS5 Radiation Monitoring Instrumentation (71124.05)

This inspection constituted one complete sample as defined in IP 71124.05-05.

### .1 Inspection Planning (02.01)

#### a. Inspection Scope

The inspectors reviewed the plant UFSAR to identify radiation instruments associated with monitoring area radiological conditions, including airborne radioactivity, process streams, effluents, materials/articles, and workers. Additionally, the inspectors reviewed the instrumentation system and the associated TS requirements for post-accident monitoring instrumentation, including instruments used for remote emergency assessment.

The inspectors reviewed a listing of in-service survey instrumentation, including air samplers and small article monitors, along with instruments used to detect and analyze workers' external contamination. Additionally, the inspectors reviewed personnel contamination monitors and portal monitors, including whole-body counters, used to detect workers' internal contamination. The inspectors reviewed this inspection list and assessed whether an adequate number and type of instruments were available to support operations.

The inspectors reviewed licensee and third-party evaluation reports of the radiation monitoring program since the last inspection. These reports were reviewed for insights into the licensee's program and to aid in selecting areas for review ("smart sampling").

The inspectors reviewed procedures that govern instrument source checks and calibrations, focusing on instruments used for monitoring transient high radiological conditions, including instruments used for underwater surveys. The inspectors reviewed the calibration and source check procedures for adequacy and as an aid to smart sampling.

The inspectors reviewed the area radiation monitor alarm setpoint values and setpoint bases as provided in the TSs and the UFSAR.

The inspectors reviewed effluent monitor alarm setpoint basis and the calculational methods provided in the Offsite Dose Calculation Manual (ODCM).

b. Findings

No findings were identified.

.2 Walkdowns and Observations (02.02)

a. Inspection Scope

The inspectors walked down effluent radiation monitoring systems, including at least one liquid and one airborne system. Focus was placed on flow measurement devices and all accessible point-of-discharge liquid and gaseous effluent monitors of the selected systems. The inspectors assessed whether the effluent/process monitor configurations aligned with ODCM descriptions and observed monitors for degradation and out-of-service tags.

The inspectors selected portable survey instruments that were in use or available for issuance and assessed calibration and source check stickers for currency as well as instrument material condition and operability.

The inspectors observed licensee staff performance as the staff demonstrated source checks for various types of portable survey instruments. The inspectors assessed whether high-range instruments were source checked on all appropriate scales.

The inspectors walked down area radiation monitors and continuous air monitors to determine whether they were appropriately positioned relative to the radiation sources or areas they were intended to monitor. Selectively, the inspectors compared monitor response (via local or remote control room indications) with actual area conditions for consistency.

The inspectors selected personnel contamination monitors, portal monitors, and small article monitors and evaluated whether the periodic source checks were performed in accordance with the manufacturer's recommendations and licensee procedures.

b. Findings

No findings were identified.

.3 Calibration and Testing Program (02.03)

Process and Effluent Monitors

a. Inspection Scope

The inspectors selected effluent monitor instruments (such as gaseous and liquid) and evaluated whether channel calibration and functional tests were performed consistent with radiological effluent TS/ODCM. The inspectors assessed whether (a) the licensee calibrated its monitors with National Institute of Standards and Technology traceable sources; (b) the primary calibrations adequately represented the plant nuclide mix; (c) when secondary calibration sources were used, the sources were verified by the

primary calibration; and (d) the licensee's channel calibrations encompassed the instrument's alarm setpoints.

The inspectors assessed whether the effluent monitor alarm setpoints were established as provided in the ODCM and station procedures.

Changes to effluent monitor setpoints were enabled; the inspectors evaluated the bases for the changes to ensure that an adequate justification existed.

b. Findings

No findings were identified.

Laboratory Instrumentation

a. Inspection Scope

The inspectors assessed laboratory analytical instruments used for radiological analyses to determine whether daily performance checks and calibration data indicated that the frequency of the calibrations was adequate and there were no indications of degraded instrument performance.

The inspectors assessed whether appropriate corrective actions were implemented in response to indications of degraded instrument performance.

b. Findings

No findings were identified.

Whole Body Counter

a. Inspection Scope

The inspectors reviewed the methods and sources used to perform whole body count functional checks before daily use of the instrument and assessed whether check sources were appropriate and aligned with the plant's isotopic mix.

The inspectors reviewed whole body count calibration records since the last inspection and evaluated whether calibration sources were representative of the plant source term and that appropriate calibration phantoms were used. The inspectors looked for anomalous results or other indications of instrument performance problems.

b. Findings

No findings were identified.

Post-Accident Monitoring Instrumentation

a. Inspection Scope

The inspectors selected drywell high-range monitors and reviewed the calibration documentation since the last inspection.

The inspectors assessed whether an electronic calibration was completed for all range decades above 10 rem/hour and whether at least one decade at or below 10 rem/hour was calibrated using an appropriate radiation source.

The inspectors assessed whether calibration acceptance criteria were reasonable and accounted for the large measuring range and the intended purpose of the instruments.

The inspectors selected two effluent/process monitors that were relied on by the licensee in its emergency operating procedures as a basis for triggering emergency action levels and subsequent emergency classifications, or to make protective action recommendations during an accident. The inspectors evaluated the calibration and availability of these instruments.

The inspectors reviewed the licensee's capability to collect high-range, post-accident iodine effluent samples.

As available, the inspectors observed electronic and radiation calibration of these instruments to assess conformity with the licensee's calibration and test protocols.

b. Findings

No findings were identified.

Portal Monitors, Personnel Contamination Monitors, and Small Article Monitors

a. Inspection Scope

For each type of these instruments used onsite, the inspectors assessed whether the alarm setpoint values were reasonable under the circumstances to ensure that licensed material was not released from the site.

The inspectors reviewed the calibration documentation for each instrument selected and the calibration methods with the licensee to determine consistency with the manufacturer's recommendations.

b. Findings

No findings were identified.

Portable Survey Instruments, Area Radiation Monitors, Electronic Dosimetry, and Air Samplers/Continuous Air Monitors

a. Inspection Scope

The inspectors reviewed calibration documentation for at least one of each type of instrument. The inspectors reviewed detector measurement geometry and calibration methods and had the licensee demonstrate use of its instrument calibrator for portable survey instruments and area radiation monitors. For the portable survey instruments and area radiation monitors, the inspectors compared instrument readings to an NRC survey instrument if problems were suspected.

As available, the inspectors selected portable survey instruments that did not meet acceptance criteria during calibration or source checks to assess whether the licensee

had taken appropriate corrective action for instruments found significantly out of calibration (greater than 50 percent). The inspectors evaluated whether the licensee had evaluated the possible consequences of instrument used since the last successful calibration or source check.

b. Findings

No findings were identified.

Instrument Calibrator

a. Inspection Scope

As applicable, the inspectors reviewed the current output values for the licensee's portable survey and area radiation monitor instrument calibrator unit(s). The inspectors assessed whether the licensee periodically measured calibrator output over the range of the instruments used through measurements by ion chamber/electrometer.

The inspectors assessed whether the measuring devices had been calibrated by a facility using National Institute of Standards and Technology traceable sources and whether corrective factors for these measuring devices were properly applied by the licensee in its output verification.

b. Findings

No findings were identified.

Calibration and Check Sources

a. Inspection Scope

The inspectors reviewed the licensee's 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," source term to assess whether calibration sources used were representative of the types and energies of radiation encountered in the plant.

b. Findings

No findings were identified.

.4 Problem Identification and Resolution (02.04)

a. Inspection Scope

The inspectors evaluated whether problems associated with radiation monitoring instrumentation were being identified by the licensee at an appropriate threshold and were 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 that involve radiation monitoring instrumentation.

b. Findings

No findings were identified.

#### 4. OTHER ACTIVITIES

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

#### 4OA1 Performance Indicator Verification (71151)

##### .1 Safety System Functional Failures

###### a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures PI for Unit 1 and Unit 2 for the fourth quarter 2010 through the third quarter 2011. To determine the accuracy of the PI data reported during this period, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, 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 WOs, issue reports, event reports, and NRC Integrated Inspection Reports for the period 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 PI Unit 1 and Unit 2 for the fourth quarter 2010 through the third quarter 2011. To determine the accuracy of the PI data reported during this period, PI definitions and guidance contained in NEI 99-02 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 period 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 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 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 PI Unit 1 and Unit 2 for the fourth quarter 2010 through the third quarter 2011. To determine the accuracy of the PI data reported during this period, PI definitions and guidance contained in NEI Document 99-02 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 period 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 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.

4OA2 Identification and Resolution of Problems (71152)

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

.1 Routine Review of Items Entered into the CAP

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 that the issues 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 followup, 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 six-month period of July 2011 through December 2011, although some examples may have expanded beyond those dates where the scope of the trend warranted.

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, system health reports, quality assurance audit/surveillance reports, self-assessment reports, and Maintenance Rule assessments. 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

No findings were identified.

.4 Selected Issue Followup Inspection: Dedicated Operator Use of Emergency Restoration Procedure Steps

a. Inspection Scope

The inspectors selected the use of emergency restoration steps by a dedicated operator during surveillance tests as an issue-followup inspection. Specifically, the inspectors reviewed the use of restoration actions to maintain the availability of safety-related systems during tests or evolutions that would result in the system being inoperable and unavailable. The inspectors review focused on verifying that the restoration steps were contained in a written procedure, were uncomplicated, did not require diagnosis or repair, and could be completed within the allowed Probabilistic Risk Assessment outage times. In addition to reviewing Nuclear Management and Resources Council document 93-01, Section 11, "Assessment of Risk Resulting from Performance of Maintenance Activities," issued February 22, 2000, for guidance, the inspectors interviewed operations personnel and observed restoration action demonstrations in the plant. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

4OA3 Followup of Events and Notices of Enforcement Discretion (71153)

.1 Retraction of Event Notification (EN) 47509

a. Inspection Scope

The inspectors reviewed the plant's emergency notification system report, EN 47509, that was transmitted to the NRC on December 7, 2011, when the reactor building ventilation differential pressure exceeded the TS allowable limit. This non-emergency notification was made in accordance with 10 CFR 50.72(b)(3)(v), "Event or condition that could have prevented the fulfillment of a safety function." After conducting an in-depth evaluation of the occurrence, the licensee later determined that the reactor building, which also serves as the secondary containment structure for both units, maintained its ability to perform its safety function and retracted the EN on December 22. The inspectors reviewed the basis of the retraction to ensure that it was technically accurate and met 50.72 reporting requirements. Documents reviewed are listed in the Attachment. to this report.

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

b. Findings

No findings were identified.

.2 (Closed) LER 05000373-2011-004-00 and 01: Loss of Secondary Cooling Function Due to Spurious Closure of the Shutdown Cooling Suction Isolation Valve

This event occurred on February 2, 2011, while Unit 1 was in Mode 3 (Hot Shutdown), cooling down to Mode 4 (Cold Shutdown) in order to perform forced outage work following an unplanned reactor scram. While in Mode 3, the 1B RHR pump was started in preparation for starting the Shutdown Cooling (SDC) system. When the pump was started, a momentary high pump suction flow signal was received, causing the common pump suction isolation valve 1E12-F009 to close and the 1B RHR pump to trip.

Both SDC trains were declared inoperable, and TS 3.4.9, "RHR Shutdown Cooling System — Hot Shutdown," Required Action A.1 was entered, which specified that action be initiated immediately to restore the RHR SDC system to operable status. The control room operators determined that the isolation was spurious, reset the containment isolation logic, reopened the valve, and exited the associated TS timeclock.

This occurrence was reportable under 10 CFR 50.73(a)(2)(v)(B) as an event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to remove decay heat. This event constituted a safety system functional failure.

Inspectors previously reviewed the technical and programmatic adequacy of the licensee's actions in response to the events described in the subject LER. Inspection report 05000373/374/2011003, second quarter 2011 integrated report, and 05000373/374/2011008, biennial problem identification and resolution inspection report, contain documentation of the NRC-identified violations associated with this event.

For this current inspection, the inspectors identified no additional findings during their review. Documents reviewed are listed in the Attachment to this report. This LER is closed.

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

.3 (Closed) LER 05000374/2011-001-00: Turbine Control Valve Fast Closure Trip Oil Pressure Switch Inoperable Due to Incomplete Surveillance Testing

This event occurred on May 27, 2011, while Unit 2 was in Mode 1 at 100 percent power. The 2A turbine control valve fast-closure trip oil pressure switch (2C71-N005A) was declared inoperable following the discovery that the required PMT had not been performed after replacement of the switch during the previous refueling outage. Response time testing as required by TS Surveillance Requirement 3.3.1.1.17 had been inadvertently omitted.

TS 3.3.1.1 Required Action A.1 was entered to place the channel in trip within 12 hours, and TS 3.3.4.1 Required Action A.1 was entered to restore the channel to operable status within 72 hours. The required TS surveillance was completed, 2C71-N005A was declared operable, and exited the associated TS timeclock.

This occurrence was reportable under 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by the plant's TSs.

Inspectors previously reviewed the technical and programmatic adequacy of the licensee's actions in response to the issue described in the subject LER. Inspection report 05000373/374/2011003, second quarter 2011 integrated report, contains documentation of the licensee-identified violation associated with this issue.

For this current inspection, the inspectors identified no additional findings during their review. Documents reviewed are listed in the Attachment to this report. This LER is closed.

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

#### 4OA6 Management Meetings

##### .1 Exit Meeting Summary

On January 4, 2012, the inspectors presented the inspection results to Site Vice President, D. Rhoades, 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 results of the ISI inspection with Mr. Rhoades on February 25, 2011;
- the results of inspections in the occupational and public radiation safety programs with Mr. K. Hedgspeth on November 4, 2011;
- the results of the LORT program inspection were discussed with Mr. Rhodes on November 18, 2011, and the results of the 2011 test review were discussed with Mr. R. Frederes on November 22; and
- the annual review of emergency action level and emergency plan changes with the licensee's Emergency Preparedness Coordinator, Mr. J. Hughes, via telephone on December 8, 2011.

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

D. Rhoades, Site Vice President  
P. Karaba, Plant Manager  
K. Hedgspeth, Radiation Protection Manager  
K. Ihnen, Nuclear Oversight Manager  
T. Simpkin, Regulatory Affairs Manager  
H. Vinyard, Site Engineering Director  
M. Sharma, Engineering Program Manager  
S. Shields, Regulatory Affairs  
J. Shields, ISI Program Manager  
J. Smith, Operations Training Manager  
G. Beale, Operations Training  
R. Frederes, Operations Training  
J. Paczolt, Operations Training  
J. Hughes, Emergency Preparedness Coordinator

#### Nuclear Regulatory Commission

Michael Kunowski, Chief, Reactor Projects Branch 5  
Hironori Peterson, Chief, Operations Branch  
Billy Dickson, Chief, Plant Support Team  
AnnMarie Stone, Chief, Engineering Branch 2

## LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

### Opened

05000373/2011005-01	NCV	Failure to Promptly Identify and Correct an Oil Leak on the HPCS Waterleg Pump (Section 1R12)
05000374/2011005-02	NCV	Failure to Perform an Adequate 10 CFR 50.59 Screening for the Use of Racklife Spent Fuel Pool Monitoring Computer Model (Section 1R18)
05000374/2011005-03	FIN	Failure to Perform an Adequate 10 CFR 50.59 Screening for the Use of Racklife Spent Fuel Pool Monitoring Computer Model (Section 1R18)

### Closed

05000373/2011005-01	NCV	Failure to Promptly Identify and Correct an Oil Leak on the HPCS Waterleg Pump (Section 1R12)
05000374/2011005-02	NCV	Failure to Perform an Adequate 10 CFR 50.59 Screening for the Use of Racklife Spent Fuel Pool Monitoring Computer Model (Section 1R18)
05000374/2011005-03	FIN	Failure to Perform an Adequate 10 CFR 50.59 Screening for the Use of Racklife Spent Fuel Pool Monitoring Computer Model (Section 1R18)
05000373/2011004-00/01	LER	Loss of Secondary Cooling Function Due to Spurious Closure of the Shutdown Cooling Suction Isolation Valve (Section 4OA3.2)
05000374/2011001-00	LER	Turbine Control Valve Fast Closure Trip Oil Pressure Switch Inoperable Due to Incomplete Surveillance Testing (Section 4OA3.3)
05000374/2010005-06	URI	Implementation of the Racklife Computer Model to Monitor Unit 2 Spent Fuel Pool Storage Racks Degradation (Section 1R18)

## 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

#### Action Requests:

- 1102692; Heat Trace for the B RSH Traveling Screen Covered with Mud
- 1102695; Heat Trace for LSH Traveling Screen Not Working
- 1106281; EED – Switchyard Winterization
- 1127082; Winter Operation Preparations
- 1135627; Line Needs Insulation Repaired. Winter Readiness Item
- 1135635; Line Needs Insulation Repaired. This is a Winter Readiness
- 1146202; LaSalle Winter Readiness Items Not Completed by 12/1/10
- 1233857; Deicing Salt Impact on Equipment
- 1245643; Winter Readiness – Walkdown of Chemical Feed Building
- 1279484; Heat Trace Alarm for Pipe 0WW61A
- 1295452; Heater Fan Not Operating
- 1297603; Found Heater Not Turned On
- 1299986; Jacket HTR Not Working (Winter Readiness)

#### Working Documents:

- AR 1233857; Apparent Cause Evaluation: Deicing Salt Impact on Equipment At LaSalle Plant Periphery in Protected Area; 6/14/2011
- WO 1392995-01; LOS-ZZ-A2 Winterize Station; 10/01/2011

#### Miscellaneous:

- ATI 1252755-02; Management Directed Assessment Winter Readiness; 11/17/2011
- LaSalle Certification Letter for Winter Readiness; 11/14/2011

### 1R04 Equipment Alignment

#### Procedures:

- LOP-DC-01; Battery Charger Startup and Shutdown; Rev. 38
- LOP-DG-01E; Unit 1A Diesel Generator Electrical Checklist; Rev. 7
- LOP-DG-01M; Unit 1A Diesel Generator Mechanical Checklist; Rev. 7

#### Miscellaneous:

- AR Search for “Misposition”; 1/1/2011 – 12/29/2011
- AR Search for “Configuration Control”; 1/1/2011 – 12/29/2011
- LOP-HP-01M; Unit 1 High Pressure Core Spray Mechanical Checklist; 2/10/2010
- LOP-LP-01E; Unit 1 Low Pressure Core Spray Electrical Checklist; 11/22/2011
- LOP-LP-01M; Unit 1 Low Pressure Core Spray Mechanical Checklist; 11/22/2011

### 1R05 Fire Protection

#### Action Requests:

- 1306224; SSB Fire Panel Alarm

## 1R06 Flooding

### Miscellaneous:

- NUREG-0800; 3.6.2 Determination of Rupture Locations and Dynamic Effects Associated with the Postulated Rupture of Piping; Rev. 2

## 1R08 ISI Activities

### Procedures:

- ER-AA-330-009; ASME Section XI Repair/Replacement Plan for WO No. 01240468; 10/21/2010
- GE-MT-100; Procedure for Magnetic Particle Examination; Rev. 8.
- GEH-UT-718; Examination of Reactor Pressure Vessel Nozzle Inside Radius Sections from the Outside Surface with MICROTOMO in Accordance with Appendix VIII; Rev. 3.
- GEH-PDI-UT2; PDI Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds; Rev. 5.
- GEH-UT-247; Procedure for Phased Array Ultrasonic Examination of Dissimilar Metal Welds; Rev. 1.
- GEH-UT-716; Examination of Reactor Pressure Vessel Welds from the Outside Surface with MICROTOMO in Accordance with Appendix VIII; Rev. 3.
- MA-LA-796-001; EMI/RFI Evaluation & Mitigation Techniques for Welding Activities; Rev. 1
- MA-MW-796-101; ASME Weld Data Record for WO 01231145-01; Rev. 4.
- WPS 1-1-GTSM-PWHT; ASME Welding Procedure Specification Record; Rev. 2.
- Wyle Welding Procedure T57688P0110; Welding Procedure for Installation of Strain Gauges on Main Steam Lines in Exelon's LaSalle Unit 2 Nuclear Station; 5/10/2010

### Action Requests:

- 01027531; NOS Identified Piping Assembly Failed Hydrostatic Test; 2/8/2010
- 01030879; Relevant ISI Indications on RPV Head Washers from L1R12; 2/10/2010
- 01032636; Required NDE Exam for Welds Not Identified on Weld Record; 2/18/2010
- 01036797; RM CRD 26-15 Flange Leakage During Vessel Leakage Test; 3/1/2010
- 01086083; Defective Weld Allows Water Leakage into Surrounding Containment; 3/5/2010
- 01090982; CDBI-FASA-Revise UFSTable 6.2-21; 7/15/2010
- 01108638; NOS Identified ANI Work Order Signatures Missing; 9/1/2010
- 01131066; Incorrect Weld Size Specified In Work Package; 10/26/2010
- 01155333; ISI Program Documents not Updated Per Procedure; 12/8/2010
- 01177873; Relevant NDE Indication on 2B21-CIVS Steam Strainer Seal Welds; 2/20/2011
- 01177883; Relevant NDE Indication on 2B21-MSV4 Steam Strainer Seal Welds; 2/20/2011

### Working Documents:

- Procedure Qualification Record 1-50C; GTAW PQR; 1/3/1984.
- Procedure Qualification Record A-001; GTAW/SMAW PQR; 10/19/1998
- WO 01231145; Replace Valve 2E12-Fo64B; 2/18/2011
- WO 01240468; Install U2 Strain Gauge for Main Steam Dryer Analysis; 2/23/2011

### Miscellaneous

- Report L1R13-016; Ultrasonic Examination Report for RPV Nozzle to Flange Weld; 2/16/2010
- Report L1R13-APR-001; Ultrasonic Examination Report for HPCS Safe End to Nozzle Weld; 2/15/2010
- Report L1R13-APR-002; Ultrasonic Examination Report for LPCS Safe End to Nozzle Weld; 2/16/2010



- Report L1R13-APR-003; Ultrasonic Examination Report for RHR Safe End to Nozzle Weld; 2/17/2010
- Report L1R13-APR-006; Ultrasonic Examination Report for HPCS Safe End Extension to Safe End Weld; 2/15/2010
- Report L1R13-APR-007; Ultrasonic Examination Report for LPCS Safe End Extension to Safe End Weld; 2/14/2010
- Report L1R13-APR-008; Ultrasonic Examination Report for RHR Safe End Extension to Safe End Weld; 2/18/2010
- Report L2R13-007; UT Examination Report for N4 Feed Water Nozzle Inner Radius and Bore; 2/18/2011
- Report L2R13-043; Ultrasonic Examination Report for Component IRH-2005-33 Weld, 2/18/2011
- Report L2R13-048; UT Examination Report for N4 Feed Water Nozzle to Shell Welds; 2/18/2011
- Report L2R13-059; Magnetic Particle Examination Report for Lugs RH53-2836X; 2/22/2011
- Report L2R13-060; Magnetic Particle Examination Report for Lugs RH53-2847X; 2/22/2011

### 1R11 Licensed Operator Regualification Program

#### Procedures:

- JPM; P-CY-05; Rev. 10
- JPM; P-EP-118; Rev. 1
- JPM; P-NB-04; Rev. 16
- JPM; P-PC-02; Rev. 15
- JPM; S-AP-05; Rev. 3
- JPM; S-RX-01; Rev. 2
- LOS-FP-SR1; Diesel Fire Pump Flow Test; Rev. 6
- OP-AA-105-101; Administrative Process for NRC License and Medical Requirements; Rev. 12
- OP-AA-105-102; NRC Active License Maintenance; Rev. 9
- S-11-6-4; ATWS Drill Dynamic Simulator Scenario Guide; Rev. 0
- TQ-AA-306; Simulator Management; Rev. 2

#### Action Requests:

- 1233962; LOS-FP-SR1 Will Need Rescheduled; 6/28/2011
- 1226136; Editorial Change Needed to LOR-1PM10J-B504; 6/8/2011
- 1237057; TRNG ATV; Critical Steps in JPM's; 7/6/2011
- 1237163; TRNG ATV; Number of Instructors Developing Sim Scenario's
- 1291650; TRNG – NRC Identified; Tolerance for Simulator Testing; 11/17/2011
- 1080288-10; Upgrade of Simulator Test Procedures; 11/18/2011
- 1080288-11; Evaluate Format, Control of Sim Test Procedures; 11/18/2011
- 1080288-12; Incorporate Pen-and-Ink Changes to 2011 Sim Tests; 11/18/2011
- 01090340; Crew Failure during Simulator OBE
- 01077971; Participation by OPS Senior Manager in LORT OBE
- 01063385; OPS Training Group End of Week Critique
- 01002930; 2 DEP Failures during LORT Annual Exams

#### Working Documents:

- NARS 1; Nuclear Accident Report (Drill); 12/31/2011

Miscellaneous:

- ANSI/ANS – 3.5 – 1985; Nuclear Power Plant Simulators for use in Operator Training
- ATI 1097100-02; Comprehensive Self-Assessment on LaSalle Operator Training Programs Identified that Objective 2 of ACAD 02-001, The Objectives and Criteria for Accreditation in the Nuclear Power Industry, Was Not Fully Met; 09/23/10
- ESG109; Simulator Scenario; Rev. 0
- ESG110; Simulator Scenario; Rev. 0
- Evaluation Summary; LORT Cycles 10-1, 10-2, 11-1, 11-2
- LaSalle 1T11 Site Tri-Annual Performance Report; 05/25/11
- LaSalle 3T10 Site Tri-Annual Performance Report; 01/19/11
- LaSalle Simulator Test; Real Time 1; 2010 and 2011
- LaSalle Simulator Test; Stability 1; 2010 and 2011
- LaSalle Simulator Test; Steady 1; 2010 and 2011
- LaSalle Simulator Test; Transient 1; 2010 and 2011
- LaSalle Simulator Test; Transient 10; 2010 and 2011
- LaSalle Simulator Test; Transient 1A; 2010 and 2011
- LaSalle Simulator Test; Transient 2; 2010 and 2011
- LaSalle Simulator Test; Transient 3; 2010
- LaSalle Simulator Test; Transient 4; 2010 and 2011
- LaSalle Simulator Test; Transient 5; 2010 and 2011
- LaSalle Simulator Test; Transient 6; 2010 and 2011
- LaSalle Simulator Test; Transient 7; 2010 and 2011
- LaSalle Simulator Test; Transient 8; 2010 and 2011
- LaSalle Simulator Test; Transient 9; 2010 and 2011
- LORT CRC Meeting Minutes; 03/23/2010, 5/21/2010, 2/09/2011
- LORT Long Range Training Plan 2010-2011
- Remedial Training Notification and Action on Failure; LORT Forms for 2010 and 2011
- Sat Test Procedures; LaSalle Simulator IO Replacement; Rev. 0
- Week 6 Bi-Annual Written Test for 2011; RO Week 2 Validation Exam
- Week 6 Bi-Annual Written Test for 2011; SRO Week 2 Validation Exam

1R12 Maintenance Effectiveness

Procedures:

- ER-AA-310; Implementation of the Maintenance Rule; Rev. 8

Action Requests:

- 1022884; 1E12-F064C Slow to Auto Close
- 1060627; MSOPS 2I Spurious Ops that Creates RHR Pump Flow Diversion
- 1067656; Lost Control Power Indication for 1E12-F009 Inbd SDC Isol V
- 1122040; Lost Power to RHR SDC Inbd Isolation Valve
- 1125043; Degrading Trend on 1E12-F031B / 1B RHR System Leak Tightness
- 1150074; Blown Control Power Fuse for 1E12-F048A A RHR HX Byp
- 1170495; 1E12-F009 Closure During LOP-RH-07
- 1210566; Unit 1 HPCS Water leg Pump Degradation
- 1220548; NRC 1<sup>st</sup> Qtr Int Insp Rpt – URI on Unit 1 SDC Reportability
- 1244457; NRC: Loss of Safety Function (1E12-F009 Closure)
- 1248293; NRC: PI & R Inspection – Potential Violation
- 1257672; NRC PI&R Insp Report – Green Finding w/ One NCV
- 1265626; NRC Identified Operator Challenge Inappropriately Closed

- 1271730; Bearing Housing Plug Orientation
- 1287679; NRC Identified: U1 HPCS Water Leg Pump Oil Bubbler Empty CCP

Working Documents:

- AR 1293017; Adverse Condition Monitoring and Contingency Plan, U1 HPCS Water Leg Pump; 11/23/2011
- RH-01; Maintenance Rule Scoping/Performance Criteria for Residual Heat Removal; Suppression Pool Cooling Mode
- RH-05; Maintenance Rule Scoping/Performance Criteria for Residual Heat Removal; Shutdown Heat Removal
- RH-08; Maintenance Rule Scoping/Performance Criteria for Residual Heat Removal; Suppression Chamber Spray
- RH-09; Maintenance Rule Scoping/Performance Criteria for Residual Heat Removal; Drywell Spray
- RH-10; Maintenance Rule Scoping/Performance Criteria for Residual Heat Removal; Keep Spent Fuel below Design Temperature
- RH-11; Maintenance Rule Scoping/Performance Criteria for Residual Heat Removal; Alternate Vessel Injection Using Head Spray
- RH-12; Maintenance Rule Scoping/Performance Criteria for Residual Heat Removal; Alternate Vessel Injection Using Shutdown Cooling Return
- RH-13; Maintenance Rule Scoping/Performance Criteria for Residual Heat Removal; Low Pressure Coolant Injection (LPCI) Mode

Miscellaneous:

- Operator Log Entries LIS-HP; 11/08/2011
- Training Document 64-01; Shutdown Cooling/Head Spray Overview; 8/2004
- Training Document 64-02; Alternate Shutdown Cooling Overview; 10/1999
- Training Document 64-03; Suppression Pool Cooling/ Full Flow Test Overview; 10/1999
- Training Document 64-04; LPCI Overview; 10/1999
- Training Document 64-05; Suppression Chamber / Drywell Spray Overview; 8/2004
- Training Document 64-06; Plant Support Functions Overview; 8/2004
- Training Document 64-07; Shutdown Cooling Flow Paths; 8/2004
- Training Document 64-08; Alternate Shutdown Cooling 1<sup>st</sup> Example 8/2004
- Training Document 64-09; Alternate Shutdown Cooling 2<sup>nd</sup> Example; 9/2004
- Training Document 64-10; Suppression Pool Cooling/Full Flow Test; 8/2004
- Training Document 64-11; LPCI Flow Paths; 8/2004
- Training Document 64-12; Containment Spray; 8/2004
- Training Document 64-13; RHR System Loop B; 3/2001
- Training Document 64-14; RHR System Components; 8/2004
- Training Document 64-15; RHR System Loop A; 10/1999
- Training Document 64-16; RHR System Loop C; 5/2008
- Training Document 64-17; RHR Pump Start / Override Control; 10/1999
- Training Document 64-22; Typical LPCI Initiation Logic; 8/2004
- Training Document 64-23; Suppression Pool Cleanup System; 10/1999
- Training Document, Residual Heat Removal System
- Training Documents 64- 18-21; Valve Interlocks; various dates
- Training Figure RH-1, RHR System; 5/13/2009
- Training Figure RH-2, RHR Models of Operation; 5/13/2009

### 1R13 Maintenance Risk Assessments and Emergent Work Control

#### Action Requests:

- 1270329; U-1 HPCS Water Leg Pump 1E22-C003 Low Dsch Pressure
- 1271730; Bearing Housing Plug Orientation
- 1280848; B" VE Refrigeration Unit Low on Freon, had to be Swapped Off
- 1282225; Leak Found on B VE Suction Pipe
- 1282324; Contingency Work Order Requested for B VE Compressor
- 1282554; 'A' VE Oil Temperature Trending Lower Than Normal
- 1282959; Foreign Material Identified in 0VE04CB Compressor
- 1282995; Intentionally Abbreviated Maintenance
- 1283057; Alarm B RT Hxer Room Diff Temp
- 1283095; Carrier Reciprocating Compressor Roll Pins
- 1283188; A VE Compressor Oil Temperature Found Out of Spec Low
- 1283741; U1 RWCU Outage Summary for 10-26-11
- 1271285; Equipment Issue Report on 24A Normal Drain Controller Failed to Manual
- 1271383; Equipment Issue Report on Unit 2 RR Loop Divergence Alarms During Ramp

#### Miscellaneous:

- B VE Emergent Repairs Report; 10/25/2011 – 10/27/2011
- Protected Equipment Log; 10/17/2011
- U1 Div 3 Maintenance Window Scheduled 10/2/11 – 10/5/11
- WO 1451437-01; Human Performance Issue Verbal Report of Unexpected Oil Spill at MPT; 9/24/2011

### 1R15 Operability Determinations and Functional Assessments

#### Action Requests:

- 1273465; Oil Leak on 1DG084

#### Operability Evaluations:

- 04-006; CSCS Pump Room Ventilation (AR 236085); Rev. 3

#### Miscellaneous:

- ECR 97901; Evaluation of ECR Concerning CSCS Pump Rooms Temperature (EC 349032); Rev. 0
- LaSalle Operator Log; 10/18/2011 – 10/19/2011
- NDIT LAS-ENDIT-0693; Sargent & Lundy ComEd Nuclear Design Information Trasmittal re: RHR SW Pump Room Temperature; 5/26/1998

### 1R18 Plant Modifications

#### Procedures:

- LS-MW-107-1001; Change Review for UFSAR Section 9.1.2.1.3; 11/01/2005
- LS-MW-107-1001; Change Review for UFSAR Section 9.1.2.2.3; 11/21/2006

#### Miscellaneous:

- Fuel Storage Reactivity Summary Sheet; LaSalle Unit 1 Cycles 13 and 14; 11/18/2009
- OE 07-006; Boraflex Panels Utilized in the Unit 2 Spent Fuel Pool Racks; Rev. 4
- LS-AA-106; Plant Operations Review Committee; Rev. 6
- LS-AA-106-1001; Typical Plant Operations Review Committee Meeting Minutes Template; Rev. 1

## 1R19 Post-Maintenance Testing

### Procedures:

- LEP-VP-101; VP Centrifugal Chiller Shutdown Inspection; Rev. 19
- LES-GM-109; Inspection of 480V Klockner-Moeller Motor Control Center; Rev. 37
- LOP-VP-01; Filling and Venting the Primary Containment Chilled Water System; Rev. 20
- LOP-VP-02; Startup, Operation and Shutdown of Primary Containment Chilled Water and Ventilation System; Rev. 41

### Figures and Drawings:

- 1E-2-4220AJ; Schematic Diagram Residual Heat Removal System "RH" (E12); Rev. Y
- 1E-2-4220BK; Schematic Diagram Residual Heat Removal System "RH" (E12) Part 34; Rev. L
- 1E-2-4378AA; Internal Wiring Diagram 480V MCC's Details; Rev. R
- 1E-2-4389AC; Int/Ext Wiring Diagram Reactor Bldg 480V MCC 235Y-2 Pt. 3; Rev. N

### Working Documents:

- 1384025-02; OP PMT: 1VP01CB B VP Chiller Satisfactory Operation; 10/14/2011
- WO 1241731-01; Perform Cubicle and Breaker Inspection for 2AP76E-C3; Rev. 0
- WO 1241731-02; Perform LES-GM-109 for 2AP76E-C3; 10/17/2011

## 1R22 Surveillance Testing

### Procedures:

- LOS-RP-Q3; Main Steam Isolation Valve Scram Functional Test; Rev. 18

### Action Requests:

- 1285340; 1B RHR Pump Discharge Pressure Low Alarm Received in MCR

### Working Documents:

- WO 1493158-01; LOS-RD-M3 U1 Cont Rod Att 1A; 12/20/2011

### Miscellaneous:

- LOS-RP-Q3; Tech Spec Surveillance, Unit 2 MSIVs Att. 2A; 11/27/2011

## 1EP4 Emergency Action Level and Emergency Plan Changes

### Procedures:

- EP-AA-1005; Exelon Nuclear Radiological Emergency Plan Annex for LaSalle County Station; Revs. 31 and 32
- EP-AA-120-1001; 50.54(q) Program Evaluation and Effectiveness Reviews; Rev. 32
- EP-AA-120-F-01; EP Document Approval Forms; Rev. 32

## 1EP6 Drill Evaluation

- S-11-6-4; ATWS Drill Dynamic Simulator Scenario Guide; Rev. 0
- NARS 1; Nuclear Accident Report (Drill); 12/31/2011

## 2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

### Procedures:

- RP-AA-460; Controls for High and Locked High Radiation Areas; Rev. 20
- RP-AA-460-002; Additional High Radiation Exposure Control; Rev. 0
- RP-AB-460; Transverse In-Core Probe Area Access Controls; Rev. 1

### Action Requests:

- 1189188; Accumulated Dose Alarm Received During LIS-MS-202
- 1022658; Personnel Contamination Event Worker Alarms Radiologically Controlled Area Exit Monitor
- 1026722; Individual Alarmed Gatehouse Monitor
- 1036201; L1R13 Cavity Manway Cover Removals
- 1178451; Nuclear Oversight Identified: Protective Clothing Removal Issues
- 1284659; RP-AA-460, Procedure Change Needed

## 2RS4 Occupational Dose Assessment (71124.04)

### Procedures:

- RP-AA-210; Dosimetry Issue; Usage and Control; Rev. 21
- RP-AA-210-1001; Dosimetry Logs and Forms; Rev. 6
- RP-AA-250; External Dose Assessments from Contaminations; Rev. 5
- RP-AA-270; Prenatal Radiation Exposure; Rev. 6

## 2RS5 Radiation Monitoring Instrumentation (71124.05)

### Procedures:

- CY-LA-110-010; Sampling of Reactor Coolant and Residual Heat Removal System at the High Radiation Sampling System; Rev. 3
- CY-LA-130-300; Gamma Spectroscopy; Rev. 5
- L-002356; WRGM Calibration Constants; Setpoints; and Adjustment Factors; Rev. 0
- LCP-810-30; Gamma Spectrometer Systems; Rev. 5
- LIS-CM-206A; Unit 2 Post Accident Monitoring (Division 1) Containment Gross Gamma Radiation Monitor Calibration; Rev. 1
- LIS-OG-104A; Unit 1 Post Treatment Radiation Monitor Channel a Calibration; Rev. 7
- LIS-OG-205; Unit 2 Flux Tilt Linear Radiation Monitor Calibration; Rev. 11
- LIS-OG-105B Unit 1 Residual Heat Removal B Service Water Effluent Radiation Monitor Calibration; Rev. 3
- LIS-PR-004; Station Vent Main Stack Wide Range Gas Monitor Calibration; Rev. 22
- LIS-RH-205A; Unit 2 Residual Heat Removal Service Water Effluent Radiation Monitor Calibration; Rev. 5
- LRP-5820-34; Off-Gas Post Treatment Monitor Alarm and Trip Setpoints; Rev. 10
- LOR-1H13-P601-B212; 1B Residual Heat Removal Service Water Radiation High; Rev. 2
- LOR-1H13-P601-B501; Liquid Radiation Monitor Downscale; Rev. 1
- LRP-5820-34; Off-Gas Post Treatment Monitor Alarm and Trip Setpoints; Rev. 10
- RP-AA-225; Quality Control Operation for the Canberra FastScan Whole Body Counter; Rev. 0
- RP-AA-229; FastScan Abacos Plus Wholebody Counter Calibration; Rev. 0
- RP-AA-230; Operation of the Canberra FastScan Whole Body Counter; Rev. 0
- RP-AA-700-1209; Calibration of Shepherd Box Irradiators; Rev. 0
- RP-AA-700-1210; Operation and Calibration of Thermo-electron IPM Whole Body Frisking Monitor; Rev. 0

- RP-AA-700-1401; Operation and Calibration of Eberline Model PM-7 Personnel Contamination Monitor; Rev. 1
- RP-AA-700-1501; Operation and Calibration of the Model SAM 9/11 Small Articles Monitor; Rev. 1

Action Requests:

- 988898; J.L. Shepherd Calibrator 89-400 Requiring Interlock Repairs
- 1011000; Enhancement to Whole Body Counter Calibration
- 1027143; Electronic Dosimeter Display Is Different Than Expected
- 1027564; 1A Residual Heat Removal Service Water Process Radiation Monitor Nuisance Alarms Due to Background
- 1032065; 1A Residual Heat Removal Service Water Process Radiation Monitor Has Hi and Hi-Hi Alarm With No Pump Running
- 1039561; B Residual Heat Removal Service Water Process Radiation Monitor Alarming on High Radiation With No Flow
- 1068856; Unit 1 Reactor 786 Sample Station Area Monitor In Alarm
- 1069348; Request Area Radiation Monitor Setpoint Be Lowered
- 1075307; Unit 1 Service Water Process Radiation Monitor Discovered to Have No Flow
- 1086361; Nuclear Oversight Identified Air Monitor Without Deficiency Tag
- 1106611; Request Alarm Setpoint Change to 0PLB2J Continuous Air Monitor
- 1177352; Electronic Dosimeter Alarm from Defective Electronic Dosimeter
- 1178079; Electronic Dosimeter Malfunction
- 1180756; Request Component Lead Package for Unit 1A Residual Heat Removal Service Water Process Radiation Monitor
- 1184566; 2A Residual Heat Removal Service Water Process Radiation Monitor High Radiation Light
- 1202065; Shepherd 89-400 Calibrator Needs Repair by Off-Site Vendor
- 1238505; Issues Identified with High Radiation Sampling System Area Radiation Monitor Calibration
- 1251671; 'D' Pre-filter Leaking
- 1251712; ALARA; Broken Monitor and Lack of Monitors
- 1251622; Air Leak on Standby Gas Treatment Wide Range Gas Monitor
- 1263533; Electronic Dosimeter Went to Sleep and Did Not Record Dose for Worker
- 1269531; 2D18-K609B Unit 2B Radiation Monitor Failed Upscale

Working Documents:

- WO 1094386; LIS-PR-005; Standby Gas Treatment Monitor Wide Range Gas Monitor Calibration; 6/27/2009
- WO 1101742; LIS-PR-004; Station Vent Main Stack Wide Range Gas Monitor Calibration; 11/6/2009
- WO 1112370; LIS -RH-105A; Unit 1 Residual Heat Removal Service Water Effluent Radiation Monitor Calibration
- WO 1169081; Post Accident Division II Containment Gross Gamma Radiation Monitor; 8/8/2010
- WO1210436; Post Accident Division 1 Containment Gross Gamma Radiation Monitor Calibration; 8/10/2010
- WO 1216647; Post Accident Division 1 Containment Gross Gamma Radiation Monitor Calibration; 1/21/2011

- WO 1242997; Unit 2 Post Accident Division 2 Containment Gross Gamma Radiation Monitor Calibration; 5/26/2011
- WO 14116820; LIS –RH-205A: Unit 2 Residual Heat Removal Service Water Effluent Radiation Monitor Calibration; 3/10/2011

Miscellaneous:

- Calibration of Shepherd Box Irradiator 89-400 Serial Number 2025; 9/15/2011
- Calibration of Thermo-electron IPM Whole Body Frisking Monitor 210; 5/18/2011
- Calibration of Thermo-electron IPM Whole Body Frisking Monitor 220; 5/20/2011
- Calibration of Thermo-electron IPM Whole Body Frisking Monitor 342D; 5/20/2011
- Calibration of Eberline Model PM-7 Personnel Contamination Monitor 113; 8/2/2011
- Calibration of Eberline Model PM-7 Personnel Contamination Monitor 114; 8/3/2011
- Calibration of Eberline Model PM-7 Personnel Contamination Monitor 115; 6/23/2011
- Calibration of the Model SAM 9/11 Small Articles Monitor; 9/20/2011
- Emails from D. Cooke; M. Wolfe re: NRC Request for Info for Off-gas Post Treatment Setpoint Determination; 11/3/2011
- LaSalle County Station Updated Final Safety Analysis Report; Chapter 12; Rev. 14
- Radcal Corporation Report of Calibration Electrometer/Ion Chamber; 5/16/2011
- 10006752-02; Self Assessment: Radiation Monitoring Instrumentation; 7/14/2011

40A1 Performance Indicator Verification

Procedures:

- LA-AA-2200; Mitigating System Performance Index Data Acquisition & Reporting; Rev. 4
- LIP-RI-503; Unit 1 RCIC Pump Suction Low Pressure Turbine Trip Calibration; Rev. 11
- LIP-RI-504; Unit 1 RCIC Turbine Exhaust High Pressure Turbine Trip and Alarm Calibration; Rev. 9
- LIP-RI-603; Unit 2 RCIC Pump Suction Low Pressure Turbine Trip Calibration; Rev. 9
- LIP-RI-604; Unit 2 RCIC Turbine Exhaust High Pressure Turbine Trip and Alarm Calibration; Rev. 11
- LIS- RX-201; Unit 2 Remote Shutdown System Vessel Pressure Calibration; Rev. 8
- LIS\_RI\_101; Unit 1 RCIC Steam Line High Flow Isolation Calibration; Rev. 19
- LIS-NB-202; Unit 2 Reactor Vessel Water Level Post Accident Monitoring and Remote Shutdown Indication Calibration; Rev. 25
- LIS-RI-102; Unit 1 RCIC Pump Discharge Flow Indication Calibration; Rev. 8
- LIS-RI-112; Unit 1 Reactor Vessel High Water Level 8 RCIC Turbine Trip and Main Turbine / Feedwater Pump Trip Calibration; Rev. 19
- LIS-RI-116; Unit 1 Cycled Condensate storage Tank Low Level RCIC Suction Calibration; Rev. 2
- LIS-RI-201; Unit 2 RCIC Steam Line High Flow Isolation Calibration; Rev. 20
- LIS-RI-202; Unit 2 RCIC Pump Discharge Flow Indication Calibration; Rev. 9
- LIS-RI-212; Unit 2 Reactor Vessel High Water Level 8 RCIC Turbine Trip and Main Turbine Feedwater Pump Trip Calibration; Rev. 22
- LIS-RI-216; Unit 2 Cycled Condensate Storage Tank Low Level RCIC Suction Calibration; Rev. 3
- LIS-RI-312; Unit 1 Reactor Vessel High Water Level 8 RCIC Turbine Trip and Main Turbine Trip Feedwater Pump Trip Functional Test; Rev. 16
- LIS-RI-316; Unit 1 Cycled Condensate Storage Tank Low Level RCIC Suction Functional Test; Rev. 2
- LIS-RI-412; Unit 2 Reactor Vessel High Water Level 8 RCIC Turbine Trip and Main Turbine Trip Feedwater Pump Trip Functional Test; Rev. 18



- LIS-RI-416; Unit 2 Cycled Condensate Storage Tank Low Level RCIC Suction Functional Test; Rev. 4
- LOS-RI-Q1; RCIC Valve Inservice Test; Rev. 48
- LOS-RI-Q1; RCIC Valve Inservice Test; Rev. 48
- LOS-RI-Q3; Reactor Core Isolation Cooling (RCIC) System Pump Operability and Valve Inservice Tests in Conditions 1, 2, and 3; Rev. 46
- LOS-RI-Q5; Reactor Core Isolation Cooling (RCIC) System Pump operability, Valve Inservice Tests in Modes 1, 2, 3 and Cold Quick Start; Rev. 33

Figures and Drawings:

- M-101; P & ID Reactor Core Isolation Coolant (RCIC); Rev. BH
- RI-1; RCIC System Training Drawing (M-101); Rev. 5

Working Documents:

- LaSalle MSPI Cooling Water Systems (CSCS) 4<sup>th</sup> Quarter 2010 – 3<sup>rd</sup> Quarter 2011
- LaSalle MSPI Heat Removal System (RCIC) 4<sup>th</sup> Quarter 2010 – 3<sup>rd</sup> Quarter 2011
- Operator Log Entries Report; (LOA entries); 10/13/2010 – 9/7/2011
- ROP LaSalle Mitigating System Performance Index Basis Document; Rev. 10, Rev. 11

Licensee Event Reports:

- 2010-003-00; Standby liquid Control Test Tank Seismic Analysis; 12/17/2010
- 2010-003-01; Standby Liquid Control Test Tank Seismic Analysis; 9/16/2011
- 2010-01-00; High Pressure Core Spray System Declared Inoperable Due to Failed Room Ventilation Control Relay; 11/24/2010
- 2011-001-00; Turbine Control Valve Fast Closure Trip Oil Pressure Switch Inoperable Due to Incomplete Surveillance Testing; 7/26/2011
- 2011-002-0; Unit Shutdown Required by Plant Technical Specifications Due to Pressure Boundary Leakage; 4/1/2011
- 2011-003-00; Secondary Containment Inoperable; 4/29/2011
- 2011-004-00; Loss of Secondary Cooling Function Due to Spurious Closure of the Shutdown Cooling Suction Isolation Valve; 9/16/2011
- 2011-01-00; Automatic Reactor Scram Due to Main Power Transformer “C” Phase Electrical Fault; 3/25/2011

Miscellaneous:

- Clearance Order Review 90989; 2E51-F360, Governor Limit Switch Adjustment; 3/7/2011
- Listing and PI View Report of LaSalle Units 1 and 2 Safety System Functional Failures; 4<sup>th</sup> Qtr 2010 – 3<sup>rd</sup> Qtr 2011
- Clearance Order Review 91138; 1E51-F080, Replace 74 Relay; 4/27/2011
- SSFF PI; Safety System Function Failures, Units 1 & 2, 3<sup>rd</sup> Quarter Performance Indicators; 12/5/2011
- LSCS-UFSAR 15.3-15; Core and System Performance; Rev. 18

40A2 Identification and Resolution of Problems

Procedures:

- LIP-RI-603; Unit 2 RCIC Pump Suction Low Pressure Turbine Trip Calibration; Rev. 9
- LIS-RI-202; Unit 2 RCIC Pump Discharge Flow Indication Calibration; Rev. 9
- LIS-RI-212; Unit 2 Reactor Vessel High Water Level 8 RCIC Turbine Trip and Main Turbine Feedwater Pump Trip Calibration; Rev. 22
- LIS-RI-216; Unit 2 Cycled Condensate Storage Tank Low Level RCIC Suction Calibration; Rev. 3

- LIS-RI-316; Unit 1 Cycled Condensate Storage Tank Low Level RCIC Suction Functional Test; Rev. 2
- LIS-RI-416; Unit 2 Cycled Condensate Storage Tank Low Level RCIC Suction Functional Test; Rev. 4
- LOP-DG-02; Diesel Generator Startup and Operation; Rev. 49
- LOP-TX-01; TSC Uninterruptible Power Supply Startup Operations and Shutdown; Rev. 13
- LOS-HP-Q1; HPCS System Inservice Test; Rev. 63
- LOS-RH-Q1; RHR (LPCI) and RHR Service Water Pump and Valve Inservice Test for Modes 1,2,3,4 and 5; Rev. 77
- LOS-RI-Q3; Reactor Core Isolation Cooling (RCIC) System Pump Operability and Valve Inservice Tests in Conditions 1, 2, and 3; Rev. 46
- LOS-RI-Q5; Reactor Core Isolation Cooling (RCIC) System Pump Operability, Valve Inservice Tests in Modes 1, 2, 3 and Cold Quick Start; Rev. 33
- LS-AA-125-1005; Coding and Analysis Manual; Rev. 8
- OP-LA-101-111-1002; LaSalle Operations Philosophy Handbook; Rev. 37

#### Action Requests:

- 1241181; Wrong Significance Level Assigned to Issue Report
- 1257808; Ops to Perform CCA for Unplanned LCOS
- 1280756; Door 234 Plate Loose
- 1283662; Employee Medical Issue Requiring Off Site Medical Attention
- 1283670; Security – Ambulance on Site for Medical Emergency
- 1294581; PCR for LIP-RI-503 Include Equipment Availability Attachment
- 1294588; Update LOS-RX-SR1 to Include Restoration Attachment
- 1301579; Very Difficult and Unsafe Getting to C RHR Hi Pt VNT Valves
- 1305335; Need Procedure Change to LIS-NB-418 for Availability
- 1291726-01; RX VSL Hi LVL 8 RCIC Turb Trip & Main Turb/FW PMP Trip

#### Action Requests Resulting from NRC/IEMA Inspection:

- 1273680; NRC: Procedures May Contain Insufficient Detail
- 1274769; NRC: WC-AA-101-1004 Attachment 4 Incorrect Reference
- 1276863; NRC Identified-Walkdown Observation
- 1283935; NRC Identified – IR on Door 234 Did Not Review HELB Impact
- 1287679; NRC Identified: Unit 1 HPCS Water Leg Pump Oil Bubbler Empty
- 1294090; NRC: Potential Violation for Use of Racklife Figures and Drawings
- 1306237; NRC Identified – Question about NRC Control Room Phones
- 1310365; NRC: 4<sup>th</sup> Qtr 2011 Finding/Violation
- 1310426; NRC: 4<sup>th</sup> Qtr 2011 Finding/Violation

#### Figures and Drawings:

- 1E-1-4000FF; TSC Uninterruptible Power Supply Panel 1IP03E System “IP”; Rev. M
- Fig. 12-1; TSC D/G and UPS; 2/2011
- RI-1; Training Document for RCIC System; Rev. 5

#### Miscellaneous:

- INPO POC by Event Code Chart; 12/16/2011
- Operator Log Entries; 1/26/2010 – 6/3/2010, 10/11/2011 – 10/12/2011
- Operator Log Entries, Search for “LIS-RI”; 1/24/2011 – 11/28/2011

#### 4OA3 Followup of Events and Notices of Enforcement Discretion

##### Action Requests:

- 1299082; Error in Submitted Licensee Event Report

##### Figures and Drawings:

- M-89; P&ID Standby Gas Treatment; Rev. AG
- M-153; P&ID Process Radiation Monitoring System; Rev. O

##### Licensee Event Reports:

- 2011-004-00 and 01; Loss of Secondary Cooling Function Due to Spurious Closure of the Shutdown Cooling Suction Isolation Valve; 9/16/2011
- 2011-001-00; Turbine Control Valve Fast Closure Trip Oil Pressure Switch Inoperable Due to Incomplete Surveillance Testing; 7/26/2011

##### Licensee Event Notifications:

- EN 47509; Secondary Containment Was Rendered Inoperable (duration less than 14 minutes); 12/7/2011
- EN 47509; Retraction of EN 47509 - Secondary Containment Was Rendered Inoperable; 12/22/2011

## LIST OF ACRONYMS USED

AR	Action Request
ADAMS	Agencywide Document Access Management System
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CSCS	Core Standby Cooling System
DG	Diesel Generator
EN	Event Notification
FIN	Finding
HPCS	High Pressure Core Spray
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
ISI	Inservice Inspection
$K_{\text{eff}}$	K Effective
LER	Licensee Event Report
LORT	Licensed Operator Requalification Training
LPCS	Low Pressure Core Spray
MSPI	Mitigating Systems Performance Index
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
PARS	Publicly Available Records System
PI	Performance Indicator
PMT	Post-Maintenance Testing
RHR	Residual Heat Removal
ROP	Reactor Oversight Process
RPV	Reactor Pressure Vessel
SAT	Systems Approach to Training
SDC	Shutdown Cooling
SDP	Significance Determination Process
SFP	Spent Fuel Pool
SL	Severity Level
SSC	Structure, System, and Component
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
WO	Work Order

M. Pacilio

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Sincerely,

*/RA/*

Michael Kunowski, Chief  
Branch 5  
Division of Reactor Projects

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

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Letter to M. Pacilio from M. Kunowski dated January 25, 2012

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2 - NRC INTEGRATED  
INSPECTION REPORT 05000373/2011005 AND 05000374/2011005

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