



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

May 9, 2013

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

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2, NRC INTEGRATED
INSPECTION REPORT; 05000373/2013002; 05000374/2013002

Dear Mr. Pacilio:

On March 31, 2013, 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 April 3, 2013, with the Plant Manager, Mr. H. Vinyard, 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.

One NRC-identified finding and one self-revealed finding 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, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Senior Resident Inspector at the LaSalle County Station.

If you disagree with the cross-cutting aspect assignments 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 Senior Resident Inspector at the LaSalle County Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and 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 System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), 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 and 50-374
License Nos. NPF-11 and NPF-18

Enclosure: Inspection Report 05000373/2013002; 05000374/2013002
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: 05000373/2013002; 05000374/2013002

Licensee: Exelon Generation Company, LLC

Facility: LaSalle County Station, Units 1 and 2

Location: Marseilles, IL

Dates: January 1, 2013 – March 31, 2013

Inspectors: R. Ruiz, Senior Resident Inspector
K. Carrington, Resident Inspector (Acting)
M. Holmberg, Senior Reactor Inspector
T. Go, Health Physicist
S. Bell, Health Physicist
V. Meghani, Reactor Inspector
A. Shaikh, Reactor Inspector

Approved by: M. Kunowski, Chief
Branch 5
Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY OF FINDINGS	1
REPORT DETAILS	3
Summary of Plant Status.....	3
1. REACTOR SAFETY	3
1R04 Equipment Alignment (71111.04)	3
1R05 Fire Protection (71111.05)	4
1R08 Inservice Inspection Activities (71111.08)	5
1R11 Licensed Operator Requalification Program (71111.11)	6
1R12 Maintenance Effectiveness (71111.12)	8
1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13).....	8
1R15 Operability Determinations and Functional Assessments (71111.15).....	11
1R18 Plant Modifications (71111.18)	11
1R19 Post-Maintenance Testing (71111.19)	12
1R20 Outage Activities (71111.20)	13
1R22 Surveillance Testing (71111.22).....	14
2. RADIATION SAFETY	15
2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01).....	15
2RS2 Occupational As-Low-As-Is-Reasonably-Achievable (ALARA) Planning and Controls (71124.02).....	22
2RS5 Radiation Monitoring Instrumentation (71124.05)	23
4. OTHER ACTIVITIES	28
4OA1 Performance Indicator Verification (71151)	28
4OA2 Identification and Resolution of Problems (71152).....	30
4OA3 Followup of Events and Notices of Enforcement Discretion (71153)	31
4OA5 Other Activities	31
4OA6 Management Meetings	32
SUPPLEMENTAL INFORMATION	1
KEY POINTS OF CONTACT.....	1
LIST OF ITEMS OPENED, CLOSED AND DISCUSSED	2
LIST OF DOCUMENTS REVIEWED.....	3
LIST OF ACRONYMS USED	18

SUMMARY OF FINDINGS

IR 05000373/2013002, 05000374/2013002; 01/01/2013 – 03/31/2013; LaSalle County Station, Units 1 and 2; Maintenance Risk Assessments and Emergent Work Control, and Followup of Events and Notices of Enforcement Discretion

This report covers a 3-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 U.S. Nuclear Regulatory Commission (NRC) regulations. The significance of inspection findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross-cutting Areas," dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated January 28, 2013. 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 non-cited violation of Technical Specification 5.4.1., "Procedures," was self-revealed on March 14, 2013, when an unexpected isolation of the reactor core isolation cooling (RCIC) system occurred as a result of the licensee's failure to properly implement the steps outlined in TS Surveillance Procedure LIS-RI-201, "Unit 2 RCIC Steam Line High Flow Isolation Calibration." Specifically, during performance of the surveillance, a conditional step was inappropriately answered which led to bypassing the remaining sections in the applicable surveillance procedure for resetting the RCIC high steam flow isolation signal and resulted in the Unit 2 RCIC steam supply outboard isolation valve (2E51-F008) going shut upon closure of its associated breaker, 2AP71E-B4.

The licensee's failure to properly implement the steps in the procedure was a performance deficiency that was determined to be more than minor, and thus a finding, because it was associated with the Mitigating Systems Cornerstone attribute of equipment performance and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance, work practices, for failing to communicate human error prevention techniques, such as, performing the proper self and peer checks. Specifically, the licensee committed a human performance error by inappropriately performing a procedural step without performing the proper self and peer checks, which resulted in an isolation of the RCIC system (H.4(a)). (Section 1R13)

Cornerstone: Occupational Radiation Safety

Green. The inspectors identified a finding of very low safety significance and associated non-cited violation of Title 10 of the Code of Federal Regulation (CFR), Part 20, Section 1501, and licensee Technical Specification 5.4.1., "Procedures." Specifically, the licensee failed to adequately identify, plan, evaluate, and control the radiological conditions and potential hazards associated with the system flow paths created by the reverse flow flushing of the Unit 2 low pressure core spray (LPCS) in accordance with licensee procedures RP-AA-401, "Operational ALARA Planning and Controls," and RP-AA-401-1002, "Radiological Risk Management." As an immediate corrective action, the licensee instituted appropriate controls and initiated an apparent cause evaluation of the event. The licensee documented the issue in its corrective action program (CAP) as action report (AR) 1475014.

The licensee's failure to plan, identify, assess, and control radiological hazards associated with the LPCS reverse flushing was a performance deficiency that was determined to be more than minor, and thus a finding, because, if left uncorrected, it could have led to a more significant safety concern. Specifically, not evaluating the radiological impact and controlling personnel exposures associated with the LPCS flushing resulted in unnecessary and unplanned elevation of ambient radiation fields where workers were present. Transiting radioactive particle(s) during the flush caused unexpected dose rate alarms on electronic dosimeters (EDs) worn by station personnel. The inspectors concluded that the finding was of very low safety significance (Green) using Inspection Manual Chapter 0609, Appendix C, as guidance. This finding had a cross-cutting aspect in the area of human performance, work-control, for failing to appropriately plan work activities when developing the work package and authorizing the work. Specifically, the licensee assumed that the radiological conditions associated with reverse flow flushing of LPCS would have a nominal impact on general area radiation fields in the reactor building and the reactor drywell (H.3(a)). (Section 2RS1.5)

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 March 24, 2013, power was reduced to approximately 60 percent to perform control rod sequence exchange and scram time testing. The unit was restored to full power that same day, where it remained for the duration of the inspection period.

Unit 2

The unit began the inspection period in coast-down at 96 percent power, in preparation for the refueling outage (RFO) L2R14, which began February 11, 2013, when the unit was disconnected from the grid. Following completion of the outage, the unit was restarted and synchronized to the grid on March 4. Full power was achieved on March 6. On March 16, power was reduced to approximately 80 percent to perform control rod pattern adjustments. The unit was restored to full power that same day, where it remained for the duration of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

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

- Unit 2 high pressure core spray (HPCS) walkdown due to RCIC valve surveillance;
- Unit 2 "B" diesel generator (DG) walkdown; and
- Unit 2 RCIC walkdown due to HPCS oil filter replacement.

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, Updated Final Safety Analysis Report (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 inspection procedure (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:

- Unit 1 core standby cooling system (fire zones 7C4, 7C5, and 7C6);
- Unit 2 auxiliary building 749' elevation cable spreading room (fire zone 4D2);
- Unit 1 auxiliary building standby gas treatment area;
- Units 1 and 2 off-gas pre-treatment area (fire zone 10C3); and
- Unit 1, division 1 essential switchgear room (fire zone 4F1).

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

b. Findings

No findings were identified.

1R08 Inservice Inspection Activities (71111.08)

From February 14 through 21, 2013, 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 1R08.5 below constituted one ISI inspection sample as defined in IP 71111.08.

.1 Piping Systems ISI

a. Inspection Scope

The inspectors observed the following non-destructive examination (NDE) required by the American Society of Mechanical Engineers, (ASME) Section XI Code to evaluate compliance with the ASME Code, Section XI, applicable ASME Code Cases and Section V requirements, and if any indications and defects were detected, to determine if these were dispositioned, in accordance with the ASME Code or an NRC-approved alternative requirement.

- dye penetrant examination of the LPCS pump casing elbow-to-flange weld (ILP-PU2-0).

The inspectors observed the following NDEs conducted as part of the licensee's industry initiative inspection programs for managing vessel internals cracking and intergranular stress corrosion cracking to determine whether the examinations were conducted in accordance with the licensee's augmented inspection program, industry guidance documents, and associated licensee examination procedures, and if any indications and defects were detected, to determine if these were dispositioned in accordance with approved procedures and NRC requirements.

- manual ultrasonic examination of a 12-inch diameter residual heat removal (RHR) system pipe-to-pipe weld (IRH-2001-21A) in accordance with boiling water reactor vessel internals project (BWRVIP)-75a, "BWR [Boiling Water Reactor] Vessel and Internals Project Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules."
- in-vessel visual (EVT-1) examination of the "B" Core Spray downcomer weld (BP-7) in accordance with BWRVIP-18, "BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines."

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

- Report No. L2R-13-049, Feedwater Nozzle to Shell Weld (LCS-2N4E) Indications.

The inspectors reviewed records of the following pressure boundary welds completed for a risk-significant system to determine if the licensee followed an ASME Code Section IX qualified welding procedure, maintained control of foreign material, and to determine

whether the welder used qualified weld filler material and base material. The inspectors also reviewed the following post-weld NDE records, to determine if the welds met the ASME Code Sections III and XI.

- field welds No. 1 and 2 fabricated during the replacement of valve 2E12-F064B as recorded in WO 1231145-01.

b. Findings

No findings were identified.

.2 Reactor Pressure Vessel Upper Head Penetration Inspection Activities (Not Applicable)

.3 Boric Acid Corrosion Control (Not Applicable)

.4 Steam Generator Tube Inspection Activities (Not Applicable)

.5 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 whether:

- 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 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 of Licensed Operator Regualification (71111.11Q)

a. Inspection Scope

On January 15, 2013, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator regualification training 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 simulator sample as defined in IP 71111.11.

b. Findings

No findings were identified.

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

a. Inspection Scope

On March 2, 2013, the inspectors observed operators in the control room during Unit 2 pre-startup activities. This was an activity that required heightened awareness or was related to increased risk. The inspectors evaluated the following areas:

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

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

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

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:

- Unit 1 125-Volt direct current (Vdc) division II battery; and
- Unit 2 turbine digital electro-hydraulic control (DEHC) diagnostic/servo card alarms.

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

No findings were identified.

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 condition during RCIC turbine control level calibration;
- Unit 1 emergent yellow risk condition during electrical bus 9 (switchyard, 345-kiloVolt (kV)) disconnect adjustment;
- Unit 1 yellow risk condition during electrical bus 242-Y (4.16 kV) outage;
- Unit 2 yellow risk condition during circulating water system maintenance; and
- Unit 2 yellow risk condition during a RCIC surveillance due to unexpected system isolation.

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

Documents reviewed are listed in the Attachment to this report.

These maintenance risk assessments and emergent work control activities constituted five samples as defined in IP 71111.13-05.

b. Findings

Introduction: A finding of very low safety significance (Green) and associated non-cited violation (NCV) of TS 5.4.1, "Procedures," was self-revealed on March 14, 2013, when an unexpected isolation of the RCIC system occurred. Specifically, while the licensee performed Step E.7.12 of TS Procedure LIS-RI-201, Revision 25, "Unit 2 RCIC Steam Line High Flow Isolation Calibration," the Unit 2 RCIC steam supply outboard isolation valve (2E51-F008) went closed upon closure of its associated breaker, 2AP71E-B4.

Description: During performance of the surveillance, a conditional step was inappropriately answered, which led to bypassing the remaining sections in the applicable surveillance procedure for resetting the RCIC isolation signal. According to the licensee's prompt investigation report, the personnel performing the steps in the procedure did not perform the proper self-check to verify the signal had been reset. Furthermore, prior to closing the breaker, neither the instrument maintenance nor operations personnel in the control room questioned the status of the lit annunciator alarm indicating the signal had not been reset. As a result, when breaker 2AP71E-B4 was closed, valve 2E51-F008 went closed and the pathway for flow from RCIC to the reactor was immediately cut off. This rendered RCIC unavailable for 5 hours and 26 minutes, until operators restored the appropriate flowpath. The unavailability of RCIC also placed Unit 2 in an unexpected risk configuration, changing online risk from green to yellow. While the system had been previously declared inoperable to support performance of the surveillance, it was originally planned to remain available in the event it would be required to perform its specified safety function.

Analysis: The inspectors determined that the failure to properly implement the steps in LIS-RI-201 was contrary to the requirements of TS 5.4.1 and was a performance deficiency warranting further review. The performance deficiency was determined to be more than minor, and thus a finding, in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the Mitigating Systems Cornerstone Attribute of Equipment Performance and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences.

The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, dated June 19, 2012. The inspectors reviewed the Mitigating Systems Screening Questions in Appendix A, Exhibit 2 and answered "yes" to Question #2, therefore, a detailed risk evaluation was required. The Region III senior reactor analyst (SRA) performed a detailed risk evaluation using the LaSalle Standardized Plant Analysis Risk (SPAR) Model, version 8.21. The SRA assumed the RCIC system was unavailable to perform its function for a period of 6 hours. The change in core damage frequency was estimated to be much less than 1×10^{-7} per year. As a result, the finding was determined to be very low safety significance (Green). The dominant sequence was a loss of main feedwater, followed by the unavailability of RCIC, the HPCS system, and the failure to depressurize the reactor and use low pressure systems.

This finding has a cross-cutting aspect in the area of human performance, work practices, for failing to communicate human error prevention techniques or perform the proper self and peer checks. Specifically, the licensee committed a human performance error by failing to perform the proper self and peer checks. This resulted in an isolation of the system (H.3(a)).

Enforcement: TS 5.4.1., "Procedures," requires written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, dated February 1979.

Regulatory Guide 1.33, Revision 2, Appendix A, Section 8b, states, in part, that procedures for surveillance tests, inspections, and calibrations should be written and that implementing procedures are required for each surveillance test, inspection, or calibration listed in the TSs.

Contrary to this, on March 14, 2013, while performing a TS Surveillance for the testing and calibration of RCIC instrumentation, LIS-RI-201, Revision 25, "Unit 2 RCIC Steam Line High Flow Isolation Calibration," the licensee failed to correctly implement the steps outlined in the procedure. Following the isolation which resulted from the licensee's failure to correctly implement the steps in the procedure, the licensee took immediate actions to restore system operability and availability in accordance with LOP-RI-04, "Turbine Trip Recovery and Turbine Reset Reactor Core Isolation Cooling System." The licensee also conducted a safety stand-down for both operations and maintenance personnel and initiated a prompt investigation and apparent cause evaluation. The issue was entered into the licensee's CAP as AR 1487800.

Because this violation was of very low safety significance and it was entered into the licensee's CAP (as AR 1487800), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (NCV 05000374/2013002-01, Failure to Properly Implement Steps Outlined in Technical Specification Surveillance Procedure).

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- Unit 1 "B" RHR air void near minimum flow valve;
- Unit 1 10 CFR Part 21 issue with control rod foreign material exclusion (FME);
- Unit 1 "B" RHR heat exchanger (HX) service water outlet valve issues;
- Unit 2 reactor recirculation "B" stop valve (2B33-F067B) pressure boundary indication; and
- Unit 2 local power range monitor (LPRM) unsatisfactory test results.

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 five samples as defined in IP 71111.15-05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modifications:

- Units 1 and 2 station auxiliary transformers single phase fault mitigation (permanent), and
- Unit 2 temporary power routed through reactor building outside penetration.

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the UFSAR, and the TSs, as applicable, to verify that the modification did not affect the operability or availability of the affected system(s). The inspectors, as applicable, observed ongoing and completed work activities to ensure that the modifications were installed as directed and consistent with the design control documents; the modifications operated as expected; post-modification testing adequately demonstrated continued system operability, availability, and reliability; and that operation of the modifications did not impact the operability of any interfacing systems. As applicable, the inspectors verified that relevant procedure, design, and licensing documents were properly updated. Lastly, the inspectors discussed the plant modification with operations, engineering, and training personnel to ensure that the individuals were aware of how the operation with the plant modification in place could impact overall plant performance. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one temporary modification sample and one permanent plant modification sample as defined in IP 71111.18-05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

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

- Unit 1 "B" control room ventilation (VC) test following damper hydramotor replacement;
- Unit 2 reactor vessel low water level instrument test following channel transmitter/trip unit replacement;
- Unit 2 "A" RHR run following scheduled system valve maintenance;
- Unit 2 HPCS DG run following oil filter replacement; and
- Unit 2 LPCS minimum flow bypass trip test following pressure switch replacement.

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the UFSAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the

equipment met the licensing basis and design requirements. In addition, the inspectors reviewed CAP documents associated with PMT 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 five PMT samples as defined in IP 71111.19-05.

b. Findings

No findings were identified.

1R20 Outage Activities (71111.20)

.1 Refueling Outage Activities

a. Inspection Scope

The inspectors reviewed the Outage Safety Plan (OSP) and contingency plans for the Unit 2 RFO, conducted February 11 through March 6, 2013, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the RFO, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below:

- licensee configuration management, including maintenance of defense-in-depth commensurate with the OSP for key safety functions and compliance with the applicable TS when taking equipment out of service;
- implementation of clearance activities and confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing;
- installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication, accounting for instrument error;
- controls over the status and configuration of electrical systems to ensure that TS and OSP requirements were met, and controls over switchyard activities;
- monitoring of decay heat removal processes, systems, and components;
- controls to ensure that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system;
- reactor water inventory controls including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss;
- controls over activities that could affect reactivity;
- maintenance of secondary containment as required by TSs;
- licensee fatigue management, as required by 10 CFR 26, Subpart I;
- refueling activities, including fuel handling and sipping to detect fuel assembly leakage;
- startup and ascension to full power operation, tracking of startup prerequisites, walkdown of the drywell (primary containment) to verify that debris had not been left which could block ECCS suction strainers, and reactor physics testing; and
- licensee identification and resolution of problems related to RFO activities.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted one RFO sample as defined in IP 71111.20-05.

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-RH-Q1; Unit 1 'C' RHR quarterly run (Routine);
- LOS-RC-Q5 Unit 1 RCIC cold quick start (Routine);
- LOS-DC-QZ; Unit 1 125-Vdc Division II battery surveillance (Routine);
- LOS-LP-Q1; Unit 1 LPCS quarterly inservice testing (IST);
- LTS-100-14; Drywell floor drain sump isolation valve (2RF-012) local leak rate testing (Containment Isolation Valve); and
- LTS-300-5; Primary containment local leak rate test for 2E21-F018 (Containment Isolation Valve).

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

- did preconditioning occur;
- the effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- acceptance criteria were clearly stated, demonstrated operational readiness, and consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the UFSAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current;
- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied;
- test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used;
- test data and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing;
- where applicable for inservice testing activities, testing was performed in accordance with the applicable version of Section XI, ASME 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 three routine surveillance testing samples, one inservice testing sample, and two containment isolation valve samples as defined in IP 71111.22, Sections -02 and -05.

b. Findings

No findings were identified.

2. **RADIATION SAFETY**

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

This inspection constituted a partial sample as defined in IP 71124.01-05.

.1 Radiological Hazard Assessment (02.02)

a. Inspection Scope

The inspectors determined if there had been changes to plant operations since the last inspection that may result in a significant new radiological hazard for onsite workers or members of the public. The inspectors evaluated whether the licensee assessed the potential impact of these changes and has implemented periodic monitoring, as appropriate, to detect and quantify the radiological hazard.

The inspectors reviewed the last two radiological surveys from selected plant areas and evaluated whether the thoroughness and frequency of the surveys were appropriate for the given radiological hazard.

The inspectors conducted walkdowns of the facility, including radioactive waste processing, storage, and handling areas, to evaluate material conditions and performed independent radiation measurements to verify conditions.

The inspectors selected the following radiologically risk-significant work activities on Unit 2 that involved exposure to radiation:

- main condenser steam side activities;
- General Electric drywell ISI activities;
- drywell insulation activities;
- emergent 2B33-F067B repairs in drywell; and
- reactor cavity and cavity support activities.

For these work activities, the inspectors assessed whether the pre-work surveys performed were appropriate to identify and quantify the radiological hazard and to establish adequate protective measures. The inspectors evaluated the radiological survey program to determine if hazards were properly identified, including the following:

- identification of hot particles;
- the presence of alpha emitters;
- the potential for airborne radioactive materials, including the potential presence of transuranics and/or other hard-to-detect radioactive materials. (This evaluation may include licensee planned entry into non-routinely entered areas subject to previous contamination from failed fuel.);
- the hazards associated with work activities that could suddenly and severely increase radiological conditions and that the licensee has established a means to inform workers of changes that could significantly impact their occupational dose; and
- severe radiation field dose gradients that can result in non-uniform exposures of the body.

b. Findings

No findings were identified.

.2 Instructions to Workers (02.03)

a. Inspection Scope

The inspectors reviewed the following radiation work permits used to access high radiation areas in Unit 2 and evaluated the specified work control instructions or control barriers:

- main condenser steam side activities;
- General Electric drywell ISI activities;
- emergent 2B33-F067B repairs in drywell; and
- reactor cavity and cavity support activities.

For these radiation work permits, the inspectors assessed whether allowable stay times or permissible dose (including from the intake of radioactive material) for radiologically significant work under each radiation work permit were clearly identified. The inspectors evaluated whether personal electronic dosimeter (ED) alarm setpoints were in conformance with survey indications and plant policy.

The inspectors reviewed selected occurrences where a worker's personal ED noticeably malfunctioned or alarmed. The inspectors evaluated whether workers responded appropriately to the off-normal condition. The inspectors assessed whether the issue was included in the CAP and dose evaluations were conducted as appropriate.

b. Findings

No findings were identified.

.3 Contamination and Radioactive Material Control (02.04)

a. Inspection Scope

The inspectors observed locations where the licensee monitors potentially contaminated material exiting the radiological control area and inspected the methods used for control, survey, and release from these areas. The inspectors observed the performance of personnel surveying and releasing material for unrestricted use and evaluated whether the work was performed in accordance with plant procedures and whether the procedures were sufficient to control the spread of contamination and prevent unintended release of radioactive materials from the site. The inspectors assessed whether the radiation monitoring instrumentation had appropriate sensitivity for the type(s) of radiation present.

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

The inspectors selected several sealed sources from the licensee's inventory records and assessed whether the sources were accounted for and appropriately tested for leakage.

b. Findings

No findings were identified.

.4 Radiological Hazards Control and Work Coverage (02.05)

a. Inspection Scope

The inspectors reviewed the application of dosimetry to effectively monitor exposure to personnel in high-radiation work areas with significant dose rate gradients.

The inspectors reviewed the following Unit 2 radiation work permits for work within airborne radioactivity areas with the potential for individual worker internal exposures.

- main condenser steam side activities;
- General Electric drywell ISI activities;
- drywell insulation activities;
- emergent 2B33-F067B repairs in drywell; and
- reactor cavity and cavity support activities.

For these radiation work permits, the inspectors evaluated airborne radioactive controls and monitoring, including potential for significant airborne levels (e.g., grinding, grit blasting, system breaches, entry into tanks, cubicles, and reactor cavities). The inspectors assessed barrier (e.g., tent or glove box) integrity and temporary high-efficiency particulate air ventilation system operation.

b. Findings

No findings were identified.

.5 Risk-Significant High Radiation Area and Very High Radiation Area Controls (02.06)

a. Inspection Scope

The inspectors discussed the controls in place for special areas that had the potential to become very high radiation areas during certain plant operations with first-line health physics supervisors (or equivalent positions having backshift health physics oversight authority). The inspectors assessed whether these plant operations required communication beforehand with the health physics group, so as to allow corresponding timely actions to properly post, control, and monitor the radiation hazards, including re-access authorization.

b. Findings

Introduction: The inspectors identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR 20.1501 for the failure to perform radiological surveys necessary to implement high radiation controls associated with the system flow paths created by the reverse-flow flush of Unit 2 LPCS. Additionally, the inspector identified that the licensee failed to meet ALARA (As-Low-As-Is-Reasonably-Achievable) procedures as part of the flush.

Description: On February 13, 2013, LaSalle County Station performed a reverse flow flush of the Unit 2 LPCS as part of the station radiation dose reduction initiative during the first week of the RFO. In normal plant configuration, LPCS takes suction from the suppression pool or comparable water source and discharges the water through reactor vessel internal piping that connects to discharge spargers just above active fuel. In the reverse-flow flush configuration, suction (water) is taken from approximately 10 feet 6 inches above the top of active fuel, reverse flushed through the spargers, through reactor vessel internal piping, and discharged back into the suppression pool. Placing the system in a reverse-flow configuration readily displaces small particles of radioactive materials that may be near the fuel or lodged in the spargers or on other reactor vessel internal piping. These radioactive particles were easily dislodged and readily migrated through the system piping during the flushing activities.

Licensee Procedures RP-AA-401, "Operational ALARA Planning and Controls," and RP-AA-401-1002, "Radiological Risk Assessment Worksheet," require the licensee to create either a specific ALARA plan or micro-ALARA plan to assess work or system operations that creates new/different flow paths that could cause dose rate changes in areas of the plant. The licensee neither created the required ALARA plan nor performed the necessary planning to assess the radiological hazards associated with the reverse flow flushing. Consequently, the licensee failed to perform the radiological surveys

necessary to implement controls at the time of flushing to preclude personnel accessing areas of the plant with elevated dose rates.

During this work activity, six licensee and contractor personnel received unexpected ED alarms as the result of a discrete radioactive particle(s) transiting the system during the reverse-flow flush. Records on one of the workers' ED histograms indicated general area dose rates in excess of 1600 mrem per hour at distances of approximately 13 feet away from the source of the radiation (LPCS piping) on the 710-foot elevation of the Unit 2 reactor building. Four additional worker ED histograms indicated general area dose rates of approximately 500 mrem per hour on the 761-foot elevation of the Unit 2 reactor building by the control rod drive accumulators. These four workers were located inside a posted radiation area. The evaluation of the workers' ED alarms indicated instantaneous radiation levels exceeding 100 mrem per hour. In response to the alarms, the licensee's measurements of radiation levels in the impacted areas confirmed that the particles moved very rapidly through the piping, that the elevated dose rates were momentary, and that there were no areas where personnel could have received a dose equivalent in excess of 100 mrem in any one hour. The source strength of the radioactive particles could have resulted in substantial radiation levels in the areas; nonetheless, the areas did not constitute high radiation areas, as defined in CFR Part 20.

Although the licensee did not plan or evaluate for the radiological impact of the LPCS reverse-flow flush in accordance with plant procedures, the licensee had conducted a similar LPCS reverse-flow flush on Unit 1 during the previous Unit 1 refueling outage. During that outage, the flush was primarily planned by the Operations Department with minimal interaction with the licensee's radiation protection (RP) staff. No dose rate anomalies or radiation monitor alarm were detected during the Unit 1 LPCS reverse-flow flush. Consequently, in the absence of indications of anomalous radiological conditions during the Unit 1 LPCS flush, the licensee assumed that there were no issues of radiological significance and applied the same level of rigor and minimal radiological review of the Unit 2 LPCS reverse-flow flush. Additionally, the licensee conducted the Unit 2 LPCS flush without the consideration of higher than normal dose rates during the current Unit 2 cycle 14 refueling outage.

The RP Department did not post personnel or individuals qualified in RP procedures in areas that could be affected by increased or transient dose rates. Instead, the licensee relied on remote monitoring the LPCS piping with tele-dosimeters. During the reverse flushing activity, RP supervisors at the Unit 2 outage control center noted dose rate spikes on the LPCS piping system in the Unit 2 reactor building and drywell areas. However, the supervisors failed to warn and evacuate personnel in the elevated dose rates conditions.

Analysis: The inspectors determined that the failure to properly evaluate the radiological hazards associated with the Unit 2 LPCS reverse-flow flush was a performance deficiency of more than minor significance, and thus a finding, in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," September 7, 2012. Specifically, if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern, in that, not evaluating the radiological impact and controlling personnel exposures associated with the LPCS reverse-flow flushing resulted in unnecessary and unplanned elevation of ambient radiation fields where workers were present. Additionally, there was industry operating

experiences on controlling system flushing involving suction from the reactor vessel. Consequently, the inspectors also concluded that this activity was within the licensee's ability to foresee and should have been prevented. The finding was not subject to traditional enforcement since the incident did not impact the NRC's ability to perform its regulatory function and was not willful.

Since the finding involved occupational radiation safety, the inspectors utilized IMC 0609, Appendix C, "Occupational Radiation Safety SDP," October 19, 2008, to assess its significance. The inspectors determined that the finding did not involve an overexposure, a substantial potential for an over exposure, or a compromised ability to assess dose. The finding did involve ALARA planning or work controls. However, the average collective dose at LaSalle County Station was less than 240 person-rem per unit. Consequently, the inspectors determined that the finding was of very low safety significance.

The finding had a cross-cutting aspect in the area of human performance related to the cross-cutting component of work control. In that, the licensee did not appropriately plan work activities when developing the work package and authorizing the work (H.3(a)). Specifically, the licensee assumed that the radiological conditions associated with reverse-flow flush of LPCS would have a nominal impact on general area radiation fields in the reactor building and drywell.

Enforcement: Two specific violations of regulatory requirements occurred. Specifically,

- Technical Specification 5.4.1. requires, in part, that the licensee establish, implement, and maintain applicable procedures recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A. Section 7 of Appendix A of RG 1.33, recommends RP procedures for control of radioactivity for limiting personnel exposures. Licensee Procedures RP-AA-401, "Operational ALARA Planning and Controls," and RP-AA-401-1002, "Radiological Risk Assessment Worksheet," implement the ALARA program and require the licensee to create either a specific ALARA plan or micro-ALARA plan to assess work or system operations that creates new/different flow paths that could cause dose rate changes in areas of the plant.

Contrary to this, on February 13, 2013, the licensee did not implement the requirements contained in procedures RP-AA-401 and RP-AA401-1002 in support of the Unit 2 LPCS reverse-flow flush. Specifically, the licensee failed to create either a specific ALARA plan or micro-ALARA plan to assess the reverse-flow flush, which involved a new flow path that could cause dose rate changes.

- 10 CFR 20.1501 requires that each licensee make or cause to be made, surveys that may be necessary for the licensee to comply with the regulations in 10 CFR Part 20 and that are reasonable under the circumstances, to evaluate the extent of radiation levels, concentrations or quantities of radioactive materials, and the potential radiological hazards that could be present. The Technical Specification 5.7.1. states, in part, that pursuant to 10 CFR 20.1601(c), in lieu of the requirements of 10 CFR 20.1601, each high radiation area, as defined in 10 CFR 20, in which the intensity of radiation is greater than 100 mrem per hour, shall be barricaded and conspicuously posted. 10 CFR 20.1003

defines survey as an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation.

Contrary to this, on February 13, 2013, the licensee did not perform the surveys necessary to assure compliance with TS 5.7.1., as required by 10 CFR 20.1501. Specifically, the licensee failed to adequately evaluate the radiological conditions and potential hazards associated with the LPCS reverse-flow flush in areas of the Unit 2 reactor building and drywell that were accessible to personnel and contained high radiation areas with the potential to generate dose rates greater than 100 mrem per hour at 30 centimeters from the radiation source or from any surface penetrated by the radiation.

Corrective actions included instituting appropriate radiological controls and initiating an apparent cause evaluation. Because this violation is of very low safety significance and it was entered into the licensee's CAP (as AR 1475014), this violation is being treated as an NCV consistent with Section 2.3.2 of the NRC Enforcement Policy (NCV 05000373/2013002-02; 05000374/2013002-02; Failure to Perform Radiological Surveys to Ensure Appropriate Control and Access to a High Radiation Area).

.6 Radiation Worker Performance (02.07)

a. Inspection Scope

The inspectors observed radiation worker performance with respect to stated RP work requirements. The inspectors assessed whether workers were aware of the radiological conditions in their workplace and the radiation work permit controls/limits in place, and whether their performance reflected the level of radiological hazards present.

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 RP manager any problems with the corrective actions planned or taken.

b. Findings

No findings were identified.

.7 Radiation Protection Technician Proficiency (02.08)

a. Inspection Scope

The inspectors observed the performance of the RP technicians with respect to all RP work requirements. The inspectors evaluated whether technicians were aware of the radiological conditions in their workplace and the radiation work permit controls/limits, and whether their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

The inspectors reviewed radiological problem reports since the last inspection that found the cause of the event to be RP 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.

2RS2 Occupational As-Low-As-Is-Reasonably-Achievable (ALARA) Planning and Controls (71124.02)

The inspection activities supplement those documented in NRC Inspection Report (IR) 05000373(374)/2012002 and constitute a partial sample as defined in IP 71124.02-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the site-specific trends in collective exposures and source term measurements.

b. Findings

No findings were identified.

.2 Radiological Work Planning (02.02)

a. Inspection Scope

The inspectors reviewed the ALARA work activity evaluations, exposure estimates, and exposure mitigation requirements. The inspectors determined whether the licensee reasonably grouped the radiological work into work activities, based on historical precedence, industry norms, and/or special circumstances.

The inspectors compared the results achieved (dose rate reductions, person-rem used) with the intended dose established in the licensee's ALARA planning for these work activities. The inspectors compared the person-hour estimates provided by maintenance planning and other groups to the RP group with the actual work activity time requirements, and evaluated the accuracy of these time estimates. The inspectors assessed the reasons (e.g., failure to adequately plan the activity, failure to provide sufficient work controls) for any inconsistencies between intended and actual work activity doses.

b. Findings

No findings were identified.

.3 Verification of Dose Estimates and Exposure Tracking Systems (02.03)

a. Inspection Scope

The inspectors reviewed the assumptions and basis (including dose rate and person-hour estimates) for the current annual collective exposure estimate for reasonable accuracy for select ALARA work packages. The inspectors reviewed applicable procedures to determine the methodology for estimating exposures from specific work activities and the intended dose outcome.

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 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, to detect workers' internal contamination. The inspectors reviewed this list to assess 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 TS and the UFSAR.

The inspectors reviewed effluent monitor alarm setpoint bases and the calculation methodology 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:

- the licensee calibrated its monitors with National Institute of Standards and Technology traceable sources;
- the primary calibrations adequately represented the plant nuclide mix;
- when secondary calibration sources were used, the sources were verified by the primary calibration; and

- 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.

For changes to effluent monitor setpoints, the inspectors evaluated the basis for 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

Inspectors selected containment high-range monitors and reviewed the calibration documentation since the last inspection.

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

The inspectors assessed whether calibration acceptance criteria were reasonable, 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 Area Monitors

a. Inspection Scope

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

The inspectors reviewed the calibration documentation for each instrument selected and discussed 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. For portable survey instruments and area radiation monitors, the inspectors reviewed detector measurement geometry and calibration methods and had the licensee demonstrate use of its instrument calibrator as applicable. The inspectors conducted comparison of instrument readings versus 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 use 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 units. The inspectors assessed whether the licensee periodically measures 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 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.

2. OTHER ACTIVITIES

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

4OA1 Performance Indicator Verification (71151)

.1 Unplanned Scrams per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams per 7000 Critical Hours performance indicator (PI) for Units 1 and 2 for the first quarter 2012 through the fourth quarter 2012. To determine the accuracy of the PI data, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, were used. The inspectors reviewed the licensee's operator narrative logs, ARs, event reports, and NRC Integrated IRs for the period to validate the accuracy of the submittals. The inspectors also reviewed the licensee's CAP 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 unplanned scrams per 7000 critical hours samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Unplanned Scrams with Complications

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams with Complications PI for Units 1 and 2 for the first quarter 2012 through the fourth quarter 2012. To determine the accuracy of the PI data, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, were used. The inspectors reviewed the licensee's operator narrative logs, ARs, event reports, and NRC Integrated IRs for the period to validate the accuracy of the submittals. The inspectors also reviewed the licensee's CAP 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 unplanned scrams with complications samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Unplanned Transients per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Transients per 7000 Critical Hours PI for Units 1 and 2 for the first quarter 2012 through the fourth quarter 2012. To determine the accuracy of the PI data, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, were used. The inspectors reviewed the licensee's operator narrative logs, ARs, maintenance rule records, event reports, and NRC Integrated IRs for the period to validate the accuracy of the submittals. The inspectors also reviewed the licensee's CAP 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 unplanned transients per 7000 critical hours samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.4 Reactor Coolant System Specific Activity

a. Inspection Scope

The inspectors sampled licensee submittals for the reactor coolant system specific activity PI for Units 1 and 2 for the first quarter 2012 through February 2013. The inspectors used PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, to determine the accuracy of the PI data. The inspectors reviewed the licensee's reactor coolant system chemistry samples, TS requirements, ARs, event reports, and NRC Integrated ARs to validate the accuracy of the submittals. The inspectors also reviewed the licensee's CAP database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. In addition to record reviews, the inspectors observed a chemistry technician obtain and analyze a reactor coolant system sample. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

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

a. Inspection Scope

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

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

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for 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.

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

.1 Unexpected Personnel ED Alarms During Reverse-Flow Flush of Unit 2 LPCS

a. Inspection Scope

Regional health physic inspectors and resident inspectors reviewed the plant's response to several workers receiving unexpected personnel ED alarms on February 13, 2013, during the reverse-flow flush of the Unit 2 LPCS.

This followup of events inspection constituted one sample as defined in IP 71153-05.

b. Findings

Findings are documented in section 2RS1.5, "Radiological Hazard Assessment and Exposure Controls," of this report.

4OA5 Other Activities

.1 Temporary Instruction 2515/182 - Review of the Industry Initiative to Control Degradation of Underground Piping and Tanks

a. Inspection Scope

Leakage from buried and underground pipes has resulted in ground water contamination incidents with associated heightened NRC and public interest. The industry issued a guidance document, NEI 09-14, "Guideline for the Management of Buried Piping Integrity," to describe the goals and required actions (commitments made by the licensee) resulting from this underground piping and tank initiative. On December 31, 2010, NEI issued Revision 1 to NEI 09-14, "Guidance for the Management of Underground Piping and Tank Integrity," (ADAMS Accession No. ML110700122), with an expanded scope of components which included underground piping that was not in direct contact with the soil and underground tanks. On November 17, 2011, the NRC issued Temporary Instruction (TI)-2515/182, "Review of the Industry Initiative to Control Degradation of Underground Piping and Tanks," to gather information related to the industry's implementation of this initiative.

From January 14 through 18, 2013, the inspectors conducted a review of records and procedures related to the licensee's program for buried pipe, underground pipe, and tanks in accordance with Phase II of TI-2515/182. This review was performed to confirm that the licensee's program contained attributes consistent with Sections 3.3 A and 3.3 B of NEI 09-14 and to confirm that these attributes were scheduled and/or completed by the NEI 09-14, Revision 1, deadlines. The inspectors also conducted interviews with licensee staff responsible for the site buried piping program to determine whether the program attributes were implemented in a manner that reflected good or poor practices in program management.

Based upon the scope of the review described above, Phase II of TI-2515/182 was completed.

b. Observations

The licensee's buried piping and underground piping and tanks program was inspected in accordance with paragraph 03.02.a of the TI and it was confirmed that activities which correspond to completion dates specified in the program which have passed since the Phase I inspection was conducted, have been completed. Additionally, the licensee's buried piping and underground piping and tanks program was inspected in accordance with Paragraph 03.02.b of the TI and responses to specific questions found in <http://www.nrc.gov/reactors/operating/ops-experience/buried-pipe-ti-phase-2-insp-req-2011-11-16.pdf> were submitted to the NRC headquarters staff.

c. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On April 3, 2013, the inspectors presented the inspection results to the Plant Manager, Mr. H. Vinyard, 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 review of the industry initiative to control degradation of underground piping and tanks (TI-2515/182) with the Site Vice-President, Mr. P. Karaba, and other members of the licensee staff on January 18, 2013;
- an inspection of ISI with Mr. P. Karaba and other members of the licensee's staff on February 21, 2013;
- inspection results for the areas of radiation monitoring instrumentation and reactor coolant system specific activity PI verification with Mr. P. Karaba, on March 15, 2013; and
- inspection results for the areas of radiological hazard assessment and exposure controls, and occupational ALARA planning and controls, with Mr. H. Vinyard, on March 29, 2013.

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

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

P. Karaba, Site Vice-President
H. Vinyard, Plant Manager
K. Hedgspeth, RP Manager
J. Washko, Engineering Manager
M. Sharma, Engineering Programs
K. Hall, Buried Piping Program Owner
V. Chopra, Engineering Programs
J. Vergara, Regulatory Assurance
L. Ekern, Nuclear Oversight
B. Hilton, Design Manager
G. Ford, Regulatory Affairs Manager
J. Houston, Nuclear Oversight Manager
A. Schierer, Engineer
D. Amezaga, System Engineer
J. Bendis, Engineer
J. Feeney, LaSalle Nuclear Oversight
J. Hughes, Emergency Preparedness Coordinator
J. Smith, Operations Training Manager
K. Hall, LaSalle Buried Piping Program Owner
L. Blunk, Regulatory Affairs
J. Shields, Invesel Visual Inspection Program Supervisor
S. Shields, Regulatory Affairs
S. Tanton, Engineer
T. Hapak, Chemistry
C. Howard, RP Operation Manager
R. Simonsen, RP Operation Manager
A. Baker, Dosimetry Specialist

U.S. Nuclear Regulatory Commission

M. Kunowski, Chief, Reactor Projects Branch 5

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000374/2013002-01	NCV	Failure to Properly Implement Steps Outlined in Technical Specification Surveillance Procedure (Section 1R13)
05000373/2013002-02; 05000374/2013002-02	NCV	Failure to Perform Radiological Surveys to Ensure Appropriate Control and Access to a High Radiation Area (Section 2RS1.5)

Closed

05000374/2013002-01	NCV	Failure to Properly Implement Steps Outlined in Technical Specification Surveillance Procedure (Section 1R13)
05000373/2013002-02; 05000374/2013002-02	NCV	Failure to Perform Radiological Surveys to Ensure Appropriate Control and Access to a High Radiation Area (Section 2RS1.5)

Discussed

none

LIST OF DOCUMENTS REVIEWED

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

1R04 Equipment Alignment

Action Requests:

- 1457691; The 2B D/G HX Is Leaking Again
- 1469649; Received an Unexpected Alarm During RCIC Pump S/U

Figures and Drawings:

- M-083; P & ID Diesel Generator Auxiliary System; Rev. AT
- M-095; P & ID High Pressure Core Spray (HPCS); Rev. AF
- M-141; P & ID High Pressure Core Spray (HPCS); Rev. AS
- M-147; P & ID; Reactor Core Isolation Coolant System (RCIC); Rev. AC
- M-147; P & ID; Reactor Core Isolation Coolant System (RCIC); Rev. H
- M-2147; P & ID / C&I Details RCIC System "RI"; Rev. H

Miscellaneous:

- B 3.5; Emergency Core Cooling Systems (ECCS) and Reactor Core Isolation Cooling (RCIC) System; Rev. 0
- Checklist Search; 2/8/2013
- Checklist Search; 3/11/2013
- Electrical Checklist Search; 1/28/2013
- LSCS-UFSAR 6.3; Emergency Core Cooling Systems; Rev. 13
- Mechanical Checklist Search; 1/28/2013

1R05 Fire Protection

Miscellaneous:

- FZ-10C3; LaSalle County Generating Station Pre-Fire Plan; OG Bldg. 674'0" Elev. U1 & U2 Off-Gas Pressure Drain Tank Area; Rev. 0
- FZ-2B1; LaSalle County Generating Station Pre-Fire Plan; RX Bldg. 820'6" Elev. U1 General Area & SBGTS Area; Rev. 0
- FZ-4D2; LaSalle County Generating Station Pre-Fire Plan; Aux. Bldg. 749'0" Elev. U2 Cable Spreading Room; Rev. 0
- FZ-4F2; LaSalle County Generating Station Pre-Fire Plan; Aux Bldg. 710'0" Elev. U2 Division 1 Essential Switchgear Room; Rev. 0
- FZ-7C4; LaSalle County Generating Station Pre-Fire Plan; DG Bldg. 674'0" Elev. U1 HPCS Diesel Pump Room; Rev. 0
- LSCS-FPR H.3.7.13; HPCS Diesel Pump Room – Fire Zone 7C4; Rev. 5
- LSCS-FPR; H.3.8.2; Division 2 Diesel-Ventilation Equipment Room – Fire Zone 8A2
- LSCS-UFSAR 6.0; Engineered Safety Features; Rev. 13
- LSCS-UFSAR 8.0; Electric Power; Rev. 13
- LSCS-UFSAR 8.3.1.4.2.4; Containment Electrical Penetration Criteria; Rev. 13
- LSCS-UFSAR 9.5.1.2.3; Fire Protection For Power-Generation Equipment Areas; Rev. 14
- LSCS-UFSAR 9.5; Preaction Systems; Rev. 14

1R08 Inservice Inspection Activities

Procedures:

- ER-AA-335-002; Liquid Penetrant (PT) Examination; Rev. 6
- ER-AA-335-003; Magnetic Particle Examination; Rev. 5
- GEH-VT-205; for Invesel Visual Inspection (IVVI) of BWR 5 RPV Internals; Rev. 12
- GE-PDI-UT-2; PDI Generic for the Ultrasonic Examination of Austenitic Pipe Welds; Rev. 6
- GE-UT-300; for Manual Examination of Reactor Vessel Assembly Welds in Accordance with PDI; Rev. 11
- Weld Procedure Specification 1-1-GTSM-PWHT; Rev. 2
- Weld Procedure Specification 1-8-GTSM; Rev. 1

Action Reports:

- 1311572; Generate Actions for RWCU Steam Leak; 1/10/2012
- 1316164; Leak on Discharge Line - RCIC; 1/20/2012
- 1322160; FME Discovered in Annulus at Jet Pump 05/06; 2/25/2012
- 1326794; Check Valve Inspection – Missing Nut; 2/14/2012
- 1326798; FME Check Valve – Missing Nut – Loose Parts; 2/14/2012
- 1331822; Core Spray Sparger Indication Unchanged; 2/24/2012
- 1332163; FME discovered in Bottom Head at Cell 24-29; 2/25/2012
- 1332164; FME in RPV Bottom Head at Location 32-29; 2/25/2012
- 1332198; FME in RPV Stub Tubes 26-23 & 26-27; 2/26/2012
- 1332855; Followup IR for BHD FME Observed; 2/27/2012
- 1332861; FME in Annulus at Base of JP 7; 2/27/2012
- 1334020; FME Recovery RX Vessel / Jet Pump #5; 2/29/2012
- 1365191; 2B D/G Cooler HX 2 GPM Leak; 5/11/2012
- 1366784; FME Found in Check Valve; 5/15/2012
- 1437832; Excessive Leak on 2B DG Cooling Water HX; 11/9/2012
- 1440904; Pin Hole Leak Shell of HX End Cap; 11/15/2012
- 1475426; ER-AA-335-1008 Needs ASME III 1968 Criteria; 2/14/2013
- 1476739; Vendor Procedure Enhancements; 2/18/2013

Working Documents:

- WO 01231145 01; Replace Valve 2E12-F064B in L2R13; ASME Section XI Repair / Replacement Plan; 5/9/2011
- WO 01231145 01; Replace Valve 2E12-F064B in L2R13; ASME Weld Map; 5/9/2011
- WO 01231145 01; Replace Valve 2E12-F064B in L2R13; ASME Weld Record for Weld No. 1, 2 (Document 3.0); 5/9/2011
- WO 01231145 01; Replace Valve 2E12-F064B in L2R13; Radiographic Examination Interpretation Report (and Associated RT Film); 2/22/2011
- WO 01231145 01; Replace Valve 2E12-F064B in L2R13; Form NIS-2, Owner's Report for Repair/Replacement Activity; 5/9/2011

Miscellaneous:

- Report No. L2R-13-049, Feedwater Nozzle to Shell Weld (LCS-2N4E); 2/24/2011
- Report No. L2R14-012; Examination Summary Sheet ILP-PU2-01; 2/16/2013
- Report No. L2R14-023; Examination Summary Sheet IRH-2001-21A; 2/18/2013
- Procedure Qualification Record; 002-41-055; 2/3/1994
- Procedure Qualification Record; 1-50C; 1/3/1994
- Procedure Qualification Record; 1-53B; 1/29/1986
- Procedure Qualification Record; 2-53A; 2/12/1986

- Procedure Qualification Record; A-001; 10/19/1998
- Procedure Qualification Record; A-002; 3/9/1999

1R11 Licensed Operator Regualification Program

Procedures:

- LOP-RH-17; Alternate Shutdown Cooling; Rev. 28

Action Requests:

- 1137952; FRPT: Licensed Operator Regualification (IP 71111.11B)

1R12 Maintenance Effectiveness

Procedures:

- ER-AA-10; Equipment Reliability Process Description; Rev. 7
- ER-AA-310-1003; Maintenance Rule – Performance Criteria Selection; Rev. 3
- ER-AA-2200; Attachment 3, Bubble Chart Work Sheet (Example); Rev. 1

Action Requests:

- 1451960; Relay House System 1 Battery Crack on Cell 32
- 1458955; Div I 125 Vdc Neg. to Ground Push Button Sticks
- 1460194; U1 Div 1 125 Battery (Cell 52 + Post) Has Mild Corrosion
- 1462577; EHC Minor Alarm (Slot 17 VGEN Diagnostic)
- 1485709; Received S Slot 7 VSVO Diagnostic Alarm

Miscellaneous:

- Condition Monitoring, DC: Battery & DC, Div. 1; 1/16/2013
- EH-01; Scoping/Risk Significance Detailed Report, EH Turbine EHC; 1/1/2004
- Enterprise Maintenance Rule Production; Systems at Risk; 3/21/2013
- Failure Report, EH; 1/1/2013 – 3/21/2013
- LAS, U1, EH – Turbine EHC; System Health Report; 7/1/2012 – 9/30/2012
- LAS, U2, EH – Turbine EHC; System Health Report; 7/1/2012 – 9/30/2012
- Maintenance Rule Functions, DC-02-Supply 125V Safety and Nonsafety Power
- Operator Logs; “EHC” Search; 1/1/2013 – 3/21/2013;
- Performance Monitoring Criteria Chart, DC-03, DC-01, DC-06, DC-07, DC-05
- Periodic Assessment of the Maintenance Rule Program; LaSalle Units 0, 1 and 2; 7/2010 - 6/20112
- Reliability Monitoring, DC: Battery & DC, Div. 1; 1/16/2013
- Scoping/Risk Significance – Summary Report, AP/DC-02, DC/DC-02; 1/15/2013
- Systems in A1; 2009 – 2010
- Train Reliability Evaluation; 01/01/2009 – 01/16/2013
- TS 3.8.6-2, Amendment 179/165; Technical Specifications Battery Parameters
- TS 5.5-14, Amendment 197/184; Technical Specifications Battery Monitoring and Maintenance Program
- Unavailability Monitoring, DC: Battery & DC, Div. 1; 1/16/2013

1R13 Maintenance Risk Assessments and Emergent Work Control

Procedures:

- ER-AA-600-1011; Risk Management Program; Rev. 11
- ER-AA-600-1012; Risk Management Documentation; Rev. 9
- ER-AA-600-1021; Risk Management Application Methodologies; Rev. 4

- ER-AA-600-1042; Online Risk Management; Rev. 7
- LIS-RI-201; Unit 2 RCIC Steam Line High Flow Isolation Calibration; Rev. 25
- LOA-FLD-001; Flooding; Rev. 16
- LOP-AP-242Y; Preparation Procedure for De-Energizing Switchgear 242Y; Rev. 10
- PC-AA-1014; Risk Management; Rev. 2
- WC-AA-101; Online Work Control Process; Rev. 19

Action Requests:

- 1412892; BT 1-9 Bus 9 Disconnect Blades Slightly Out of Adjustment
- 1487800; 2E51-F008 Closed During LIS-RI-201

Figures and Drawings:

- M-63; P&ID, Circulating Water System; Rev. AD

Working Documents:

- OP-LA-101-111-1002; Protected Equipment Log, Unit 1 Switchyard and SAT; 2/9/2013
- Clearance Request 342513; WO 1426391-01; Diver Support to Seal 2CW007C and 2CW007D Valves; 8/2/2012
- Clearance Request 344952; WO 1426391-07; CM-2CW76AC Remove Blind Flange/Install Dewatering System; 9/7/2012
- Clearance Request 345019; WO 1426391-08; CM-2CW76AC Remove Dewatering System / Reinstall Blind Flange; 9/7/2012
- Clearance 103616; Checklist 001, Unit 2, First Hang, Review Copy
- Clearance 103616; Checklist 001, Unit 2, First Hang, Master Copy
- OP-LA-101-111-1002; Protected Equipment Log, U1 FC System; 6/10/2012
- OP-LA-101-111-1002; Protected Equipment Log; 1/21/2013
- WEC Guide, Plant Parameter List (RFO); 2/19/2013

Event Notifications:

- IR 1487800; Human Performance Issue Verbal Report: During Execution of IMD Surveillance on the RCIC System, the RCIC Steam Supply Outboard Isolation Valve Shut on Closure of its Breaker; 3/14/2013

Miscellaneous:

- LIS-RI-201; Human Performance Alert During Unit 2 RCIC Steam Line High Flow Isolation Calibration; *undated*
- Log Entries Report. search on "CO"; 2/12/2013
- Log Entries Report; 3/14/2013 – 3/15/2013
- U1 and U2 PRA Results for 1/21/2013 - 2/17/2013
- LaSalle March 11th Work Week; Week 13 of 11 & U2 Multi-Divisional; 3/11/2013
- Model LS2-PRD-M-013D; Paragon 1.3 Status View Report; 3/11/2013 – 3/17/2013
- Model LS2-PRD-M-013D; Paragon 1.3 Schedule View Report; 3/11/2013 – 3/17/2013
- Paragon 1.3, Model LS1-PRD-M-012D, PRA LS1-PRD-P-08A; Status View Report; 2/12/2013
- POD; Plan of the Day; 1/30/2013
- WEC Guide, Plant Parameters List; 3/15/2013

1R15 Operability Determinations and Functional Assessments

Procedures:

- ER-AA-2009; Managing Gas Accumulation; Rev. 1
- LIS-NR-303B; Unit 1 Average Power Range Monitor Channels B, D and F Rod Block and Scram Functional Test; Rev. 18
- LOP-RH-01; Filling and Venting the Residual Heat Removal System; Rev. 47

Action Requests:

- 0812163; NRC GL 08-01 Inspection Results at Pipe 1RH03AA
- 1205083; 1E12-F068A Material Condition of Valve is Unsatisfactory
- 1352212; 1E12-F068A Packing Leak Update
- 1376513; 1E12-F068A Packing Leak
- 1415112; Valve 1E12-F068B Is Leaking
- 1460099; UT Identifies Small Void Upstream of 1E12-F053B
- 1460573; UT Identifies Small Void Upstream of 1E12-F016B
- 1480479; LPRM 16-49C Tested Unsat During LIP-NR-610
- 1480480; LPRM 16-17C Tested Unsat During LIP-NR-610
- 1480481; LPRM 56-33A Tested Unsat During LIP-NR-610
- 1480483; LPRM 40-57C Tested Unsat During LIP-NR-610
- 1480484; RM-LPRM 32-49D Tested Unsat During LIP-NR-610
- 1481885; RM-16-33 C Damaged During Shoot Out Steel Installation
- 1482226; RM- U2 LPRM 32-41D Bypassed Due to Upscale Indication
- 1483086; RM-LPRM 32-41D Is Downscale
- 1484523; RM-LPRM 24-09B Drifting

Working Documents:

- EC 371531; Generic Letter 2008-01 System Evaluation of Clinton Power Station, RHR; Rev. 1
- EC 371609; Evaluation for Clinton Power Station GL 2008-01: Air Intrusion in ECCS Systems; Rev. 1
- EC 371609; Revision Summary for Clinton Power Station Suction Volume Determination; Rev. 1
- EC 371660; Clinton GL 2008-01 Air Intrusion in ECCS Systems Ultra-sonic Inspection Criteria: Div. 3 ECCS: HPCS; Rev. 1
- EC 371660; Independent Design Review Notes for Clinton GL 2008-01 Air Intrusion in ECCS Systems Ultra-sonic Inspection Criteria: Div. 3 ECCS: HPCS; *undated*
- EC 372452-000; GL2008-01 Void Calculation and Acceptance Criteria; 11/13/2008
- LOS-RH-SRI; RHR Loop 'B' Service Water Flow Balance; 2003 – 2012
- WO 1531570-01; LOS-RH-Q1 1B RHR WS Operability & Inservice Test; 7/10/2012
- WO 1557326-01; LOS-RH-Q1 1B RHR WS Operability & Inservice Test; 10/5/2012
- WO 1575462-01; Adjust Packing / Repair Valve 1E12-F068B is Leaking; 3/7/2013
- WO 1583802-01; LOS-RH-Q1 1B RHR WS Operability & Inservice Test; 1/7/2013
- WO 1603944-01; 1B Min Flow Valve Troubleshooting NDE and Venting Steps; Rev. 0
- WR 412239; B RHR Heat Exch OTLT Stop VLV 1E12-F068B Is Leaking

Miscellaneous:

- B 3.3 Instrumentation Bases; 3/2013
- 3.3.1; Reactor Protection System Instrumentation; 3/2013; Amendment 147/133
- EC 371529; Generic Letter 2008-01 System Evaluation Clinton Power Station – HPCS Evaluation; Rev. 1
- LaSalle Peer Review Comments and Resolution; Clinton Power Station HPCS; *undated*

- Log Entries Report; 1/8/2013 – 1/9/2013
- LSCS-UFSAR 9.2-1; Water Systems; Rev. 13
- LSCS-UFSAR 7.7; Turbine/Power Generation; Rev. 19

1R18 Plant Modifications

Procedures:

- EC-387696; Single Phase Fault Mitigation; Rev. 001
- LS-AA-104-1001; 50.59; Rev. 3

Figures and Drawings:

- 1E-1-4005A3; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 9; Rev. U
- 1E-1-4005AM; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 12; Rev. L
- 1E-1-4005CN; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 61; Rev. H
- 1E-1-4005CP; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 62; Rev. D
- 1E-1-4005DQ; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 87; Rev. L

1R19 Post-Maintenance Testing

Procedures:

- LOR-1PM01J-B207; 1A Diesel Generator Fuel Oil Storage Tank Level Low; Rev. 7
- LOS-RH-SR1; RHR Service Water Flow Verification Test; Rev. 13

Action Requests:

- 00306789; 2AP79E-4B 2B DG "B" Starting Air Compressor
- 0930924; 2AP79E-4B 2B DG "B" Starting Air Compressor
- 1131746; U2 LPCS/A RHR Water Leg Pump 2E21-C002 Low Disch Press
- 1416146; HPCS DG 1B Fuel Oil Storage Tank Low Level Alarm
- 1465710; Div. 1 MS LD Temp Recorder Screen Is Black
- 1465718; High Filter Delta P Alarm Div. 1 Switchgear Vent. Panel
- 1472256; 2B DG HX Leaking Worse Than Last Identified
- 1474482; 2B DG Low Air Receiver Alarm

Working Documents:

- WO 0483517-01; Contingency WR – Replace XMTR / Trip Unit During LIS-MS-207A/B; 2/4/2013
- WO 1327828-01; Replace Hydramotor for 0VC52YB; 11/16/2011
- WO 1426500-01; PMT: 2E12-F008/9/20 (RH-Q3-7B)
- WO 1426503-01; PMT: 2A RHR Valves (Q2-2A/4A/6A, Q3-2A/4A/6A/10A)JBR; 2/13/2013
- WO 1426503-02; PMT: 2A RHR Sys Functional & Leak Chks & 2E12-F027A JBR; 2/14/2013
- WO 1594327-01; LOS-RH-Q1 2A RHR System Att 2A; 1/29/2013
- WO 1601614-01; LIS-LP-202 LPCS Min Flow Bypass Cal, including Risk Screenings; 1/30/2013
- WO 1614336-03; 2B DG Lube OIL Filter Needs To Be Changed; 3/11/2013

Miscellaneous:

- 3.3.5.1; Emergency Core Cooling System (ECCS) Instrumentation; Amendment No. 147/133
- 3.5; Emergency Core Cooling Systems (ECCS) and Reactor Core Isolation Cooling (RCIC) System; Amendment No. 171/157
- 3.6 Containment Systems, Primary Containment Isolation Valves (PCIVs); Amendment No. 147/133
- 3.8.2; AC Sources – Shutdown; 3/2013; Amendment 147/133
- 3.8.3; Diesel Fuel Oil and Starting Air, Electrical Power Systems; Amendment 191/178
- 3.8; Electrical Power Systems; 3/2013; Amendment 171/157
- 9.5 LSCS-UFSAR; Diesel Generator Fuel Oil Storage and Transfer System; Rev. 18
- B 3.3.5.1-1; Emergency Core Cooling System (ECCS) Instrumentation; Rev. 0
- B 3.3.5.1-37; Bases, Surveillance Requirements; Rev. 51
- B 3.5.1-1; Emergency Core Cooling Systems (ECCS) and Reactor Core Isolation Cooling (RCIC) System; Rev. 0
- B 3.5.1-11; Bases Surveillance Requirements; Rev. 51
- B 3.8.1; AC Sources – Operating; Electrical Power Systems; Rev. 19
- B 3.8.3; Diesel Fuel Oil and Starting Air; Electrical Power Systems; Rev. 33
- LSCS-UFSAR 5.4; Residual Heat Removal System; Rev. 14
- TRM 2.2.j; Primary Containment Isolation Instrumentation; Rev. 1
- TRM 3.7.g; Plant Systems, Area Temperature Monitoring; Rev. 1
- TS 3.7; Technical Specifications; Plant Systems, Amendment No. 186/173; *undated*
- TS 3.7; Technical Specifications; Plant Systems; Rev. 36

1R20 Outage Activities

Procedures:

- EC-387696; Single Phase Fault Mitigation; Rev. 001
- LGP-1-1; Normal Unit Startup; Rev. 102
- LGP-2-1; Normal Unit Shutdown; Rev. 96
- LOP-AA-03; Reactor Mode Changes; Rev. 29
- LOP-AP-242Y; Preparation Procedure for De-Energizing Swgr 242Y; Rev. 10
- LOP-FC-16; Reactor Vessel/Cavity Draindown Via RHR SDC; Rev. 22
- LOS-DG-209; Unit 2 Integrated Division I Response Time Surveillance; Rev. 13
- LOS-RH-Q3; RHR (LPCI) and RHR Service Water Valve Inservice Test for Cold Shutdown or Refuel Condition; Rev. 44
- LS-AA-104-1001; 50.59; Rev. 3
- LS-AA-119; Fatigue Management and Work Hour Limits; Rev. 9
- LS-AA-119-1001; Fatigue Management; Rev. 1
- LS-AA-119-1003; Calculating Work Hours; Rev. 1
- LTS-100-8; Drywell Personnel Access Hatch Inner/Outer Door Seals Leak Rate Test; Rev. 9
- MA-AA-716-008-1008; Reactor Services Refuel Floor FME Plan; Rev. 8
- MA-AB-756-601; Reactor Disassembly; Rev. 18
- NF-AB-110-1170; Generation of Fuel Moves Using Shuffleworks; Rev. 6

Action Requests:

- 1461261; Need Support Task for L2R14 Supporting RPV Floodup
- 1473474; U2 IRM E Anomaly
- 1473478; 2B21-F421C Did Not Open When Main Turbine Tripped
- 1473479; 2ES007C: Did Not Immediately Close Upon Turbine Trip
- 1473480; 2B21-RSLLV2 Showed Dual Indication Following Turbine Trip
- 1473481; 2HD036A Did Not Close Upon Turbine Trip

- 1473483; 2B21-RSLLV1 Indicating Open Following Turbine Trip
- 1473485; 2HD036B Did Not Close Upon Turbine Trip
- 1473488; 2HD036C Did Not Close Upon Turbine Trip
- 1473495; 2CD015 Failed Open While in Auto
- 1473496; 2ES053 Did Not Close Upon Turbine Trip
- 1473497; 2ES054 Did Not Close Upon Turbine Trip
- 1473498; Severe Packing Leak Discovered During U2 HTR Bay Walkdown
- 1473499; 2B21-F424 Did Not Close Upon Turbine Trip
- 1473501; Severe Packing Leak Identified During Walkdown
- 1473787; 2B21-MSBPV-2 Packing Leak/Corrosion
- 1473789; 2B21-MSBPV-4 Stem Leakage/Corrosion
- 1473864; 2B33-F067B Indicated Dual Upon Valve Closure
- 1473864; 2B33-F067B Indicated Dual Upon Valve Closure
- 1473927; QV ID L2R14 Resource Issue
- 1474467; Air Monitor Alarm During RX Vessel Disassembly
- 1474556; Water Anomaly Observed During Reactor Disassembly
- 1474564; Refuel Floor – Personnel Contamination
- 1474604; L2R14 LL – Leakage Id'd During Flood-Up Walkdown
- 1475116; Elevated Dose Rate on LPCS Pump Discharge Elbow
- 1475579; Higher Than Normal Dose Rates Due to Draining of LPCS System
- 1475609; L2R14 As-Found LLRT 2B33-F020 Exceeded Admin Alarm Limit
- 1475674; Unit 2 Refuel Bridge Electrical Cable Found Damaged
- 1476016; NOS ID – U2 LPCS Reverse Flush / RB Rad Condition
- 1476136; FME – DWFD Standpipe / Plug Broke During Installation
- 1476844; RP Work Hour Rule Waiver
- 1477609; Unexpected Results During LES-RP-205
- 1477639; 2E12-F046B Spring Can Found Pinned
- 1477725; L2R14 CRDM Scope Reduction Due to Elevated UV Dose Rates
- 1479416; During L2R14 FS #2 Netco Insert Came Out with Fuel Bundle
- 1479540; RM-Position Indication Lost for Control Rod 2C11-D4251
- 1479938; 10CFR26 Work Hour Limits Waiver / Fatigue Assessment Required
- 1480566; 44C249 Discovered To Be 2nd Defect Fuel Bundle During L2R14
- 1481851; RM-U2 Rod 54-15 Has No 46,36,26,16,06 Indication H1481905; Erroneous Initial Elongation Rod Measurement on Stud #64
- 1482070; 2 In. Socket Dropped Between RPV Head and Insulation
- 1482189; Results of U-2 Drywell 807', 796', & 777' Close-out Walkdowns

Figures and Drawings:

- 1E-1-4005A3; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 9; Rev. U
- 1E-1-4005AM; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 12; Rev. L
- 1E-1-4005CN; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 61; Rev. H
- 1E-1-4005CP; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 62; Rev. D
- 1E-1-4005DQ; Schematic Diagram 4160V Switchgear 141Y Main Feed ACB 1412 System "AP" Part 87; Rev. L
- 1E-2-4000FB; Key Diagram 125V DC Distribution ESS Div. 1; Rev. N
- 1E-2-4008AB; Schematic Diagram Div. 1 125V DC Battery Main Charger 2AA (2DC09E) System "DC" Part 2; Rev. I

- 1E-2-4008AL; Schematic Diagram Div. 1 125 DC Battery Backup Charger 2AB (2DC23E) System "DC"; Rev. A
- 1E-2-4439AA; Internal / External Wiring Diagram 125V DC Distribution Bus 2A and 125V DC Distribution Panel 211X; Rev. AC
- 1E-2-443AE; Internal / External Wiring Diagram Div. 1 125V DC Battery Backup Charger 2AB (2DC23E) System "DC"; Rev. A

Working Documents:

- Bundle Identification Array, Unit 2 Cycle 15 Core Loading Plan; Rev. 1
- Clearance 103820-01; First Hang Motor, RHR HX SHL/SD Bypass Valve, Div. 2 OPS Burden Mods; 2/21/2013
- Clearance 108276-02; Final Clear, Div. 1 125DC Battery Charger, 2DC23E Charger Output Breaker Won't Close; 2/27/2013
- EC 387696; Design Consideration Summary, Single Phase Fault mitigation (Byron Event); Rev. 0
- LOS-AA-S201; Att. A, Unit 2 Shiftly Surveillance for Mode 1, 2, or 3; Rev. 84
- LS-AA-119; 10 CFR 26 Work Hour Limits Waiver for RP Worker; 2/17/2013 – 2/18/2013
- LS-AA-119; 10 CFR 26 Work Hour Limits Waiver for RP Worker; 2/25/2013
- NF-AB-715; LaSalle Unit 2 Cycle 15 Critical Prediction Checklist; 3/2/2013
- NF-AB-720-F-1; Unit 2, Cycle 15, Startup L2C15-r1.0; L2C15BOC Startup Sequence; 3/2/2013
- NF-LA-721-2000; Unit 2 Control Rod Arrays / Control Rod Move Sheets; L2C14-r10.4
- OU-LA-104; Shutdown Safety (SDS) Level Assessment Sheet; 2/28/2013
- Radial Map LaSalle Core; 7/8/2009
- Schedule Report for Chemistry; 2/2013
- Schedule Report for EMD; 2/2013
- Schedule Report for Operating; 2/2013
- Schedule Report for Radiation Protection; 2/2013
- Schedule Report for Security; 2/2013
- Shutdown Safety Log 24; L2R14 Shutdown Safety Log; 2/27/2013
- Unit 2 Final Startup PORC 13-006; 3/1/2013

Miscellaneous:

- L2R14 RWP Spreadsheet; 1st Quarter 2013
- L2R14 Shutdown Safety Classification; 2/19/2013
- L2R14 Work Orders List / NSO; 1st Quarter 2013
- L2R14; LaSalle County Nuclear Power Station Refueling Outage Schedule, Revision "0", 11/19/2012
- LAS-U2-DC Battery-DC-0; Performance Monitoring – Condition Monitoring; 1/2010 – 1/2013
- OPS Operator Schedules During RFO; 2/2013
- Periodic Assessment of Maintenance Rule Program; 9/28/2012
- Protected Equipment Activity Log; 2/19/2013
- RP-AA-350; Personnel Contamination Data; 2/12/2013: 0410
- RP-AA-350; Personnel Contamination Data; 2/12/2013: 0415
- SDS Contingency Plans Activity Log; 2/19/2013

1R22 Surveillance Testing

Procedures:

- LMP-GM-06; Bench Testing/Setting of ASME OM Class 2 and 3 Safety Relief Valves; Rev. 28

- LOS-RH-Q1; RHR (LPCI) and RHR Service Water Pump and Valve Inservice Test for Modes 1,2,3,4, and 5; Rev. 80
- LOS-RI-Q5; Reactor Core Isolation Cooling (RCIC) System Pump Operability, Valve Inservice Tests in Modes 1,2,3 and Cold Quick Start; Rev. 35
- LTS-100-14; Drywell Floor Drain Sump Isolation Valves Local Leak Rate Test 1 (2) RF012 and 1(2)RF013; Rev. 19
- LTS-300-5; Primary Containment Leak Rate Testing Program; Rev. 40

Action Requests:

- 1050457; Relief Valve Outlet Flange Over Torqued Under WO 835846-01
- 1434660; Vacuum Pump Has Shaft Packing Leak while Running and STBY
- 1460194; U1 Div. 1 125V Battery (Cell 52 + Post) Has Mild Corrosion
- 1476117; Valve Failed Final Seat Leak Test
- 1479484; L2R14-2RF012 Failed As-Left LLRT
- 1486110; Failed LLRT
- 424966; 2E21-F018 Valve Failed Final Seat Leak Test

Working Documents:

- LU2001-091; UFSAR/FPR Change Request; 9/13/2001
- WO 1315026-01; Bench Test for IST; 1/10/2013
- WO 1315026-04; Bench Test for IST; 11/07/2012
- WO 1413680-12; EP PMT 2RF012 As Left LLRT PMT Per LTS-100-14; 3/1/2013
- WO 1582084-01; LOS-DC-Q1 U1 Div II 125VDC Batt Att B; 1/8/2013
- WO 1587802-01; LOS-RI-Q5 U1 RCIC Cold-Quick Start; 1/22/2013
- WO 1591428-01; LOS-RH-Q1 1C RHR System Operability Att 1C; 01/28/2013

Miscellaneous:

- B 3.5.1-1; Emergency Core Cooling Systems (ECCS) and Reactor Core Isolation Cooling (RCIC) System; Rev. 0
- B 3.5; RCIC System, Emergency Core Cooling Systems and Reactor Core Isolation Cooling System; Amendment 171/157
- B 3.5; RCIC System, Emergency Core Cooling Systems and Reactor Core Isolation Cooling System; Rev. 13
- B 3.6.Containment Systems, PCIVs; Amendment 147/133
- B 3.6.Containment Systems, PCIVs; Rev. 0
- B 3.6.Containment Systems, Primary Containment; Amendment 184/171
- B 3.6.Containment Systems, Primary Containment; Rev. 0
- IEEE Std 450-1975; IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations; 10/24/1980
- IEEE Std 450-1995; IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications; 1/24/1995
- LSCS-UFSAR 5.4.6; Reactor Core Isolation Cooling (RCIC) System; Rev. 14
- LSCS-UFSAR 8.3; Power Systems; Rev. 15
- LSCS-UFSAR Table 6.2-2; Engineered Safety Systems Information for Containment Response Analyses; Rev. 14
- LSCS-UFSAR; Table 8.3; Rev. 17
- Residual Heat Removal Training Document, Supported Systems; *undated*
- TRM 3.3; Technical Requirements Manual, RCIC System Discharge Line; Rev. 1
- TRM 3.8.d; Technical Requirements Manual; Battery Monitoring and Maintenance; Rev. 0
- Unit 2 Type B & C Test Results Log, Penetration/Valves; 2006 – 2013

- VDCR 13361; Vendor Information Solutions, Vendor Document Comparison Report, GNB Batteries Installation and Operating Instructions; 8/2/2007

2RS1 Radiological Hazard Assessment and Exposure Controls

- AR-01475014; Unit 2 LPCS Reverse Flush; 02/13/2013
- AR-01474175; Insulator Received Dose Rate Alarm; 02/11/2013
- AR-01474579; Work Stopped in 4 Valve Room Higher Than Expected Dose Rates; 02/12/2013
- AR-01476016; Nuclear Oversight Observation on Unit 2 LPCS Reverse Flush / RB Radiation Condition
- AR-01475116; Elevated Dose Rate on LPCS Pump Discharge Elbow; 02/13/2013
- AR-01475579; Higher Than Normal Dose Rates Due to Draining of LPCS System; 02/14/2013
- AR-01474284; Refuel Floor Personnel Contamination; 02/12/2013
- AR-01474446; Delay to Reactor Services and Refuel Floor Activities Due to Continuous Air Monitor Alarm; 02/12/2013
- AR-01474467; Air Monitor Alarm during Reactor Vessel Disassembly; 02/12/2013
- AR-01474564; Refuel Floor Personnel Contamination; 02/12/2013
- AR-01474529; L2R14-Delayed B Low Pressure Outage Work Due to High Airborne; 02/12/2013
- AR-01476384; Worker Electronic Dosimeter Alarmed; 02/16/2013
- AR-01476314; Unexpected Electronic Dosimeter Dose Rate Alarm – CB&I Pipe Fitter; 02/13/2013
- AR-01474446; Air Monitor on the Refuel Floor Began to Alarm During Reactor Disassembly; 02/12/2013
- Human Performance Issue OP-AA-106-101-1001Associated AR-01474446
- RWP-10013922; L2R14 Under Vessel Preparation, Set-up Demobilization; Rev. 1
- RWP-10013941; L2R14 2B33-F067B Valve Activities; Rev. 0
- RWP-10013909; L2R14 Drywell Temporary Shielding Activities; Rev. 0
- RWP-10013922; L2R14 Drywell U/V Work Preps, Set Up and Demobe Include Pre-outage; Rev. 1
- RWP-10013933; L2R14 Drywell Shaw ISI (Excluding Nozzles) High Energy Work to 50K CPM; Rev. 0
- RWP-10013922; L2R14 Under Vessel Preparation, Set-up, Demobilization; Rev. 1
- L1R14 ECCS Reverse Flushing: Radiological Control for Reverse Flushing ECCS System Piping
- RP-AA-203; Exposure Control and Authorization; Rev. 3
- RP-AA-203-1001; Attachment 1; Sample Personnel Exposure Investigations; Rev. 6; SSN/EID; 201700; ESLIN0555; HARRI3326; COOPE3158; HARCA3696; and GAGEX9938
- RP-AA-225; Quality Control Operation for the Canberra Fast Scan Whole Body Counter; Rev. 3
- RP-AA-229; Fast Scan ABACOS Plus Whole Body Counter Calibration; Rev. 0
- RP-AA-300; Radiological Survey Program; Rev. 10
- RP-AA-301; Radiological Air Sampling Program; Rev. 5
- RP-AA-302; Determination of Alpha Levels and Monitoring; Rev. 4
- RP-AA-350; Personnel Contamination Monitoring, Decontamination and Reporting; Rev. 10
- RP-AA-376; Radiological Posting, Labeling and Marking; Rev. 6
- RP-AA-460-001; Implementation of VHRA; Rev. 4

2RS2 Occupational ALARA Planning and Controls

- RP-AA-400; ALARA Program; Rev. 9
- RP-AA-401; Operational ALARA Planning and Control; Rev. 15
- RP-AA-401-1002; Radiological Risk Management; Rev. 3
- ALARA Plan-10013922; L2R14 Under Vessel Preparation, Set-up Demobilization; Rev. 1
- ALARA Plan-10013941; L2R14 2B33-F067B Valve Activities; Rev. 0
- ALARA Plan-10013909; L2R14 Drywell Temporary Shielding Activities; Rev. 0
- ALARA Plan-10013933; L2R14 Drywell Shaw ISI (Excluding Nozzles) High Energy Work to 50K CPM; Rev. 0
- ALARA Plan-10013922; L2R14 Drywell U/V Work Preps, Set Up and Demobe Include Pre-Outage; Rev. 1
- ALARA Plan-10013922; L2R14 Under Vessel Preparation, Set-up, Demobilization; Rev. 1
- LOS-2-RH-R2 ECCS Check Valve Reverse Flushing Operating Procedure; Rev. 0
- LaSalle County Miscellaneous Noble Gas Analysis; Head Vent Breach, 02/12/2013

2RS5 Radiation Monitoring Instrumentation

Procedures:

- RP-LA-723; Calibration of the General Atomic Wide Range Gas Monitor Low Range Detector; Rev. 0
- RP-LA-724; Calibration of the General Atomic Wide Range Gas Mid and High Range Detectors; Rev. 0
- RP-LA-715; 1PL75J; Continuous Air Monitor and Manifold Setpoint Determination; 11/28/2012
- RP-AA-700-1209; Raw Data for Box Irradiator Calibration for a Fixed Distance J.L. Shepherd 89-30; 9/22/2011
- RP-AA-800; Active Inventory List Semiannual Inventory of Check and Calibration Sources; 2/18/2013

Action Requests:

- 1446341; 2B Carbon Bed Vault Radiation High Alarm
- 1446551; Received 2N62-P600-B408 2B OG Carbon Bed Vault Radiation High; 12/1/2012
- 1451089; Shepherd Calibrator Sources Replacement Requires Funding; 12/12/2012
- 1445518; Liquid PRM Detector Serial Number Different than Expected

Working Documents:

- Certificate of Calibration No. 0010688453; MGP 4-0027; 4/11/2012
- Certificate of Calibration No. 0010723678; MGP 4-0027-30; 9/26/2012
- Certificate of Calibration No. 0010692613; MGP AMP-100; Serial No. 5003-145; 4/12/2012
- Certificate of Calibration No. 0010731661; Thermo Electron; AMS-4 1858; 11/13/2012
- Certificate of Calibration No. 0010710493; Ludlum 3030P No. 272579; 8/1/2012
- Certificate of Calibration No. 0010711533; Ludlum 3030P No. 264781; 7/28/2012
- Certificate of Calibration No. 0010702620; Eberline RM-14 No. 1031; 8/28/2012
- Certificate of Calibration No. 0010711933; Eberline RM-14 No. 7394; 8/28/2012
- Certificate of Calibration No. 0010729616; Radiation Detection Device; 11/1/2012
- Certificate of Calibration No. 0010701419; Eberline RO-20 No. 005206; 1/2/2013
- WO-01268067; RHR SW Radiation Monitor; RHR B Service Water Effluent Rad Monitor Calibration; 8/18/2011
- WO-01309591; Unit-1 Primary Containment Panel 1PL75J Air Particulate and Noble Gas Monitor Calibration; 8/11/2011
- WO-01327135; Station Ventilation Vent Stack Wide range Gas Monitor; 4/17/2012

Miscellaneous:

- Area Radiation Monitor (ARM) Setpoint Determination on RB Crane ARM; 11/17/2004
- Area Radiation Monitor (ARM) Setpoint Determination on RB Sample Station; 6/15/2011
- Continuous Air Monitor and Manifold Setpoint Determination; 1PL753; 8/4/2011 - 5/17/2012
- Carbon Bed Vault Radiation Monitor Setpoint Determination; 1A Carbon Bed; 10/1/2011
- General Atomic Wide Range Gas Monitors Background Correction and Check Source Response; 4/13/2012
- Radcal Corporation; Report No. 7911; Model 2025AC Radiation Monitor S/N 4097; Ion Chamber No. 5801 and 7696; 6/20/2012
- Radeco H-809V; H-809V-1, H-809V-II Calibration Data Sheet; Serial No. 7150; 5/31/2013

4OA1 Performance Indicator Verification

Procedures:

- CY-LA-110-202; 2 PL14J Reactor Panel Sampling; Rev. 5

Action Requests:

- 1458694; INPO CDE Indicator Documentation Accidentally Discarded

Licensee Event Reports:

- 2011-001-00; Automatic Reactor Scram Due to Main Power Transformer "C" Phase Electrical Fault; 3/25/2011
- 2011-002-00; Unit Shutdown Required by Plant Technical Specifications Due to Pressure Boundary Leakage; 4/1/2011

Miscellaneous:

- LS-AA-110-2090; Monthly Data Elements for NRC Reactor Coolant System Specific Activity; Rev. 4
- LS-AA-2010; Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, January 2012 - December 2012; Rev. 5
- LS-AA-2030; Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, January 2012 - December 2012; Rev. 5
- Monthly Data Elements for NRC Reactor Coolant System Specific Activity for Unit-1(2); from January 2012 through February 2013
- NEI 99-02; Nuclear Energy Institute, Regulatory Assessment Performance Indicator Guideline; Rev. 6, 10/2009
- NEI 99-02; Nuclear Energy Institute, Unplanned Scrams with Complications (USwC); Rev. 6
- Plant Parameters Report Operations Log, U1-Thermal Power; U2 Thermal Power; 01/01/2012 – 01/01/2013

4OA2 Identification and Resolution of Problems

Procedures:

- HR-AA-2009; Nuclear Organizational Charts; Rev. 15

Action Requests Resulting from NRC/IEMA Inspection:

- 1451116; NRC Identified Typographical Error In EC 362991
- 1452074; NRC Id Question About EOP Support Procedure
- 1453181; IEMA Question On Cathodic Protection
- 1454507; NRC Identified Issues
- 1454569; NRC Identified Issue

- 1457783; IEMA Question On LOS-HP-Q1
- 1458590; NRC Question U1 LPCS Vibrations & Adsorber Adjustment
- 1466168; IEMA Questions on 1VQ034 LLRT
- 1470232; IEMA Questions on RHR and HPCS PCM Template
- 1470304; NRC Questioned Use of B.B.B Connection for RX Bldg Temp PWR
- 1471314; NRC Identified – Surface Rust Identified on Supports 1LP000
- 1472243; PCR For Seismic Monitoring LOR's
- 1474075; NRC: QV Inspector Independence per Requirements of 10CFR50A
- 1474895; NRC Identified Sign with Potential to Cover Floor Drain
- 1475468; NRC Stepped in Water on Floor of 786' RX BLD
- 1484640; IEMA Question on EFCV Testing

Miscellaneous:

- ML11224A255; NRC Confirmatory Order Modifying Licenses (EA-11-096); 8/24/2011
- QATR NO-AA-10; Quality Assurance Topical Report; Rev. 87

4OA5 Temporary Instruction (TI) 2515/182

Procedures:

- ER-AA-335-004; Ultrasonic (UT) Measurement of Material Thickness and Interfering Conditions; Rev. 6
- ER-AA-5400; Buried Piping and Raw Water Corrosion Program (BPRWCP) Guide; Rev. 5
- ER-AA-5400-1002; Buried Piping Examination Guide; Rev. 4
- ER-AA-5400-1003; Buried Pipe and Raw Water Corrosion Program (BPRWCP) Performance Buried Pipe and Raw Water Systems, Long Term Asset Management (LTAM) Strategy; Rev. 5
- LS-AA-126-1001; Focused Area Self-Assessment for Buried Piping; Rev. 2
- Procedure NES-MS-15.2; Guidance for Determining Reasonable Assurance for Structural and/or Leakage Integrity for Buried Piping; Rev. 0
- Procedure No. IMP-GWT-01N; Long Range Guided Wave Ultrasonics Pipe Screening System; Rev. 5
- NES-EIC-50.00; Guideline for Performing Cathodic Protection (CP) System Survey; Rev. 1

Working Documents:

- WO 01329120; 2RH16 RHR SW Buried Strainer Discharge Flow Test (VT-2); 9/25/2012
- WO 01329122; 2RH15 RHR SW Buried Suction Piping Flow Test (VT-2); 9/25/2012

Miscellaneous:

- Buried Pipe Inspection Plan – LaSalle County Station; Rev. 1
- CSI Report No. 0600.109-3; Exelon Buried Piping Risk Ranking – LaSalle County Generating Station; 11/12/2009
- Indicators; Rev. 4
- Evaluation Report No. NU2011111.00; Condition Assessment Excavated Buried Pipe Excavation Nos. 1, 2, and 3; 1/7/2012
- Evaluation Report No. NU2012115.00; Condition Assessment Excavated Buried Pipe Excavation No. 5; 4/25/2012
- Exelon Report No. SL-010764; LaSalle County Station Outdoor Cycled Condensate Piping Replacement Alternate Mitigation Study; Rev. 0A
- NDE Report No. 12-051; UT Thickness Results for 0DO62A-3, 0DO24A-3; 1DO87A-3; and 1DO88A-3; 4/30/2012

- Technical Report AM1571-358317; Long Range Guided Wave Ultrasonics Pipe Screening Results for 0DG05A-12, 0DG04B-12; 2CY19A-4; and 1CY19A-4; 12/1/2011
- Technical Report AM2475-399512; Long Range Guided Wave Ultrasonics Pipe Screening Results for 0DO62A-3, 0DO24A-3; 1DO87A-3; and 1DO88A-3; 5/15/2012

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
ALARA	As-Low-As-Is-Reasonably-Achievable
AR	Action Report (also known as Issue Report)
ASME	American Society of Mechanical Engineers
BWR	Boiling Water Reactor
BWRVIP	Boiling Water Reactor Vessel Internals Project
CAP	Corrective Action Program
CFR	Code of Federal Regulations
DG	Diesel Generator
ECCS	Emergency Core Cooling System
ED	Electronic Dosimeter
FME	Foreign Material Exclusion
HPCS	High Pressure Core Spray
HX	Heat Exchanger
IEEE	Institute of Electrical & Electronic Engineers
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
ISI	Inservice Inspection
LLRT	Local Leak Rate Testing
LPCI	Low Pressure Coolant Injection
LPCS	Low Pressure Core Spray
mrem	Millirem
NCV	Non-Cited Violation
NDE	Nondestructive Examination
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
OSP	Outage Safety Plan
PARS	Publicly Available Records System
PI	Performance Indicator
PMT	Post-Maintenance Testing
RCIC	Reactor Core Isolation Cooling
RFO	Refueling Outage
RG	Regulatory Guide
RHR	Residual Heat Removal
RP	Radiation Protection
SDP	Significance Determination Process
SSC	Structure, System, and (or) Component
TI	Temporary Instruction
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
Vdc	Volts Direct Current
WO	Work Order

M. Pacilio

-2-

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and 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 System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), 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 and 50-374
License Nos. NPF-11 and NPF-18

Enclosure: Inspection Report 05000373/2013002; 05000374/2013002
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ™

DISTRIBUTION:
See next page

DOCUMENT NAME: LaSalle 2013002

☒ Publicly Available ☐ Non-Publicly Available ☐ Sensitive ☒ Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII		RIII		RIII		RIII	
NAME	MKunowski:rj							
DATE	05/09/13							

OFFICIAL RECORD COPY

Letter to M. Pacilio from M. Kunowski dated May 9, 2013

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2, NRC INTEGRATED
INSPECTION REPORT; 05000373/2013002; 05000374/2013002

DISTRIBUTION:

Doug Huyck
RidsNrrDorlLpl3-2 Resource
RidsNrrPMLaSalle
RidsNrrDirslrib Resource
Chuck Casto
Cynthia Pederson
Steven Orth
Allan Barker
Christine Lipa
Carole Ariano
Linda Linn
DRPIII
DRSIII
Patricia Buckley
Tammy Tomczak
ROPreports.Resource@nrc.gov