

January 15, 2008

Mr. Charles G. Pardee  
Chief Nuclear Officer and  
Senior Vice President  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville IL 60555

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2  
PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION  
NRC INSPECTION REPORTS 05000373/2007006; 05000374/2007006

Dear Mr. Pardee:

On December 7, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed a team inspection at your LaSalle County Station. The enclosed inspection report documents the inspection results, which were discussed on December 7, 2007, with Mr. Daniel Enright, LaSalle Site Vice President, and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, the team concluded that implementation of the Corrective Action Program (CAP) at LaSalle was generally good. There were two Green findings identified by the team during this inspection, both related to the implementation of the CAP for a significant condition adverse to quality. The first was related to the failure to perform an adequate root cause analysis (RCA) for a March 2006 modification to install jet pump riser brace clamps. The second was related to a failure to correct, in a timely manner, the ten remaining Core Standby Cooling System (CSCS) valves that are susceptible to separation of the valve disc from the valve stem. Both violations have a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program. The findings were determined to be violations of NRC requirements. However, because each of the violations was of very low safety significance (Green) and because they were entered into your CAP, the NRC is treating these as Non-Cited Violations (NCVs) in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of any of the NCVs, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the U.S. Nuclear

Regulatory Commission, ATTN: Document Control Desk, Washington DC, 20555-0001, with copies to the Regional Administrator, Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC, 20555-0001; and the NRC Resident Inspectors' Office 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 will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Kenneth Riemer, Chief  
Branch 2  
Division of Reactor Projects

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

Enclosure: Inspection Report Nos. 05000373/2007006; 05000374/2007006  
w/ Attachment: Supplemental Information

cc w/encl: Site Vice President - LaSalle County Station  
Plant Manager - LaSalle County Station  
Regulatory Assurance Manager - LaSalle County Station  
Chief Operating Officer and Senior Vice President  
Senior Vice President - Midwest Operations  
Senior Vice President - Operations Support  
Vice President - Licensing and Regulatory Affairs  
Director - Licensing and Regulatory Affairs  
Manager Licensing - Braidwood, Byron and LaSalle  
Associate General Counsel  
Document Control Desk – Licensing  
Assistant Attorney General  
Illinois Emergency Management Agency  
State Liaison Officer  
Chairman, Illinois Commerce Commission

C. Pardee

-2-

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

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Letter to C. Pardee from K. Riemer dated January 15, 2008

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2  
PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION  
NRC INSPECTION REPORTS 05000373/2007006; 05000374/2007006

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 05000373; 05000374

License Nos: NPF-11; NPF-18

Report No: 05000373/2007006, 05000374/2007006

Licensee: Exelon Generation Company, LLC

Facility: LaSalle County Station, Units 1 and 2

Location: Marseilles, Illinois

Dates: November 26 – December 7, 2007

Team Leader: Barry S. Norris, Senior Project Engineer  
Division of Reactor Projects, Region I

Inspectors: Donald Jones, Reactor Engineer  
Division of Reactor Safety

Nirodh Shah, Project Engineer  
Division of Reactor Projects

Observers: Jane Yesinowski, Resident Inspector  
Illinois Emergency Management Agency

Approved by: Kenneth R. Riemer, Chief  
Reactor Projects Branch 2

Enclosure

## SUMMARY OF FINDINGS

IR 05000373/2007-006, 05000374/2007-006; 11/26/2007 - 12/14/2007; LaSalle County Station; Biennial Baseline Inspection of the Identification and Resolution of Problems; two violations were identified with respect to the implementation of the CAP.

This team inspection was performed by three NRC regional inspectors and observed by the Illinois resident inspector. Two findings of very low safety significance (Green) were identified during this inspection. Each of the findings was classified as a NCV. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using NRC Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). 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.

### Identification and Resolution of Problems

The team concluded that the implementation of the CAP at LaSalle was generally good. The licensee had a low threshold for identifying problems and entering them in the CAP. Items entered into the CAP were screened and prioritized in a timely manner using established criteria; were properly evaluated commensurate with their safety significance; and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. The team noted that the licensee was good at reviewing and applying industry operating experience lessons learned. Audits were noted to be good, while self-assessments were acceptable. On the basis of interviews conducted during the inspection, workers at the site expressed freedom to enter safety concerns into the CAP.

There were two Green NCVs identified by the team during this inspection. Each is related to the implementation of the CAP for a significant condition adverse to quality (SCAQ). The first was related to the failure to perform an adequate root cause analysis (RCA) for a March 2006 modification to install jet pump riser brace clamps. Specifically, the licensee did not evaluate whether there were any aspects under their control that may have identified or prevented the incorrect machining of the Unit 1 jet pump riser brace clamps; therefore, they were unable to determine a corrective action to prevent recurrence of similar oversight of contractor activities. The second was related to the failure to correct in a timely manner a SCAQ which initially was identified in 1996. Specifically, the licensee had not repaired or replaced all of the affected CSCS valves that are susceptible to separation of the valve disc from the valve stem. As of this inspection, ten CSCS valves associated with safety-related and important-to-safety systems have not been refurbished or replaced. Both violations have a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program.

#### a. NRC Identified and Self-Revealing Findings

##### **Cornerstone: Initiating Events and Mitigating Systems**

- Green: The NRC identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to perform an adequate RCA to determine the corrective actions necessary to prevent recurrence for a SCAQ. Specifically, the licensee did not evaluate whether there were any aspects under their control that may have identified or prevented the incorrect machining of the Unit 1 jet pump riser brace clamps. The modification was initiated and processed in accordance

with the licensee's process, but the contractor had the primary responsibility for implementation. The licensee assigned the performance of the RCA to the contractor. The contractor identified that they had provided incorrect measurements. However, the licensee did not perform an evaluation of their involvement with the modification; specifically, they did not look at those aspects of the modification directly under their control. By not performing an independent evaluation, the licensee failed to identify the root cause of any weaknesses within their oversight of the work that may have identified the incorrect measurements. As such, they were not able to determine a corrective action to prevent recurrence of similar oversight of contractor activities. The performance deficiency has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not evaluate whether there were any aspects under their control that may have identified or prevented the incorrect machining of the clamps. [P.1(c)]

The finding is more than minor because it directly affected the Human Performance attribute of the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions while at power. The finding is of very low safety significance because the incorrectly sized clamps were not installed, and there was no likelihood of a reactor trip or the loss of a mitigating function. (Section 4OA2.a.3(a))

- Green: The NRC identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to correct a SCAQ in a timely manner. Specifically, the licensee had not repaired or replaced all of the affected CSCS valves that are susceptible to separation of the valve disc from the valve stem. The first failure was in September 1996. The cause was determined to be vibration accelerated corrosion and erosion of the valves internal carbon steel components. There were at least four additional failures between 2002 and 2006. Corrective actions included the refurbishment or replacement of the 88 susceptible valves, as appropriate. As of this inspection, ten valves have not been refurbished or replaced. The valves are associated with safety-related and important-to-safety systems. The performance deficiency has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not take the appropriate corrective actions to address a safety issue in a timely manner, commensurate with the safety significance. [P.1(d)]

The finding is greater than minor because it affects the Equipment Performance attribute of the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance because it is associated with a design deficiency (carbon steel valve internals) that did not result in a loss of operability. (Section 4OA2.a.3(b))

b. Licensee-Identified Violations

None

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA2 Problem Identification and Resolution (PI&R) (Biennial - IP 71152B)

##### .1 Assessment of the Corrective Action Program

##### a. Inspection Scope

The inspection team reviewed the licensee's procedures describing the CAP. The licensee identified problems by initiating Issue Reports for conditions adverse to quality, plant equipment deficiencies, industrial or radiological safety concerns, or other significant issues. The Issue Reports are subsequently screened for operability, categorized by priority (1 to 5) and significance (A through D), and assigned for evaluation and resolution; after the Issue Reports are screened, they result in Action Requests and other assignments. The Issue Reports and Action Requests are collectively referred to as Condition Reports (CRs).

The team reviewed CRs selected across the seven cornerstones of safety in the NRC's Reactor Oversight Program (ROP) to determine if problems were being properly identified, characterized, and entered into the CAP for evaluation and resolution. The team selected items from the maintenance, operations, engineering, emergency preparedness, physical security, radiation safety, training, and oversight programs to ensure that the licensee was appropriately considering problems identified in each functional area. The team used this information to select a risk-informed sample of CRs that had been issued since the last NRC Problem Identification and Inspection Report (PI&R) inspection, which was conducted in October 2005.

The team selected items from other processes, to verify that the licensee appropriately considered these items for entry into the CAP. Specifically, the team reviewed a sample of engineering requests, training work requests, maintenance work requests, operator log entries, control room deficiency and operator work-around lists, operability determinations, engineering system health reports, completed surveillance tests, and current temporary configuration change packages. In addition, the team interviewed plant staff and management to determine their understanding of and involvement with the CAP at LaSalle. The CRs and other documents reviewed, and the key personnel contacted, are listed in the Attachment to this report.

The team considered risk insights from the NRC's and licensee's risk analyses to focus the sample selection and plant tours on risk-significant components. The team determined that the five highest risk-significant systems were Divisions 1 and 2 of the alternating (AC) power, Divisions 1 and 2 of the 125 volt direct current (VDC) power, the automatic depressurization system, the vapor suppression system, and the cooling water for the Division 0 emergency diesel generator (EDG). For the selected risk-significant systems, the team reviewed the applicable system health reports, a sample of work requests and engineering documents, plant log entries, and results from surveillance tests and maintenance tasks.

The team reviewed the CRs to assess whether the licensee adequately evaluated and prioritized the identified problems. The CRs reviewed encompassed the full range of licensee evaluations, including RCA, apparent cause evaluations (ACE), common cause analyses, and work group evaluations. The review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of the resolutions. For significant conditions adverse to quality, the team reviewed the effectiveness of the corrective actions to preclude recurrence. The team observed meetings of the Station Oversight Committee ((SOC) - in which licensee personnel reviewed new CRs for prioritization, and evaluated preliminary corrective action assignments, analyses, and plans) and the Management Review Committee ((MRC) - where senior managers reviewed new Significance Level 1-3 CRs, all completed RCAs, and selected ACEs). The team also reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected problems. The team assessed the backlog of corrective actions in the maintenance, engineering, and operations departments, to determine, individually and collectively, if there was an increased risk due to delays in implementation of corrective actions. The team further reviewed equipment performance results and assessments documented in completed surveillance procedures, operator log entries, and trend data to determine whether the equipment performance evaluations were technically adequate to identify degrading or non-conforming equipment.

The team reviewed the corrective actions associated with selected CRs to determine whether the actions addressed the identified causes of the problems. The team reviewed CRs for significant repetitive problems to determine whether previous corrective actions were effective. The team also reviewed the licensee's timeliness in implementing corrective actions. The team reviewed the CRs associated with selected NCVs and findings (FINs) to determine whether the licensee properly evaluated and resolved these issues.

## .2 Assessment

### a. Identification of Issues

No findings of significance were identified in the area of identification of issues. In general, the team considered the licensee's identification of equipment deficiencies to be generally good. There was a low threshold for the identification of individual issues, approximately 12,000 CRs were written per year. The housekeeping and cleanliness of the plant was generally good, although the team identified numerous examples of low-level equipment storage deficiencies – such as ladders, rolling carts, extension cords, and rags. In addition, the team noted that in the 1A EDG room, there was a film of oil on the base plate, and the catch rags under the oil drips appeared to have been there for a long time. This made it difficult for personnel to determine if a leak was getting worse or if a new leak developed. However, the general cleanliness of the plant enhanced the ability of personnel to easily identify equipment deficiencies and monitor equipment for worsening conditions.

Also, during one of the SOC meetings, the team observed three examples where the origination of the CR was delayed by as much as nine days from the discovery of the issue.

- CR 703553, Technical Specification (TS) Bases 3.8.3 Fuel Oil Capacity Required for Division 3 Inconsistent: Discovered November 21, 2007, CR originated November 26, 20/07 – 5 days
- CR 704080, Replacement of SBM Switch for Reactor Core Isolation Cooling Room Rescheduled: Discovered November 19, 2007, CR originated November 27, 2007 – 8 days
- CR 704346, Nuclear Oversight (NOS) Identified Generic Letter 82-12 Overtime Forms Not Completed as Required: Discovered November 19, 2007, CR originated November 28, 2007 – 9 days

No one in the SOC meeting identified the delay in the origination of the CRs. Discussions with the applicable departments revealed that the issues were being reviewed and evaluated before the CRs were submitted. The team determined that this was a weakness that had the potential to delay the identification of a significant problem or to delay the operability determination of a TS required system.

#### Prioritization and Evaluation of Issues

There was one Green violation identified in the area of prioritization and evaluation of issues. The team determined that the licensee's performance in this area was generally acceptable. The station screened the CRs appropriately and properly classified them for significance. There were no items in the operations, engineering, or maintenance backlogs that were risk significant, individually or collectively. The team considered the contributions of the SOC and MRC to add value to the CAP process. The discussions about specific topics were detailed, and there were no classifications or immediate operability determinations with which the team disagreed.

The quality of the causal analyses reviewed was generally good. However, the inspectors identified two RCAs where the evaluation was limited in scope. Both root causes involved work that was primarily performed by contract personnel. The first example discussed an event where loose radioactive material was found inside a shipping cask sent to the Barnwell burial site by the licensee (CR 663766 -August 22, 2007). The shipping cask had been loaded and prepared for shipment by contract personnel in July 2006. The associated RCA focused on the actions of the contractor and not on the Exelon oversight of the activities. The RCA identified that there was applicable Operating Experience (OE) that may have prevented this issue; and although the contractor was aware of the OE, it was not provided to the licensee's staff. However, the RCA did not address whether this same OE was available through Exelon's OE program. This issue is being tracked as an Unresolved Item (URI 05000373/2007004-03; 05000374/2007004-03).

The second example discussed that a contractor had incorrectly manufactured the jet pump riser brace clamps for Unit 1 jet pumps (CR 462099 – March 4, 2006). The clamps were being installed to improve the structural reliability of the jet pumps. The clamps were not able to be installed; instead, new clamps had to be manufactured. The licensee required the contractor to perform the RCA, but did not perform an independent evaluation of their own actions. As a result, the evaluation was limited to the contractor's involvement and not on those issues directly under the licensee's control. The jet pumps and the riser clamps are safety-related components, and the failure to perform an

adequate evaluation of the deficiency is a SCAQ. Refer to Section 4OA2.a.3(a) for a discussion of the finding.

In addition, the team noted that since 2005, there have been several historical examples of NRC-identified and NOS-identified deficiencies for weak or inadequate documentation to support operability. The team determined that there continues to be a problem in this area. Although the team did not find any issues where the equipment should have been declared inoperable, the inspectors questioned several issues to understand the basis for operability.

### Effectiveness of Corrective Actions

There was one Green violation identified in the area of effectiveness of corrective actions. The team concluded that the licensee's performance in the area of effectiveness of corrective actions was generally acceptable. The inspectors determined that corrective actions were adequate and mostly completed in a timely manner. For significant conditions adverse to quality, corrective actions were identified to prevent recurrence.

However, the inspectors identified that the licensee failed to correct a SCAQ within a timely manner. In July 1996, the licensee learned that the valve disc had separated from the valve stem on one of the CSCS valves for the EDGs. Since that time, there have been at least five additional occurrences of disc-stem separation of CSCS valves. As of the exit, there were still ten valves that had not been repaired or replaced. Refer to Section 4OA2.a.3(b) for a discussion of the finding.

Also, the inspectors identified an example of the poor implementation of a corrective action to prevent recurrence. In August 2007, the licensee initiated CR 663732 to document that a radioactive shipment from the station arrived at another nuclear site with contact dose rates on the package bottom in excess of the Department of Transportation limits. The source was identified to be a hot-particle located in a tool box that had apparently shifted during the transportation of the shipment. The licensee learned that the tool box had been surveyed before the shipment, but the contents of the box had not been surveyed. This was attributed, in part, to a lack of clear guidance in the station procedures. The corrective action to prevent recurrence included revising the procedures to require that all items in the shipment be surveyed prior to release. However, during this inspection, the team identified that the revised procedural guidance did not clearly state the new expectation, and was similar to the previous guidance. The licensee documented this item in the CAP as IR 704561. This event was discussed in NRC Inspection Report 05000373/2007004.

## .3 Findings

### (a) Failure to Adequately Evaluate A Significant Condition Adverse to Quality and Identify Corrective Actions to Prevent Recurrence

Introduction: The NRC identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to perform an adequate RCA to determine the corrective actions necessary to prevent recurrence for a SCAQ. Specifically, the licensee did not evaluate whether there were any aspects under their control that may

have identified or prevented the incorrect machining of the Unit 1 jet pump riser brace clamps.

Description: On March 4, 2006, during installation of the riser brace clamp modification for the Unit 1 jet pumps, the licensee identified that the clamps were the wrong size. The clamps were not installed; instead, new clamps were manufactured. Because both the clamps and the jet pump risers are safety-related components, this issue was considered a SCAQ, and the licensee entered the issue into the CAP as CR 462099.

The modification was initiated and processed in accordance with the licensee's process, but the contractor had the primary responsibility for implementation. This included the development of the procedures and methodology for measuring, manufacturing, and installing the jet pump riser brace clamps. The licensee assigned the performance of the RCA to the contractor. The RCA identified that the contractor had provided incorrect measurements to the machining facility such that the clamps were incorrectly sized. In addition, the RCA identified other related deficiencies within their organization and implemented appropriate corrective actions. However, the licensee did not perform an evaluation of their involvement with the modification; specifically, they did not look at those aspects of the modification directly under their control. For example: the contractor identified several deficiencies associated with the procedures used for making the clamps, but the licensee failed to address whether those procedures had been reviewed by station engineering staff prior to use. By not performing an independent evaluation, the licensee failed to identify the root cause of any weaknesses within their oversight of the work that may have identified the incorrect measurements. As such, they were not able to determine a corrective action to prevent recurrence of similar oversight of contractor activities.

The failure to determine the cause for a SCAQ is a performance deficiency. Specifically, by not evaluating whether there were any aspects of the modification under the licensee's control that may have identified or prevented the incorrect machining of the clamps, the licensee was precluded from identifying and implementing any corrective actions to prevent recurrence.

### Analysis

The finding is more than minor because it directly affected the Human Performance attribute of the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions while at power. The incorrect clamps, had they been installed, could have affected the structural integrity of the jet pump risers, potentially increasing the frequency of an initiating event (i.e., the failure of the jet pump risers).

The inspectors conducted a Phase I characterization and screening of the finding in accordance with IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." Because the incorrectly sized clamps were not installed, there was no likelihood of a reactor trip or the loss of a mitigating function; therefore, the finding screened out as having very low safety significance (Green).

The performance deficiency has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not

evaluate whether there were any aspects under their control that may have identified or prevented the incorrect machining of the clamps. [P.1(c)]

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, that in the case of a SCAQ, measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. Contrary to the above, the licensee did not evaluate whether there were any aspects under their control that may have identified or prevented the incorrect machining of the clamps. Therefore, there was no opportunity to identify and implement applicable corrective action that may preclude repetition. Because this finding was of very low safety significance (Green), and was entered into the licensee's CAP (CR 708359), this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy.

**(NCV 05000373/2007006-01; 05000374/2007006-01 – Failure to Adequately Evaluate a Significant Condition Adverse to Quality and Identify Corrective Actions to Prevent Recurrence)**

- (b) Introduction: The NRC identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to correct a SCAQ in a timely manner. Specifically, Exelon had not repaired or replaced all of the affected CSCS valves that are susceptible to separation of the valve disc from the valve stem.

Description: In September 1996, station personnel initiated Problem Identification Form (PIF) #96-2557 (a predecessor to Condition Reports) to document the failure of CSCS valve 0DG009, the backwash valve for the cooling water pump strainer; specifically, the disc had separated from the valve stem. The PIF stated that there had been a previous occurrence in July 1996 for another CSCS valve. The cause was determined to be vibration accelerated corrosion and erosion of the valves internal carbon steel components. Planned corrective actions included enhanced preventive maintenance of the valves, and repair/replacement of the susceptible valves. In September 2002, two additional CSCS valves were found with the disc separated from the stem. The RCA for the September failures identified the cause as the failure to evaluate and understand the impact of the corrosion related wear and potential failure of the CSCS valves. Corrective actions this time included determining the total population of susceptible valves (88) and to refurbish/replace the valves, as appropriate.

In December 2004 and in April 2006, two more CSCS valves were identified with the disc separated from the valve stem. As of this inspection, 10 valves have not been refurbished or replaced. The current plans are to repair 9 of the valves during the next two Unit 1 refueling outages (Spring 2008 and Spring 2010), and the remaining valve on-line during 2008. The valves are associated with safety-related and important-to-safety systems. The specific systems affected are:

- the Unit 1 "A" EDG cooling water,
- the Unit 1 southeast cubicle area cooler,
- the Unit 1 "C" and "D" residual heat removal (RHR) service water pumps,
- the Unit 1 "B" spent fuel pool emergency makeup system, and
- the Unit 2 "A" and "B" spent fuel pool emergency makeup pump system.

The failure to correct a SCAQ in a timely manner is a performance deficiency. Specifically, although the licensee was aware of the problem of disc-to-stem separation on the safety-related and important-to-safety CSCS since 1996, the remaining 10 CSCS valves have not been repaired or replaced.

### Analysis

The finding is greater than minor because it affects the Equipment Performance attribute of the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, some of the safety-related and important-to-safety CSCS valves are degraded and may not be able to perform their initial design capabilities.

The inspectors conducted a Phase I characterization and screening of the finding in accordance with IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." Because the finding is associated with a design deficiency (carbon steel valve internals) that did not result in a loss of operability per Part 9900, Technical Guidance, "Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety," the finding screened out as having very low safety significance (Green).

The performance deficiency has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not take the appropriate corrective actions to address a safety issue in a timely manner, commensurate with the safety significance. Specifically, since 1996, the licensee has experienced disc-to-stem separation on many of the safety-related and important-to-safety CSCS valves, but has failed to repair/replace all of the susceptible CSCS valves; and their current plans will not complete those repairs until 2010. [P.1(d)]

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, that conditions adverse to quality (which includes SCAQs) are promptly identified and corrected as soon as possible. Contrary to the above, the licensee identified in 1996 that many of the CSCS valves were susceptible to disc-to-stem separation. As of this inspection, they had not repaired or replaced the remaining 10 CSCS valves. All of the remaining valves are in safety-related and important-to-safety systems. Because this finding was of very low safety significance (Green), and was entered into the licensee's CAP (CR 708358), this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy.

(NCV 05000373/2007006-02; 05000374/2007006-02 – Failure to Correct a Significant Condition Adverse to Quality in a Timely Manner)

- b. Assessment of the Use of Operating Experience
- 1. Inspection Scope

The team reviewed a sample of operating experience (OE) issues for applicability to LaSalle, and for the associated actions. The documents were reviewed to ensure that underlying problems associated with the issues were appropriately considered for

resolution. The team also reviewed how the licensee considered OE for applicability in causal evaluations.

In accordance with the Inspection Procedure, the inspectors increased the scope of the review to five years (i.e., since November 2002) to determine if there was an adverse trend in the quality of engineering products generated over the past five years. The review included: a review of existing temporary modifications, installed scaffolding, and lead shielding packages; observations during plant walkdowns; and a search of the CAP database. The inspectors also interviewed selected licensee staff.

## 2. Assessment

No findings of significance were identified in the area of prioritization and evaluation of issues. In general, OE was effectively used at the station. The inspectors observed that OE was discussed as part of the daily station planning meetings, at shift turnover meetings, and at maintenance pre-briefings. Also, the inspectors determined that OE was appropriately reviewed during causal evaluations. During interviews, several licensee personnel commented favorably on the use of OE in their daily activities. The inspectors noted that the licensee had appropriately evaluated the specific examples that had been selected for review. An example of OE being used properly involved a fuel handling accident analyses that was discussed during the daily station planning meeting on November 27<sup>th</sup>. Although the report had been issued the previous week, the inspectors observed that the licensee was fully aware of the issue and had already implemented corrective actions.

Prior to the start of the inspection, the inspectors noted a potential trend of inadequate licensee amendment requests submitted between 2005 and 2006; several of the requests were rejected. The basis for the rejections was associated with the licensee's weak engineering supporting basis. Each of these requests was either rejected by the office of Nuclear Reactor Regulation (NRR) or withdrawn by the licensee. The licensee performed a common cause evaluation, and identified several concerns with the quality of engineering technical rigor and with the communication with the NRR technical staff. The inspectors concluded that the proposed corrective actions were appropriate.

The team did not identify any other significant deficiencies within the sample of engineering products reviewed. Overall, the team concluded that there was not a pervasive problem with the technical rigor of engineering documents.

### c. Assessment of Self-Assessments and Audits

#### 1. Inspection Scope

The team reviewed a sample of NOS audits, including the most recent audit of the CAP, the CAP trend reports, and departmental self-assessments. The team specifically reviewed the Exelon "Fleet Safety Culture Assessment Report." This review was performed to determine if problems identified through these evaluations were entered into the CAP system, and whether the corrective actions were properly completed to resolve the deficiencies. The effectiveness of the audits and self-assessments was evaluated by comparing audit and self-assessment results against self-revealing and NRC-identified findings, and observations during the inspection.

2. Assessment

No findings of significance were identified in the area of audits and self-assessments. The team considered the quality of the NOS audits to be thorough and critical. CRs were initiated for all issues identified by NOS. In addition, the self-assessments were acceptable; but, as expected, they were not at the same level of quality as the audits.

The team reviewed the results of the LaSalle "Nuclear Safety Culture Survey Results" Report, conducted in January 2007. The survey consisted of a safety culture survey and interviews. The report identified some minor weaknesses at the station, which were entered into the CAP. The team did not identify any results that were inconsistent with the licensee's conclusions.

d. Assessment of Safety Conscious Work Environment

1. Inspection Scope

During interviews with many of the station personnel, the team assessed the safety conscious work environment (SCWE) at LaSalle. Specifically, the team interviewed personnel to determine whether they were hesitant to raise safety concerns to their management and/or the NRC, due to a fear of retaliation. The team also interviewed the station ECP coordinator to determine if employees were aware of the program and had used it to raise concerns. The team reviewed a sample of the ECP files to ensure that issues were entered into the corrective action program, as appropriate.

2. Assessment

No findings of significance were identified. The team determined that the plant staff were aware of the importance of having a strong SCWE and expressed a willingness to raise safety issues. No one interviewed had experienced retaliation for safety issues raised, or knew of anyone who had failed to raise issues. All persons interviewed had an adequate knowledge of the CAP and ECP. Based on these limited interviews, the team concluded that there was no evidence of an unacceptable SCWE.

4OA6 Meetings, Including Exit

On December 7, 2007, the team presented the inspection results to Mr. D. Enright, LaSalle Site Vice President, and to other members of the LaSalle staff, who acknowledged the findings. The team confirmed that no proprietary information reviewed during the inspection was retained.

ATTACHMENT: SUPPLEMENTAL INFORMATION

In addition to the documentation that the team reviewed (listed in the Attachment), copies of information requests given to the licensee are in ADAMS, under Accession Number ML080150552.

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

R. Adler, Employee Concerns Representative – Site  
R. Argubright, Station Scaffold Coordinator  
B. Boggetto, Facilities Manager  
N. Bonomo, Balance of Plant Engineering Branch Manager  
D. Coveyou, Shift Manager  
R. Dus, Operations Support Manager  
D. Enright, LaSalle - Site Vice President  
F. Gogliotti, Plant Engineering Manager  
J. Hedenschoug, Work Control  
W. Hilton, Mechanical Structural Design Engineering Supervisor  
J. Hodson, Engineering CAPCo  
K. Ihnen, Nuclear Oversight Manager  
T. Lanc, Employee Concerns Representative – Site  
S. Landahl, Senior Vice President, Operations Support – Corporate  
S. Marik, Operations Director  
M. Peters, Senior Staff Design Engineer  
D. Rhoades, Plant Manager  
K. Rusly, Emergency Preparedness Manager  
C. Scheidt, System Engineer  
J. Schuster, Corrective Action Program Manager  
V. Shah, Electrical Design Engineering Supervisor  
M. Sharma, Engineering CAPCo  
S. Shields, Regulatory Assurance Engineer  
T. Simpkin, Regulatory Assurance Manager  
R. Speek, Employee Concerns Investigator – Corporate  
B. Trafton, Shift Manager  
J. Vergara, Regulatory Assurance Engineer  
R. Vickers, Engineering CAPCo  
R. Williams, Senior Engineer

#### Nuclear Regulatory Commission

K. Riemer, Chief, Reactor Projects Branch 2  
D. Kimble, Senior Resident Inspector

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened and Closed:

05000373/2007006-01 NCV Failure to Adequately Evaluate A SCAQ and Identify Corrective  
05000374/2007006-01 Actions to Prevent Recurrence Section 40A2.a.3(a)

05000373/2007006-02 NCV Failure to Correct a SCAQ in a Timely Manner  
05000374/2007006-02 Section 40A2.a.3(b)

## LIST OF DOCUMENTS REVIEWED

### Procedures

CC-AA-401, Maintenance Specification: Installation and Control of Temporary Shielding and  
Shielding Components, Revision 8

EI-AA-101-1001, Employee Concern Process Program, Revision 5

ER-AA-2030, Conduct of Plant Engineering, Revision 5

LAP 2200-8, Installation of Video and Dose Rate Monitoring Equipment, Revision 3

LAP-100-56, Equipment/Parts Storage in Plant Areas Containing Safety-Related Equipment,  
Revision 5

LOA-AN-101(201), Loss of Annunciators, Revision 12

LOP-DC-04, 125 VDC System Division 1 Ground Location and Isolation, Revision 26

LOR-1PM01J-A409, Division 1 125 VDC Battery Ground Detector Alarm, Revision 4

LOS-RH-Q, RHR (LPCI) and RHR Service Water Pump and Valve Inservice Test for Modes  
1, 2, 3, 4 and 5, Revision 64

LS-AA-104, Exelon 50.59 Review Process, Revision 5

LS-AA-104-1000, Exelon 10CFR50.59 Resource Manual, Revision 4

LS-AA-104-1002, 50.50 Applicability Review Form, Revision 3

LS-AA-115, Operating Experience, Revision 10

LS-AA-120, Issue Identification and Screening, Revision 7

LS-AA-125, Corrective Action Program (CAP) Procedure, Revision 11

LS-AA-125-1001, Root Cause Analysis Manual, Revision 6

LS-AA-125-1002, Common Cause Evaluation Manual, Revision 5

LS-AA-125-1003, Apparent Cause Evaluation Manual, Revision 7

LS-AA-125-1004, Effectiveness Review Manual, Revision 2

LS-AA-125-1005, Coding and Analysis Manual, Revision 5

LS-AA-126, Self-Assessment Program, Revision 5

LS-AA-126-1001, Focused Area Self Assessments, Revision 4

LS-AA-126-1005, Check-In Self Assessments, Revision 3

LS-AA-126-1006, Benchmarking Program, Revision 1

MA-AA-716-007, Support of Miscellaneous Items, Revision 2

MM-AA-716-025, Scaffold Installation, Modification, and Removal Request Process, Revision 5

MM-AA-796-024, Scaffold Installation, Inspection, and Removal, Revision 7

NES-MS-04.1, Seismic Prequalified Scaffolds, Revision 5

NO-AA-100-004, Nuclear Oversight Issue Elevation, Revision 7

NO-AA-1007, Nuclear Oversight Station Status Report, Revision 10

NO-AA-1013, Nuclear Oversight Trending and Analysis, Revision 7

NO-AA-1018, Nuclear Oversight Quarterly Report, Revision 9

NO-AA-200-002-1001, Exelon Nuclear Performance, Revision 12  
NO-AA-200-002-1002, Nuclear Oversight Performance Assessment, Revision 6  
NO-AA-200-003, Nuclear Oversight Performance Assessment, Revision 9  
NO-AA-200-003-1001, Exelon Nuclear Performance Assessment, Revision 9  
NO-AA-200-003-1002, Nuclear Oversight Performance, Revision 2  
NO-AA-22, Nuclear Oversight Performance Assessment, Revision 2  
NO-AA-30, Independent Inspection Process Description, Revision 3  
NO-AA-300-001, Inspection Planning and Executions, Revision 2  
OP-AA-101-111, Roles and Responsibilities of On-Shift Personnel, Revision 1  
OP-AA-101-111-1001, Operations Philosophy Handbook, Revision 3  
OP-AA-102-102, General Area Checks and Operator Field Rounds, Revision 5  
OP-AA-106-101-1006, Operational and Technical Decision Making Process, Revision 4  
OP-AA-108-101, Control of Equipment and System Status, Revision 5  
OP-AA-108-104, Technical Specification Compliance, Revision 0  
OP-AA-108-105, Equipment Deficiency Identification and Documentation, Revision 4  
OP-AA-108-105-1001, MCR and RWCR Equipment Deficiency Management and Performance Indicator Screening, Revision 0  
OP-AA-108-111, Adverse Condition Monitoring and Contingency Planning, Revision 4  
OP-AA-108-115, Operability Determinations, Revision 4  
OP-AA-109-101, Clearance and Tagging, Revision 1

### **Audits**

NOSA-LAS-05-03, Security Audit Report – February 2005  
NOSA-LAS-05-06, Health Physics Functional Area – July 2005  
NOSA-LAS-05-07, Operations Functional Area – September 2005  
NOSA-LAS-06-03, Emergency Preparedness – April 2006  
NOSA-LAS-06-05, Engineering Programs Audit Report – August 2006  
NOSA-LAS-07-01, Corrective Action Program Audit – April 2007  
NOSA-LAS-07-04, Emergency Preparedness – April 2007  
NOSA-LAS-07-06, Radiation Protection Audit Report – September 2007

### **Self-Assessments**

Distribution and Use of “Information Only” OPEX – November 2005 (AR 392472)  
Effectiveness of Engineering Support at E-15/E-12 Meetings – February 2007 (AR 563702)  
Fire Brigade Readiness – August 2006 (AR 518126)  
INPO Identified Performance Deficiency in the Area of Significance Level 3 Classification of Issue Reports - October, 2005 (AR 426511)  
L2R11 Outage Modifications – June 2007 (AR 566513)  
Modification Process – June 2007 (AR 566513)  
NRC Baseline Program Inspection [EP] Readiness Assessment – June 2007 (AR 565793)  
Operations Technical Decision Making – March 2007 (AR 573129)  
Operations Training Programs – June 2006 (AR 482921)  
OPEX Process – November 2006 (AR 493787)  
OPEX Use in Root Cause Evaluations and EACEs – April 2005 (AR 283541)  
Outage Access Control & ALARA – February 2007 (AR 568469)  
Preparation for NRC PI&R Inspection – August 2007 (AR 565775)  
Safety Culture Survey – January 2007 (AR 538854)  
SER 3-05, Weaknesses in Operator Fundamentals – April 2007 (AR 597749)

Technician Knowledge, Skills, Training & Performance – June 2007 (AR 564991)  
 Training Department Corrective Action Program – June 2006 (AR 560650)

**Condition Reports (\* denotes a CR generated as a result of this inspection):**

076234	389399	467881	564242	659244	705226*
081741	389729	467937	565445	661665	705560*
121647	389729	468017	572276	661734	705650*
121821	391330	468132	575980	663732	705962*
141177	393332	470071	576097	663766	707062*
141816	396085	470952	576528	664844	707882*
157621	396267	471958	576646	665459	708358*
197959	396394	472796	577654	667185	708359*
198637	399023	474281	577657	668185	
206241	426083	475317	578025	671271	
215484	429179	476439	578633	684029	
224159	429479	482857	581543	687105	
233290	429885	483079	582821	688898	
240043	430657	483132	584593	688908	
271473	431405	483717	585752	688914	
294916	436297	483981	586135	688920	
347905	437486	486964	589686	688924	
348289	438651	490045	589741	688927	
351884	438734	490316	589876	688929	
352743	439673	491101	590413	688935	
352944	440910	493077	591594	688936	
353163	441154	495439	592438	690199	
353539	441782	497765	593125	690247	
353554	442143	500023	594368	690552	
355933	442485	504945	598883	690782	
359836	446347	510130	603937	690828	
365858	446416	510991	605275	690904	
367509	447669	512280	609141	691017	
379426	448012	513174	611779	693124	
380683	449169	514391	612524	697727	
380685	454001	515168	615791	699570	
381834	456404	515599	617318	702495	
382383	458571	521389	617653	703553	
382688	458658	522543	619418	704080	
383958	461189	523435	621220	704132*	
383960	461302	535178	622103	704164	
384060	461952	538854	627476	704278	
384700	462099	541106	628044	704346	
385752	462714	542896	629995	704403	
386071	462817	549343	633964	704984	
386125	463418	551121	645714	704132*	
387169	464782	557343	648734	704506*	
387921	465225	559256	648929	704561*	
388368	465929	559259	653208	704582*	
389157	466298	561338	653848	704686*	

## **Maintenance Work Requests**

CO 33740, Administrative Control CSCS Gate Valves, dated December 3, 2007  
WO 482157, Install TCC to Remove Disc on Valve 1DG019, Revision 1  
WR 344898, Request for Installation of Scaffold, Revision 2  
WR 858672, Request for Installation of Scaffold # L-0027, Revision 3  
WR 923834, Substation Repair Division 1 125 VDC Ground on 1MP04E Description, Revision 2  
WR 925002, Inability to Isolate Unit 1 Division 1 125 VDC Grounds Description and Job Type, Revision 1  
WR 973280, 1B RHR Low Pressure After 1A RHR LOS-RH-Q1 Status, Revision 1

## **Non-Cited Violations and Findings Reviewed**

NCV 2005006-03, Procedures Fail to Ensure Doors Are Operable  
NCV 2005008-01, Failure to Perform 10CFR50.59 Evaluation for an Adverse Change to the UFSAR  
NCV 2005008-02, Inadequate Design Basis for Simultaneous Energization of Both Battery Chargers  
NCV 2005008-03, Inadequate Water Leg Pump Room Heatup Calculation  
NCV 2005008-04, Inadequate Setpoint Calculation Associated with the RCIC Turbine Exhaust Pressure Trip  
NCV 2005008-05, Inadequate Temperature Qualifications for RCIC Electronic Governor Modules  
NCV 2005008-06, Inadequate NPSH for the RCIC Pump  
FIN 2005012-01, Weaknesses In Corrective Action Program and NRC Performance Indicator Procedure Implementation and Use  
NCV 2006003-02, Failure to Establish and Maintain Written Procedures and Instructions for the TS Administrative Control of Primary Containment Isolation Valve 1E51-F069  
NCV 2006003-04, Instrument Maintenance Technician Enters a High Radiation Area on the Wrong RWP  
NCV 2006003-Licensee Identified, Operators Cleared Tags and Installed Fuses for the Wrong Unit  
NCV 2006004-Licensee Identified, Licensee Failed to Incorporate into Plant Procedures the Actual Method of Operation Of the RWM, Creating a Situation Scram Response was Unnecessarily Complicated  
NCV 2006004-Licensee Identified, Licensee Replaced Valves in the CSC System Without the Required Temporary Seismic Supports  
NCV 2006005-01, Failure to Promptly Repair a Degraded Condition Associated with the 2B EDG Day Tank Room Structure  
NCV 2006005-02, Inadequate Procedure Used for GL 89-13 Program Thermal Performance Tests on RHR Heat Exchangers  
NCV 2006005-03, Failure to Promptly Correct Identified Issues Associated with the GL 89-13 Program for RHR Heat Exchangers  
NCV 2006005-Licensee Identified, Lead Blankets Installed During Unit 1 2006 Outage Found Still Hanging Due to Them Being Installed in Accordance with Wrong Procedure  
NCV 2006006-01, Operator Manual Actions for Maintaining EDG Availability During Surveillance Testing Not Adequately Implemented as Required by 10CFR50.65(a)(4)  
NCV 2007002-01, Failure to Use Valve Alignment Checklist When Clearing Tag Out Results in Mispositioned Valve and Low Instrument Nitrogen System Header Pressure  
NCV 2007002-02, Incomplete RHR Heat Exchanger Vessel Weld Examinations

FIN 2007002-04, De-Tensioning Drywell Head in Mode 3 Has Unanticipated Impact on TS  
NCV 2007002-05, Failure to Adequately Plan and Proceduralize Reactor Vessel Nozzle  
Flushing Activities Results in Inadvertent ECCS Injection into the Reactor Vessel  
NCV 2007002-06, Inadequate Procedural Instructions to Place Shutdown Cooling in Service  
Results in Inadvertent ECCS Injection into the Reactor Vessel  
NCV 2007002-Licensee Identified, Licensee Failed to Implement an Hourly Fire Watch for  
Approximately 82 Minutes Between Rounds  
NCV 2007002-Licensee Identified, Licensee Failed to Properly Implement a Continuous Fire  
Watch for 30 Minutes During Hot Work in a Safety-Related SW Pump Room  
NCV 2007003-01, Failure to Properly Control and Execute Work During a Unit 1 LPCS Inservice  
Test  
NCV 2007003-02, Licensee Relied On Operator Manual Actions for Post-Fire SSD  
NCV 2007007-01, Inadequate Procedure for Removal Of Drywell Head Bolts  
NCV 2007007-02, Lack Of Calibrated Air Wrench for Drywell Head Assembly Bolt Installation

### **Miscellaneous**

50.59 Safety Evaluation for LaSalle Administrative Procedure LAP-100-56  
50.59 Safety Evaluation for LOA-AN-101(201); Loss of Annunciators, Revision 2  
50.59 Screening for Calculation 91-002, Revision 1  
50.59 Screening for EC 338695, Revision 0  
50.59 Screening for EC 338718, Revision 0  
50.59 Screening for EC 362872, Revision 1  
50.59 Screening for EC 361813, Revision 0  
50.59 Screening for LOA-AN-101(201), Revision 8  
50.59 Screening for CC-AA-401, Revision 0  
Calculation 91-002, Computation of Seismic Pre-Qualification of Scaffolds, Revision 3  
Calculation L-001369, Equipment/Parts Storage in Plant Areas Containing Safety-Related  
Equipment, Revision 0  
Drawing No. 1E-1-4011HA, Block Diagram Main Control Room Annunciator Power Scheme  
System "AN" Part 1, Revision I  
Drawing No. 1E-1-4011JC, Schematic & Int. Wiring Diagram Annunciator & Sequential Events  
Recorder Logic Equip. No. 1PA03J System AN PT. 27, Revision B  
Drawing No. 1E-1-4011JD, Schematic & Int. Wiring Diagram Annunciator & Sequential Events  
Recorder Logic Equip. No. 1PA03J System AN PT. 28, Revision B  
Drawing No. 94-13772, 4 inch Class 300 Flex Wedge Gate Valve with SMB-000 Limitorque  
Actuator, Revision F  
EC 338695, Temporary Configuration Change to Remove Disc 1DG019 NW Cubicle Area  
Cooler Inlet Valve, Revision 1  
EC 338718, Temporary Configuration Change to Remove Disc from Valve 0DG005 Inlet  
Isolation to "0" DG Cooler 0DG01A, Revision 1  
EC 362872, Permanent Scaffold in the Drywell, Revision 1  
EC 338557, Unit 1 Sequence of Events Recorder (SER) Replacement Project Design  
Summary, Revision 1  
EC No. 361813, Abandonment of Hathaway Ground Detection for Both Units, Revisions 0 and 1  
Exelon Daily Industry Evolution Report for Tuesday, November 27, 2007

Problem Identification Form (PIF) #96-2557 [predecessor to Condition Reports]  
SCM-1537, Sargent & Lundy Engineers Seismic Analysis of Racked-Out Circuit Breakers  
(4160v and 480v Switchgear), dated October 15, 1991  
Shielding Component Permit – Numbers 01-3C, 02-12C, 05-48C, 06-03C and 05-58C  
SHIP Summary Report for 2<sup>nd</sup> Quarter 2007

## LIST OF ACRONYMS

ACE	Apparent Cause Evaluation
ACM	Adverse Condition Monitoring
CAP	Corrective Action Program
CAPCo	Corrective Action Program Coordinator
CFR	Code of Federal Regulations
CO	Clearance Order
CR	Condition Report
EAL	Emergency Action Level
ECP	Employee Concerns Program
EDG	Emergency Diesel Generator
FASA	Focused Area Self-Assessment
FME	Foreign Material Exclusion
HPCI	High Pressure Coolant Injection
HPSW	High Pressure Service Water
HX	Heat Exchanger
IMC	NRC Inspection Manual Chapter
IN	NRC Information Notice
LCO	Limiting Condition for Operation
LORT	Licensed Operator Requalification Training
MRC	Management Review Committee
NCV	Non-Cited Violation
NOS	Nuclear Oversight
NRC	Nuclear Regulatory Commission
OE	Operating Experience
P&ID	Piping and Instrumentation Drawing
PI&R	Problem Identification and Resolution
PMT	Post-Maintenance Test
PV&F	Pump, Valve, and Flow
QPA	Quality Performance and Assessment
RCA	Root Cause Analysis
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
ROP	Reactor Oversight Program
RWT	Refueling Water Tank
SCWE	Safety Conscious Work Environment
SDP	Significance Determination Process
T&RM	Technical and Reference Manual
TRM	Technical Requirements Manual
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report
NSSS	Nuclear Steam Supply System