



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
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LISLE, IL 60532-4352

July 7, 2015

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

**SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2—NRC PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000373/2015007; 05000374/2015007**

Dear Mr. Hanson:

On May 22, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution (PI&R) biennial inspection at your LaSalle County Station, Units 1 and 2. The NRC inspection team discussed the results of this inspection with Mr. P. Karaba and other members of your staff. The inspection team documented the results of this inspection in the enclosed inspection report.

This inspection was an examination of activities conducted under your license as they relate to problem identification and resolution and compliance with the Commission's rules and regulations and the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the inspection samples, the inspection team determined that your staff's implementation of the corrective action program (CAP) supported nuclear safety. In reviewing your CAP, the team assessed how well your staff identified problems at a low threshold, your staff's implementation of the station's process for prioritizing and evaluating these problems, and the effectiveness of corrective actions taken by the station to resolve these problems. In each of these areas, the team determined that your staff's performance was adequate to support nuclear safety.

The team also evaluated other processes your staff used to identify issues for resolution. These included your use of audits and self-assessments to identify latent problems and your incorporation of lessons-learned from industry operating experience into station programs, processes, and procedures. The team determined that your station's performance in each of these areas supported nuclear safety.

Finally, the team determined that your station's management maintains a safety-conscious work environment adequate to support nuclear safety. Based on the team's observations, your employees are willing to raise concerns related to nuclear safety through at least of several means available.

The NRC inspectors documented one NRC-identified finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. The NRC is

B. Hanson

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treating this violation as a non-cited violation (NCV) in accordance with Section 2.3.2 of the Enforcement Policy. Further, the inspectors documented a licensee-identified violation which was determined to be of very low safety significance (Green) in this report. The NRC is treating this violation as an NCV in accordance with Section 2.3.2 of the Enforcement Policy.

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

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

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

Sincerely,

/RA/

Michael Kunowski, Branch Chief
Branch 5
Division of Reactor Projects

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

Enclosure:
IR 05000373/2015007; 05000374/2015007
w/Attachment: Supplemental Information

cc w/encl: Distribution via LISTSERV®

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-373; 50-374
License Nos: NPF-11 and NPF-18

Report No: 05000373/2015007; 05000374/2015007

Licensee: Exelon Generation Company, LLC

Facility: LaSalle County Station, Units 1 and 2

Location: Marseilles, IL

Dates: May 4-22, 2015

Inspectors: R. Ruiz, Senior Resident Inspector (Team Lead)
A. Dahbur, Senior Reactor Inspector
B. Jose, Senior Reactor Inspector
R. Winter, Reactor Engineer
C. Jackel, Reactor Engineer (Observer)
R. Zuffa, Illinois Emergency Management Agency

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

Enclosure

SUMMARY OF FINDINGS

Inspection Report 05000373/2012007, 05000374/2012007; 05/04/2015–05/22/2015; LaSalle County Station, Units 1 and 2; Biennial Problem Identification and Resolution (PI&R) Inspection.

This inspection was performed by three NRC regional inspectors, the senior resident inspector, and the Illinois Emergency Management Agency resident inspector. One Green finding was identified by the inspectors. This finding was considered a non-cited violation (NCV) of NRC regulations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5, dated February 2015.

Problem Identification and Resolution

On the basis of the samples selected for review, the team concluded that implementation of the corrective action program (CAP) at LaSalle County Station was effective. The licensee had a low threshold for identifying problems and entering them into 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 for conditions adverse to quality were generally implemented in a timely manner, commensurate with their safety significance. Operating experience was entered into the CAP and appropriately evaluated for applicability to station activities and equipment. The use of operating experience was integrated into daily activities. Audits and self-assessments were performed at appropriate frequencies and at an appropriate level to identify issues. The assessments reviewed were thorough and effective in identifying site performance deficiencies, programmatic concerns, and improvement opportunities. On the basis of interviews conducted during the inspection, workers at the site expressed freedom to raise safety concerns without fear of retaliation. The inspectors did not identify any impediments to the health of the safety-conscious work environment at LaSalle County Station. There was one finding identified by the team during the inspection. The finding involved a failure to promptly identify and correct misaligned mechanism-operated cell (MOC) switches associated with 4-kiloVolt (KV) safety-related breakers. The finding had a cross-cutting aspect in the area of Problem Identification and Resolution.

NRC-Identified and Self-Revealed Violations

Cornerstone: Mitigating Systems

Green: The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct the condition adverse to quality of misadjusted MOC switches associated with 4-KV safety-related breakers. Specifically, after the station experienced a system malfunction in 2011 due to misaligned MOC switches, the licensee failed to ensure prompt identification and correction of this degraded condition in the rest of the affected population of safety-related applications, in accordance with the current NRC guidance for timeliness of corrective actions in IMC 0326, Operability Determinations and Functionality Assessments for Conditions Adverse to Quality or Safety, January 31, 2014.

The licensee entered action request (AR) 02502652, "NRC Identified Issue with MOC Switch Timeliness," into the CAP to correct the issue and restore compliance.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee's failure to ensure that the MOC switches associated with the 4-KV safety-related breakers were promptly adjusted and aligned, could potentially result in the undesired malfunction of important equipment, i.e., failure to start, failure to run, inadvertent actuation, during an event. Using Exhibit 2 of IMC 0609, Appendix A, "The SDP for Findings At-Power," dated June 19, 2012, the finding was determined to have very low safety significance because all screening questions were answered "No." The inspectors determined this finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution (PI&R), Evaluation, because the licensee's organization failed to thoroughly evaluate the MOC switch issue to ensure that the resolution would address the cause and extent of condition commensurate with its safety significance (P.2). (Section 4OA2.1b.(2))

Licensee-Identified Violations

A violation of very low safety significance was identified by the licensee and has been reviewed by the NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's CAP. This violation and corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution (71152B)

The activities documented in Sections .1 through .4 constituted one biennial sample of problem identification and resolution as defined in Inspection Procedure 71152.

.1 Assessment of the Corrective Action Program Effectiveness

a. Inspection Scope

The inspectors reviewed the licensee's CAP implementing procedures and attended CAP meetings to assess the implementation of the CAP by site personnel.

The inspectors reviewed risk and safety significant issues in the licensee's CAP since the last U.S. NRC problem identification and resolution inspection in May 2013. The selection of issues ensured an adequate review of issues across NRC cornerstones. The inspectors used issues identified through NRC generic communications, department self-assessments, licensee audits, operating experience reports, and NRC documented findings as sources to select issues. Additionally, the inspectors reviewed action requests (ARs) generated as a result of facility personnel's performance in daily plant activities. The inspectors also reviewed ARs and a selection of completed causal evaluations from the licensee's various investigation methods, which included root cause, apparent cause, equipment apparent cause, and work group evaluations.

The inspectors selected the topic of procedures for a detailed review, i.e., procedure use and adherence, and procedure adequacy. A 5-year review was performed to assess the licensee staff's performance with respect to the aforementioned procedure-related areas.

During the reviews, the inspectors determined whether the licensee staff's actions were in compliance with the facility's CAP and 10 CFR Part 50, Appendix B requirements. Specifically, the inspectors determined if licensee personnel were identifying plant issues at the proper threshold, entering the plant issues into the station's CAP in a timely manner, and assigning the appropriate prioritization for resolution of the issues. The inspectors also determined whether the licensee staff assigned the appropriate investigation method to ensure the proper determination of root, apparent, and contributing causes. The inspectors also evaluated the timeliness and effectiveness of corrective actions for selected issue reports associated with conditions adverse to quality. This included a review of completed investigations and previous NRC findings and NCVs.

b. Assessment

(1) Effectiveness of Problem Identification

Based on the results of the inspection, the inspectors concluded that problem identification was generally effective. Based on the information reviewed, the inspectors determined that LaSalle County Station personnel had a low threshold for initiating ARs; station personnel appropriately screened issues from both the NRC and industry

operating experience at an appropriate level and entered them into the CAP when applicable; and identified problems were generally entered into the CAP in a complete, accurate, and timely manner.

The inspectors determined that the station was generally effective at trending low level issues to prevent larger issues from developing. The licensee also used the CAP to document instances where previous corrective actions were ineffective or were inappropriately closed.

Findings

No findings were identified.

(2) Effectiveness of Prioritization and Evaluation of Issues

Based on the results of the inspection, the inspectors concluded that identified problems were generally prioritized and evaluated commensurate with their safety significance, including an appropriate consideration of risk. Higher level evaluations, such as root cause and apparent cause evaluations, were generally technically accurate; of sufficient depth to effectively identify the cause(s); and generally considered extent of condition, generic implications, and previous occurrences in an adequate manner.

The inspectors determined that the station ownership committee and management review committee meetings were generally thorough and meeting participants were actively engaged and well-prepared. Station ownership committee and management review committee meetings accurately prioritized issues.

The inspectors determined that, overall, LaSalle County Station personnel evaluated equipment operability and functionality requirements adequately after a degraded or non-conforming condition was identified, and appropriate actions were assigned to correct the degraded or non-conforming condition.

Observations

In June 2012, LaSalle's Nuclear Oversight (NOS) group identified that procedurally controlled temporary configuration changes did not contain the required reference information per procedure CC-AA-112. Specifically, the evaluation number as well as Precautions and Limitations for the temporary configuration changes, such as the allowable plant Modes for installation, were not contained within each procedure as required.

Subsequently, LaSalle's NOS group performed an audit in 2014 to review the station's progress in completing the changes in applicable procedures and discovered that the LaSalle Operating Procedures were not scheduled for review and revision until 16 months after the initial June 2012 identification of the problem. An apparent cause evaluation (ACE) was performed and identified additional procedure families that also needed to be reviewed and revised, such as abnormal operating, surveillance, and general operating procedures.

Through interviews, the inspectors noted that there was an apparent lack of prioritization, in that no focus was put on correcting safety-related (activities affecting quality) or risk-significant procedures over those nonsafety-related/nonrisk-significant

procedures. For example, numerous nonsafety-related procedures were corrected, while some safety-related procedures were not scheduled for completion until 2018. The licensee generated AR 2503805 to capture this observation and to create actions to ensure adequate prioritization occurred for the remaining procedures.

Findings

Failure to Promptly Identify and Correct Misaligned Mechanism-Operated Cell Switches Associated with 4-KV Safety-Related Breakers

Introduction: The inspectors identified a finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct the condition adverse to quality of misadjusted MOC switches associated with 4-KV safety-related breakers.

Description: On May 11, 2011, Unit 1 station air compressor trip and trouble alarms annunciated in the control room. This issue was documented in AR 01214832. Troubleshooting identified that an auxiliary contact of the MOC switch was intermittent due to less-than-optimal adjustment of the switch operating linkage. The linkage travel was originally set in a marginal position, which, coupled with normal wear, resulted in the contact having inadequate pressure to maintain electrical continuity. Maintenance personnel mechanically adjusted the linkage for proper over-travel and contact engagement. The MOC assembly was not part of the 4-KV breaker, but was part of the switchgear cubicle for the breaker; the breaker was not safety-related. These MOC switches were believed by the licensee to be a reliable component, not normally requiring adjustment during breaker preventive maintenance (PM) performed every 10 years per the LES-GM-103 series of procedures. The PM procedures provided guidance on performing the MOC inspection during the PM, but did not include any specific adjustment criteria. Proper operation of the switch was verified by validating the switch changed state and did not have high contact resistance.

In December 2011, the licensee revised the pm series of procedures LES-GM-103 for the 4-KV safety-related and nonsafety-related breakers and added guidance to verify and ensure proper adjustment of the MOC switches. The licensee did not specify any other actions to promptly ensure that the MOC switches had the proper adjustment. Instead, the licensee relied on the 10-year PM frequency to inspect the MOC switches. In addition, the licensee issued an industry operating experience describing the event and the corrective actions.

On August 13, 2013, during preplanned maintenance activity per LES-GM-103 in the 1C residual heat removal (RHR) switchgear, the main control room received an indication that the 1A diesel generator (DG) cooling water pump had automatically started. The licensee determined that the closure of the MOC switch in the cubicle for the 1c RHR 4-KV safety-related breaker caused the automatic start of an area ventilation fan which in turn started the 1DG01P cooling water pump.

The licensee subsequently performed ACE 1546110, which identified that the apparent cause was the misadjustment of the MOC switch linkage arm and switch contacts. The ACE indicated that during the maintenance (cleaning) in the 1C RHR cubicle casual contact with the linkage arm was made and could have momentarily closed the contacts of the MOC switch. The ACE concluded that this condition may apply to maintenance

activities in the cubicles for other 4-KV safety-related breakers. The ACE further noted that guidance was added to revision 6 of the PM procedure LES–GM–103D in December of 2011 to address proper adjustment of the MOC switches and this guidance would ensure accurate setting of the MOC switch linkages and prevent similar future events. The ACE reasoned that any existing misadjustments of the MOC switches in the switchgear cubicles would be corrected over the next 10 years as the PM testing was performed.

The licensee entered the inspectors' issue into the cap as AR 02502652, "NRC identified issue with MOC switch timeliness," and performed a preliminary review which revealed that since the procedure change to the LES–GM–103 series of procedures in 2011, the licensee has completed PMS on 11 4-KV safety-related breakers and the MOC switch for all except the breaker of 1C RHR were acceptable. The licensee identified that there were 14 remaining 4-KV safety-related breakers that required inspection for extent of condition from the 2013 ACE, including those for the 1B RHR pump and the 2A RHR pump.

Based on the review of inspection records for the breakers inspected since the procedure revision showing proper MOC switch alignment, the licensee determined that there were no immediate operability concerns associated with this issue for the remaining safety-related breakers, while a new plan was being formulated to promptly inspect, identify, and correct any MOC switch misalignments among the remaining population.

Analysis: The inspectors determined that the failure to promptly identify and correct the condition adverse to quality of misaligned MOC switches was not in accordance with the timeliness expectations of IMC 0326 and 10 CFR 50, Appendix B, Criterion XVI, corrective action, and was a performance deficiency. Specifically, following the 2011 MOC switch-related failure, the licensee failed to promptly identify and correct the condition adverse to quality with MOC switch misalignments associated with 4-KV safety-related breakers, deferring to a 10-year PM to identify and correct any misalignments. Further, following the causal evaluation of the 2013 misalignment, the licensee again chose to use the 10-year PM frequency to resolve the issue.

The inspectors concluded that the licensee's use of a 10-year PM frequency to identify and correct the potentially misadjusted MOC switches associated with 4-KV safety-related breakers was not timely, given the potential safety significance of the issue. NRC IMC 0326, operability determinations and functionality assessments for conditions adverse to quality or safety, issued January 31, 2014. Section 07.02 of NRC IMC 0326, entitled "Timing of Corrective Actions," provides guidance to inspectors in determining whether the licensee made reasonable efforts to promptly complete corrective actions. The IMC states, in part, that "the NRC will consider safety significance, the effects on operability, the significance of the degradation, and what is necessary to implement the corrective action. The NRC may also consider the time needed for design, review, approval, or procurement of the repair or modification; the availability of specialized equipment to perform the repair or modification; and whether the plant must be in hot or cold shutdown to implement the actions. If the licensee does not resolve the degraded or nonconforming condition at the first available opportunity or does not appropriately justify a longer completion schedule, the staff would conclude that corrective action has not been timely and would consider taking enforcement action. Factors that should be considered are (1) the identified cause, including contributing

factors and proposed corrective actions, (2) existing conditions and compensatory measures, including the acceptability of the schedule for repair and replacement activities, (3) the basis for why the repair or replacement activities will not be accomplished prior to restart after a planned outage (e.g., additional time is needed to prepare a design/modification package or to procure necessary components), and (4) review and approval of the schedule by appropriate site management and/or oversight organizations.”

The inspectors determined that none of the extenuating circumstances outlined in the IMC 0326 guidance above applied to this case, and have therefore concluded that the licensee’s reliance on a 10-year PM frequency, following the identification in 2011 that 4-KV safety-related breakers might be affected, was untimely. This conclusion is supported by the 2013 problem involving the MOC switch associated with the 4-KV safety-related breaker for 1C RHR.

The performance deficiency was determined to be more than minor, and a finding in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated September 7, 2012, because it was associated with the equipment performance attribute of the mitigating systems cornerstone, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee’s failure to ensure that the MOC switches associated with the 4-KV safety-related breakers were properly adjusted/aligned, could potentially result in the undesired malfunction of equipment, i.e., failure to start, failure to run, inadvertent actuation, during an event.

Using Exhibit 2 of IMC 0609, Appendix A, “The SDP for Findings At-Power,” dated June 19, 2012; the finding was determined to have very low safety significance (Green) because all screening questions were answered “No.”

The inspectors determined this finding had an associated cross-cutting aspect in the area of problem identification and resolution, evaluation, because the licensee’s organization failed to thoroughly evaluate the MOC switch issue to ensure that the resolution would address the cause and extent of condition commensurate with its safety significance (p.2).

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” states, in part, that “Measures shall be established to assure conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected.”

Contrary to the above, as of May 22, 2015, and following the 2011 issue with a misaligned MOC switch, the licensee failed to promptly identify and correct the condition adverse to quality associated with MOC switch misalignments in 4-KV safety-related breakers.

Because this violation was of very low safety significance (Green) and was entered into the licensee’s cap (as AR 02502652) to schedule visual checks of the remaining 4-KV safety-related breakers at the licensee’s earliest opportunity, this violation is being treated as an NCV, consistent with section 2.3.2 of the NRC Enforcement Policy **(NCV 05000373/2015007–01; 05000374/2015007–01, Failure To Promptly Identify**

And Correct Misaligned Mechanism-Operated Cell Switches Associated With 4-Kv Safety-Related Breakers).

(3) Effectiveness of Corrective Actions

Based on the results of the inspection, overall, the corrective actions reviewed were found to be appropriately focused to correct the identified problem and were generally implemented in a timely manner commensurate with the issues' safety significance. Problems identified through root or apparent cause evaluations were generally resolved in accordance with the CAP procedures and regulatory requirements. Corrective actions intended to prevent recurrence were generally comprehensive, thorough, and timely.

The corrective actions associated with selected NRC documented findings and violations, as well as licensee-identified violations, were generally appropriate to correct the problem and were implemented in a timely manner.

Additionally, the inspectors reviewed the 2014 95001 inspection report for LaSalle Unit 2 (Inspection Report 05000374/2014009) for incomplete CAP items at the time of the supplemental inspection. Inspectors noted that CAP item #20 from AR 1506809, "Implement Formal Training in the Case Study Methodology," was incomplete at the time of the 95001 inspection. The inspectors verified that the aforementioned CAP item was completed appropriately.

Observations

Through the review of root cause report (RCR) 1627300, "Elevated Turbine Bearing 11 Vibrations During Startup from L1R15," and through interviews with representatives of the associated work group, the inspectors concluded that the root cause determination of a misoriented coupling clip appeared to be incorrectly stated as a definitive root cause and the root cause appeared, rather, to be indeterminate. Specifically, the cause appeared indeterminate due to the large number of variables that could have affected the alignment of the coupling, as documented in the RCR, such as lift pump status, measuring equipment, gas state of the generator, and heat-up of the generator,—coupled with the fact that the subsequent Unit 2 outage found its clips similarly misoriented (i.e., installed backwards) with no ill effects noted.

Further, the corrective-action-to-prevent-recurrence for this condition was to modify the design to remove the clips altogether. The inspectors noted that the effectiveness review for this corrective-action-to-prevent-recurrence was simply to verify that the clips were removed. Given the indeterminate nature of the root cause, the inspectors questioned why the effectiveness review did not include some type of measureable performance parameter, such as a measured lack of high vibrations or a lack of subsequent turbine trips on bearing 11. The licensee captured this observation in AR 02503551.

Findings

No findings were identified.

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

The inspectors reviewed the licensee's implementation of the facility's Operating Experience (OE) program. Specifically, the inspectors reviewed implementing OE program procedures, attended CAP meetings to observe the use of OE information, completed evaluations of OE issues and events, and selected monthly assessments of the OE composite performance indicators. The inspectors' review was to determine whether the licensee was effectively integrating OE experience into the performance of daily activities, whether evaluations of issues were proper and conducted by qualified personnel, whether the licensee's program was sufficient to prevent future occurrences of previous industry events, and whether the licensee effectively used the information in developing departmental assessments and facility audits. The inspectors also assessed if corrective actions, as a result of OE experience, were identified and effectively and timely implemented.

b. Assessment

In general, OE was appropriately used at the station. The inspectors observed that OE was discussed as part of the daily station and pre-job briefings. Industry OE was disseminated across the various plant departments. No issues were identified during the inspectors' review of licensee OE evaluations. The inspectors also verified that the use of OE in formal CAP products such as root cause evaluations and equipment apparent cause evaluations was appropriate and adequately considered. Generally, OE that was applicable to LaSalle County Station was thoroughly evaluated and actions were implemented in a timely manner to address any issues that resulted from the evaluations.

Findings

No findings were identified.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The inspectors assessed the licensee staff's ability to identify and enter issues into the CAP program, prioritize and evaluate issues, and implement effective corrective actions, through efforts from departmental assessments and audits.

b. Assessment

Based on the results of the inspection, the inspectors did not identify any issues of concern regarding LaSalle County Station staff's ability to conduct self-assessments and audits. Assessments were conducted in accordance with plant procedures, were generally thorough and intrusive, adequately covered the subject area, and were effective at identifying issues and enhancement opportunities at an appropriate threshold. Identified issues were entered into the CAP with an appropriate significance characterization and corrective actions were completed and/or scheduled to be completed in a timely manner commensurate with their safety significance.

Findings

No findings were identified.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The inspectors assessed the licensee's safety-conscious work environment through the reviews of the facility's employee concern program implementing procedures, discussions with coordinators of the employee concern program, interviews with personnel from various departments, and reviews of issue reports. To assess LaSalle County Station's safety culture, the inspectors interviewed a representative group of station employees over the course of the first and third weeks of the inspection. Additionally, the site's most recent safety culture assessment was reviewed and the employee concerns program coordinators were interviewed.

b. Assessment

Based on the results of the inspection, the inspectors did not identify any issues that suggested conditions were not conducive to the establishment and existence of a safety-conscious work environment at LaSalle County Station. Information obtained during the interviews indicated that an environment was established where LaSalle County Station employees felt free to raise nuclear safety issues without fear of retaliation; were aware of and generally familiar with the CAP and other processes, including the employee concerns program and the NRC, through which concerns could be raised; and safety significant issues could be freely communicated to supervision.

Findings

No findings were identified.

40A6 Management Meeting

.1 Exit Meeting Summary

On May 22, 2015, the inspectors presented the inspection results to Mr. P. Karaba and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

40A7 Licensee-Identified Violations

The licensee identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly correct the condition-adverse-to-quality of known corroded piping during Unit 2 Refueling Outage L2R13. Specifically, pitting was identified in 2007, 2008, and 2009 on the safety-related 2DG06A piping, and replacement was recommended through the CAP to be performed during L2R13, in the year 2011. Despite this recommendation, work order 1275796 scheduled the piping replacement for refueling outage L2R16, in the year 2017. This piping, however, needed to be replaced in 2015 due to a licensee program inspection that revealed unacceptable levels of degradation. The licensee replaced all

effected piping and performed RCE 2471718 "Failure of 2DG05A and 2DG06A Piping" to address the underlying causal factors. In accordance with IMC 0609, Significance Determination Process, this finding was determined to have very low safety significance (Green) because all screening questions were answered "No."

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

P. Karaba, Site Vice-President
H. Vinyard, Plant Manager
G. Ford, Regulatory Assurance Manager
J. Houston, Nuclear Oversight Manager
R. Bellettini, Corrective Action Program Manager
L. Blunk, Regulatory Assurance
S. Shields, Regulatory Assurance
B. Hilton, Design Engineering Manager
S. Tanton, Design Engineering Supervisor

Nuclear Regulatory Commission

M. Kunowski, Chief, Reactor Projects Branch 5

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000373/2015007-01; NCV Failure to Promptly Identify and Correct Misaligned
05000374/2015007-01 Mechanism-Operated Cell (MOC) Switches Associated
with 4-KV Safety-Related Breakers (Section 4OA2.1b.(2))

Closed

05000373/2015007-01; NCV Failure to Promptly Identify and Correct Misaligned
05000374/2015007-01 Mechanism-Operated Cell (MOC) Switches Associated
with 4-KV Safety-Related Breakers (Section 4OA2.1b.(2))

LIST OF DOCUMENTS REVIEWED

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

PLANT PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
LES-GM-103A	Bus 141X I.T.E. Breaker and TSC Switch Operational Test	10
LOA-AP-201	Unit 2-AC Power System Abnormal	38
PI-AA-125	Corrective Action Program (CAP) Procedure	2
PI-AA-125-1003	Apparent Cause Evaluation Manual	2

<u>Number</u>	<u>Description or Title</u>
0694690	IN 2007-34 Electrical Circuit Breakers
1094635	Entered 72-hour Shutdown Time Clock Due to Tripping of the Common Diesel Generator Cooling Water Pump
1214832	Unit 1-SAC Trip
1259080	LOS-DO-SR2 Required Revision Due to Incorrect Limit
1295248	2DG011 Limit Adjustment Require Procedure Changes
1333644	Clearance Order Tags Were Found Erroneously Removed and Valves Were Discovered Not in the Position Required
1350733	Inadequate Operator Response to Alarm Results in Emergent Down-power
1444878	Seismic Vulnerability Main Control Room
1471558	EP New Rule: Procedure Revision Not Completed Timely
1477279	EP FASA Deficiency: Periodicity Of NOS 50.54T Audits
1477402	EP FASA Deficiency: Maintenance Of Equipment Important To EP
1480592	2DV009C Relief Valve Lifting During Condensate Fill
1493260	LaSalle Station Does Not Have On-Line Water Chemistry Monitoring Capabilities As Recommended For Industry Excellence In The EPRI Guideline As Well As Previously Recommended In Multiple LaSalle Chemistry Assessments For Raw Water Chemistry Optimization.
1499049	Procedure Deficiency Identified during Simulator Drill
1506809	Leakage Past CW Inlet Valve Results in Reactor Trip; Corrective Action Item # 20 Implement Formal Training in the Case Study Methodology (Action Item Not Closed at the Time of 2014 95001 Inspection)
1509247	2A RR FCV Closed Unexpectedly
1509247	2A RR FCV Closed Unexpectedly
1513175	Dual Indication when Performing Weekly Exercising of Extraction Steam

<u>Number</u>	<u>Description or Title</u>
	Check Valves
1514097	CW System Exceeded Maintenance Rule Performance Criteria
1516895	Through Wall Steam Leak on 1RI07B–2 Pipe
1518242	Operations Crew 6 4/17/13 LOOP Lessons Learned
1518486	Reactor Building Floor Drains Maintenance Rule Criteria Exceeded
ACE 01520429	RHR Service Water Leak
1522619	Perform CCA On Operations Knowledge Gaps From LOOP
1523941	1PL15J Sample Pump Tripped Again
EACE 01526713	1A RPS Motor Generator Trip
1528202	Outage Group Lessons Learned From The Dual Unit LOOP
1529396	CM System Performance Issues Challenged LOOP Response
1535436	CDBI FASA SW Pump As Backup Fire Pump Testing
1536109	Unit 2 Bus Duct Temperature High Alarm
1539979	NOS ID: Inadequate Closure Of Action Items
1542345	Revise UFSAR Section 9.1.2.2
1543929	Abbreviated Maintenance Performed on the Valve to Operate
1546110	1A DG CWPP Auto Started during 1C RHR Breaker Maintenance
1548172	1PL15J Will Not Restart
1548369	Door To Flammable Cabinet Does Not Latch Properly MMD–006
1549059	Three Compressed Gas Cylinders Were Stored in a Flammable Cabinet With Other Flammables
1549484	Potential Adverse Trend in Human Performance–EMD
1561027	Electrical PM Gap ACE Deficiency
1569471	Operations have Identified an Adverse Trend in Formal Communications
1596719	NRC CDBI Green NCV For 125 VDC Battery Testing
1606105	Fleet Opex Program 2013 Biennial Self-Assessment, LAS DEF.
1614107	0VS10C Fan Belt Failure
1614375–02	Effectiveness of Actions Taken For NOS Identified 2013 CAP ARMA
RCE 01627300	Elevated Turbine Bearing 11 Vibration During Startup from L1R15
1646983	0VA03C Shutdown Due to Adverse Trend
1654232	Remove Alligator Clips on HFA Relays
1654237	High Radiation Area Discovery Identified
1654242	2JB806T has Corrosion and Oil Drops Inside
1654244	L2M17 SRV Setscrew Inspections: Instrument Out of Tolerance
1654247	Instrument OOT 2PS–FP026: Trend Code B4
1654251	PM on Breaker Scheduled Online Instead of Offline
1654271	Stores Label Expiration Date on Gas Bottles One Year Earlier than Vendors
1654341	Security Small Panel on Motorola Radio Console Split
1655658	NRC Finding Associated With RCIC Surveillance Frequency

<u>Number</u>	<u>Description or Title</u>
1655668	NRC Finding For Secondary Containment Door Classification
1689555	U2 Reactor Scram Due To MSIV Stem-Disc Separation
1689555	RCR: 2B21-F022BMSIV Failed to Fully Open During LES-MS-201
1697166	LaSalle Station Access During Inclement Weather
1699477	ACE Needed To Evaluate VC And VE Issues For Common Causes
2381559	ODG Heat Exchanger Maintenance
2394400	B RHR Pump Tripped during LOP-RH-07
2413956	Ceiling Tile Is Disengaged from Support and Sagging
2417222	Procedurally Controlled Temporary Configuration Change Issue
RCE 02419110	Precise Control of Infrequent Manipulations
RCE 02422098	Inadvertent Contact with Plant Equipment
2424245	INPO Identified A Maintenance Performance Issues—Temporary Power Installation Performance Deficiency
2425382	Vibration Analysis Identifies Adverse Trend
2425967	Working Electronic Copy Of The Worker Tag-out Log Wrong Revision
2427921	NOS ID: Actions For Accumulated Dose Alarms Not Effective
2437466	Document Quality And Control Issues Related to DEP Documentation Were Identified
2437478	TSC Key ERO Members Incorrectly Given Participation Credit For HAB
02446360	0FP01KB Block Heater Is Not Working
2448380	NOS ID: Adverse Trend Safety-Related, Seismic Installations
2448380	NOS ID: Adverse Trend Safety-Related, Seismic Installations
2449598	BUS 243 And 2B DG Tripped Unexpectedly
2450872	Revise P&ID For RCIC Abandoned Piping
2450934	Fire Detection Zone 2-33 To Remain OOS Greater Than 14 Days
2452321	2C11-D0223-127 Snoop Bubbles at Air Fitting to 127 Valve
2452478	PMT Issues on Unit 2 HCU 34-31
2452479	PMT Issue on Unit 2 HCU 30-07 116 Valve
2452897	Unqualified Worker Doing Fire Watch
2454070	Unit 1 RB 710 Interlock Allowed both Doors to be Opened
2458118	2C11-D006 PMT Failed
2459270	2B33-F060A FCV Not Responsive After Pump Start
2466170	NRC Finding On MSIV Stem/Disk Separation
2468058	1B Heater Drain Pump Trip 10 Seconds After Star
2471718	Failure of 2DG05A and 2DG06A Piping
2472145	Normal Hotwell Makeup Tuning 1LIC-CD0
2480551	IRSF Crane Not Nesting Properly
2489827	Maintenance Trend IR January—March 2015
2489831	Oil Analysis Identified Particulate in EHC Fluid
2491270	Download Data from MCR Recorder
2491932	Operations First Quarter Trend Report

<u>Number</u>	<u>Description or Title</u>
2493003	OP-AA-108-111, Adverse Condition Monitoring and Contingency Planning, U2 Leak Rates Rising
2500804	Fan Spinning in Forward Direction with Dampers Closed

CORRECTIVE ACTION PROGRAM DOCUMENTS WRITTEN DURING INSPECTION

<u>Number</u>	<u>Description or Title</u>
2502652	NRC Identified Issue with MOC EOC Timeliness
2503551	2015 PI&R ID'd EFR for RCR 1627300 Not Measureable
2503558	Safety Culture Components Applicable RCR 2471718
2504236	Untimely Actions to Address 2DG06A UT Exam Results

AUDITS, ASSESSMENTS, AND SELF-ASSESSMENTS

<u>Number</u>	<u>Description or Title</u>
1598090	NOSA-LAS-14-14
1598081	Audit 4-Chemistry-2 Weeks: May 19-July 25
1598082	Audit 5-Engineering Programs-2 Weeks: March 17-May 9
1451646	Audit 5-Design Eng. Programs-2 Weeks: June 17-August 16
1451647	Audit 6-HP/RP-2 Weeks: June 17-August 16
1598082	NOS Audit NOSA-LAS-14-05 Engineering Programs
1451646	NOS Audit Design Engineering Program

OPERATING EXPERIENCE ITEM

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
249113	Failure of Linkage in Low Voltage Power System Class 1E Circuit Breaker	05/11/2011
OE 13-003 1497929	GE Transfer of Part 21 Information RPS EPMS MCCB	0
OE 13-002 1464255	GEH Part 21 CRDM FME Unit 1 CRDM 06-47	0
OE10-005 1136071 1141618	The non-conforming condition is that there is insufficient fuel volume of fuel oil for both seven days and six days of continuous EDG operation at rated load at the highest frequency allowed by Technical Specifications (i.e., 61.2 Hz). This issue impacts all five of the Emergency Diesel Generators.	5
OE11-002 1245184	The drywell temperature used as input for the containment analysis (135 deg F) may not be conservative relative to the calculated peak Drywell Pressure.	6
OE 13-001 1459827	Reactor Coolant System Pressure and Temperature Curves	1
OE 13-005 1575421 1588860	IST Instrument Calibration Accuracy	

OPERATING EXPERIENCE ITEM

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
1697071	OPEX Evaluation Documentation Not Stand Alone	08/2014
1500799	SOER 10–2 Must Know OPEX Deficiency Identified	
1511270	SOER 10–2 FASA Deficiency ILT Simulator Scenarios	

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
2493003	Adverse Condition Monitoring and Contingency Plan for Unit 2 Drywell Unidentified Leakage	4/28/2015
L2R15	A Packing Program Critique, by A.P. Services	2015
IB 3.6.6.7A	Type 2 Auxiliary Switches Installation/Maintenance Instruction	1
EC 367163	DG Backwash Strainer MOV Handwheel Conversion	
N–LA–OPS CW	2013 SOER10–2 Case Study	0
GEK 7623A	Generator-Alternator Exciter Flexible Couplings, 1800 RPM Direct Drive	07/1976

LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
ADAMS	Agencywide Documents Access Management System
AR	Action Request
CAP	Corrective Action Program
CFR	Code of Federal Regulations
DG	Diesel Generator
IMC	Inspection Manual Chapter
IR	Inspection Report
KV	Kilovolt
LOPS	LaSalle Operating Procedures
MOC	Mechanism-Operated Cell
NCV	Non-Cited Violation
NOS	Nuclear Oversight
NRC	U.S. Nuclear Regulatory Commission
OE	Operating Experience
PARS	Publicly Available Records System
PI&R	Problem Identification and Resolution
PM	Preventive Maintenance
RHR	Residual Heat Removal
SDP	Significance Determination Process

B. Hanson

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treating this violation as a non-cited violation (NCV) in accordance with Section 2.3.2 of the Enforcement Policy. Further, the inspectors documented a licensee-identified violation which was determined to be of very low safety significance (Green) in this report. The NRC is treating this violation as an NCV in accordance with Section 2.3.2 of the Enforcement Policy.

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

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

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

Sincerely,

/RA/

Michael Kunowski, Branch Chief
Branch 5
Division of Reactor Projects

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

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Letter to Brian Hanson from Michael Kunowski dated July 7, 2015

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2—NRC PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000373/2015007; 05000374/2015007

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