UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

August 10, 2016

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

SUBJECT: CLINTON POWER STATION — NRC INTEGRATED INSPECTION REPORT 05000461/2016002

Dear Mr. Hanson:

On June 30, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Clinton Power Station. On July 14, 2016, the NRC inspectors discussed the results of this inspection with Mr. T. Stoner, and other members of your staff. The enclosed report represents the results of this inspection.

Based on the results of this inspection, the NRC has identified nine issues. Six of these nine were findings evaluated under the risk significance determination process as having very low safety significance (green). The inspectors also evaluated three of the above nine as NRC-identified issues under the traditional enforcement process as having very low safety significance (Severity Level IV). The NRC determined there were seven violations associated with these nine issues. Because the licensee initiated condition reports to address these issues, these violations are being treated as Non-Cited Violations (NCVs), consistent with Section 2.3.2 of the Enforcement Policy. These NCVs are described in the subject inspection report.

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

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

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

Sincerely,

/RA/

Karla Stoedter, Chief
Branch 1
Division of Reactor Projects

Docket No. 50–461
License No. NPF–62

Enclosure:
Inspection Report 05000461/2016002

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50–461
License No:	NPF–62
Report No:	05000461/2016002
Licensee:	Exelon Generation Company, LLC
Facility:	Clinton Power Station
Location:	Clinton, IL
Dates:	April 1 through June 30, 2016
Inspectors:	W. Schaup, Senior Resident Inspector E. Sanchez Santiago, Resident Inspector C. Phillips, Project Engineer S. Bell, Health Physicist T. Bilik, Reactor Engineer G. Edwards, Health Physicist L. Smith, Reactor Engineer J. Wojewoda, Reactor Inspector S. Mischke, Resident Inspector, Illinois Emergency Management Agency
Approved by:	K. Stoedter, Chief Branch 1 Division of Reactor Projects

Enclosure

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SUMMARY

Inspection Report 05000461/2016002; 04/01/2016 – 06/30/2016, Clinton Power Station, Unit 1; Adverse Weather Protection, Flooding, Inservice Inspection Activities, Modifications, and Other Activities.

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

Cornerstone: Initiating Events

Green. The inspectors identified a finding of very low safety significance for the failure to ensure material placed within the transformer secured material zone, was secured as required by station procedure MA–AA–716–026, "Station Housekeeping/Material Condition Program," Revision 14. Specifically, the inspectors identified unsecured scaffold poles and knuckles within the licensee established secure material zone. The licensee has entered this issue into their corrective action program (CAP) as action request AR 02668245. The material was immediately removed from the secured zone by the licensee.

The inspectors determined the licensee's failure to ensure material within the "secured material zone" was adequately secured in accordance with procedure MA–AA–716–026, "Station Housekeeping/Material Condition Program," was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the Initiating Events Cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and is therefore a finding. Specifically, by not securing material in the vicinity of main power transformers, the material could become a missile and impact the transformers causing a potential reactor SCRAM. The finding was screened against the Initiating Events Cornerstone and determined to be of very low safety significance (Green) because the finding did not involve the complete or partial loss of a support system that contributes to the likelihood of, or cause an initiating event and did not affect mitigation equipment. The inspectors determined that this finding had a cross-cutting aspect in the area of human performance in the aspect of field presence, where leaders are commonly seen in the work areas of the plant observing, coaching, and reinforcing standards and expectations. Specifically, since initial identification of the issue the inspectors have noted that while discussions on when to perform walkdowns took place, the supervisors or managers did not ensure sufficient field presence to reinforce the standards and expectations, leading to material continuing to be easily found by the inspectors. (H.2) (Section 1R01)

Green. The inspectors identified a finding of very-low safety significance and associated NCV of 10 CFR 50.55a(g)(4). Specifically, the licensee failed to perform a surface examination to detect cracking on reactor water cleanup small-bore piping prior to performing a weld repair. The license documented the issue in the CAP as AR 02671726 and AR 02685332 and performed an operability review. The licensee has prepared a work order to perform a surface exam of the existing weld and surrounding area.

The inspectors determined that the failure to perform the surface examination prior to weld repair of RWCU pipe 1G33C001B as required by 10 CFR 50.55a(g)(4) was a performance deficiency. The inspectors determined that this issue was more-than-minor in accordance with IMC 0612, Appendix B, because it adversely affect the Initiating Events Cornerstone attribute of barrier integrity and because the answer to the question of "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern?" was yes. Specifically, the lack of a surface exam may result in the entire defect not being removed during the repair and the potential existed for a cracked pipe to remain in service. This could lead to a repeat leak of reactor coolant. The inspectors determined this finding was of very-low safety significance (Green) based on answering "no" to Question A.1 and A.2 of the Exhibit 1, "Initiating Events Screening Questions," in IMC 0609, Attachment A, "The Significance Determination Process (SDP) for Findings At-Power." Specifically, the inspectors answered "no" to the screening question associated with a reactor coolant system leak exceeding the leak rate for a small loss of coolant accident (LOCA) and "no" to the screening question associated with systems used to mitigate a LOCA. A subsequent visual examination of the weld repair revealed an absence of cracking and the licensee also planned to perform a follow-up surface examination of the repaired area to look for cracking. The inspectors determined that this finding had a cross-cutting aspect in the area of human performance in the aspect of resources, where leaders ensure that personnel, equipment, procedures and other station resources are available and adequate to support nuclear safety. Specifically, the work order that performed the work did not specify a surface examination of the base metal prior to welding. (H.1) (Section 1R08.2)

Severity Level IV. The inspectors identified a Severity Level IV NCV of 10 CFR 50.59(a)(1), "Changes, Tests, and Experiments," and an associated Green finding for the licensee's failure to perform an adequate written safety evaluation to provide the basis that changes to the Updated Safety Analysis Report (USAR) and station procedures did not involve an unreviewed safety question. Specifically, the licensee changed the USAR and station procedures to allow operators to a defeat the safety function of the reactor water cleanup (RWCU) isolation valves to prevent unwarranted isolation signals during normal operation without obtaining prior Commission approval. The licensee entered this issue into their CAP as AR 02685337 and will be changing station procedures to prevent placing the RWCU leak detection divisional bypass switches in bypass except for instrument channel maintenance, testing or calibration.

The inspectors determined that the licensee's failure to perform an adequate written safety evaluation to provide the basis that changes to the USAR and station procedures did not involve an unreviewed safety question was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Initiating Events cornerstone

and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was screened against the Initiating Events cornerstone and determined to be of very low safety significance (Green) because the finding did not result in exceeding the RCS leak rate for a small LOCA and did not affect other systems used to mitigate a LOCA resulting in a total loss of their function (e.g. Interfacing System LOCA). No cross cutting aspect was assigned because the inspectors determined the performance deficiency was not indicative of current plant performance. Violations of 10 CFR 50.59 are dispositioned using the traditional enforcement process because they are considered to be violations that potentially impede or impact the regulatory process. The inspectors reviewed Section 6.1.d.2 of the NRC Enforcement Policy and determined this violation was Severity Level IV because the resulting changes were evaluated by the SDP as having very low safety significance. (Section 1R18)

Cornerstone: Mitigating Systems

Green. The inspectors identified a finding of very low safety significance (Green) for the failure to incorporate human performance standards when developing work package instructions in accordance with MA–AA–716–010,"Maintenance Planning," Revision 23. Specifically, the licensee did not assure the cable vault dewatering system installation and maintenance work order (WO) included the appropriate details to troubleshoot and install the cable vault sump pumps and float switches. This resulted in installation of the equipment in a manner that prevented detection and removal of water from the cable vaults, allowing cables to remain submerged undetected. The licensee entered this issue into their CAP as AR 02668245. The corrective actions performed by the licensee included placing the sump pumps in the right location and adjusting the float switches to ensure the indications would alert operators when the vaults needed to be pumped.

The inspectors determined that the failure to incorporate human performance standards when developing work package instructions in accordance with MA–AA–716–010, "Maintenance Planning," Revision 23, was a performance deficiency. The performance deficiency was determined to be more than minor because if left uncorrected the performance had the potential to lead to a more significant safety concern. Specifically, by not appropriately installing the sump pumps and float switches, the cables would be allowed to remain submerged undetected. The finding was screened against the Mitigating Systems cornerstone and determined to be of very low safety significance (Green) because the inspectors answer "Yes" to the question "does the SSC maintain its operability or functionality?". This finding has a cross-cutting aspect in the area of human performance in the aspect of conservative bias, where individuals use decision making practices that emphasize prudent choices over those that are simply allowable. Specifically, because the licensee classified the cable vault dewatering system as a maintenance tool, they decided it was not necessary to include specific instructions within the WOs related to ensure the troubleshooting and re-installation activities were performed appropriately. (H.14) (Section 1R06)

Green. The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action Program," for the failure to identify a condition adverse to quality. Specifically, the licensee failed to identify that portions of the Division 1 SX safety related cables, which are not rated for submergence, were under water. The licensee entered this issue into their corrective

action program as action requests AR 02648804 and AR 02648507. Operators took actions to pump out the water to ensure the cables were returned to a dry condition.

The inspectors determined the licensee's failure to identify a condition adverse to quality was contrary to 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action Program," and was a performance deficiency. The performance deficiency was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, because the SX cables are not rated for submergence, they could degrade and affect the reliability of the SX system. The finding was screened against the Mitigating Systems cornerstone and determined to be of very low safety significance (Green) because the inspectors answer "Yes" to the question "does the SSC maintain its operability or functionality." Specifically, the SX system submerged cables did not cause the SX system to be inoperable or nonfunctional. The inspectors determined that this finding had a cross-cutting aspect in the area of human performance in the aspect of resources, where leaders ensure that personnel, equipment and other resources are available and adequate to support nuclear safety. Specifically, the individuals performing the inspection did not have the necessary resources, such as training, procedures, drawings or a detailed pre-job brief, to identify the cables sloped downwards in the cable vault and were submerged in the water. (H.1) (Section 1R06)

Green. On May 17, 2016, the inspectors identified a finding of very-low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," for the licensee's failure to ensure that nondestructive testing was controlled and accomplished using qualified procedures in accordance with applicable codes and standards. Specifically, the licensee did not implement an angle beam ultrasonic (UT) examination to detect cracking in a degraded SX pipe prior to implementation of a weld overlay repair. The licensee subsequently performed the required UT examination to confirm the absence of cracks and documented the issue in the CAP in AR 02671724.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to perform the UT would become a more significant safety concern. Specifically, if left uncorrected, the use of an unqualified UT examination for detection of cracks could result undetected cracks that propagate to failure during service. The inspectors determined this finding was of very low safety significance (Green) based on answering "yes" to the questions in Part A of Exhibit 2, "Mitigating Systems Screening Questions," in IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Specifically, the inspectors answered "yes" to the screening question "If the finding is a deficiency affecting the design or qualification of a mitigating SSC [structures, systems, or components], does the SSC maintain its operability or functionality?" because the licensee subsequently performed appropriate UT examination to confirm that cracks were not present. The finding had a cross-cutting aspect in the area of Human Performance for Procedure Adherence, because the licensee failed to follow processes, procedures, and work instructions to ensure that the appropriate UT examination was applied to the degraded SX pipe. (H.8) (Section 1R08.1)

Cornerstone: Barrier Integrity

Green. The inspectors identified a finding of very-low safety significance and associated NCV of 10 CFR 50.55a(g)(4). Specifically, the licensee failed to define acceptance criteria for containment visual examinations. Consequently, active containment liner degradation on a containment penetration was identified and returned to service without comparing to defined acceptance criteria. The licensee verified through visual examination that the liner thickness was marginally affected by the corrosion and documented this issue in the Corrective Action System in AR 02671728.

The inspectors determined that the failure to define and incorporate acceptance criteria in the containment visual examination procedure as required by 10 CFR 50.55a(g)(4) was a performance deficiency. The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because the inspectors answered "yes" to the more than minor question "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern" in that active containment penetration degradation may not be properly evaluated and/or promptly corrected. Specifically, the inspectors were concerned that without acceptance standards, unacceptable containment degradation may be returned to service and adversely affect containment leakage or structural integrity. The inspectors determined this finding was of very-low safety significance (Green) based on answering "no" to Questions B.1 and B.2 of the Exhibit 3, "Barrier Integrity Screening Questions," in IMC 0609, Attachment A, "The Significance Determination Process (SDP) for Findings At-Power," issued on June 19, 2012. Specifically, the inspectors answered "no" to the screening question associated with an actual open pathway (e.g., breach) in the containment and "no" to the question associated with reduction in function of hydrogen igniters in containment. A subsequent visual examination performed by the licensee confirmed only marginal degradation of the liner thickness.

The inspectors determined that this finding had a cross-cutting aspect in the area of human performance in the aspect of consistent process, where individuals use a consistent, systematic approach to make decisions. Specifically, the lack of acceptance criteria allowed various interpretations for disposing of identified conditions that were inconsistent. (H.13) (Section 1R08.2)

Cornerstone: Miscellaneous

Severity Level IV. The inspectors identified a Severity Level IV NCV of 10 CFR 50.71(e), "Periodic Update of the [Final Safety Analysis Report] FSAR," for the licensee's failure to update the USAR after updating a Safety Analysis Calculation. Specifically, the licensee did not update the USAR Section A3.8.3.1 and Table 15.2.9–1 to coincide with the most recent updates to the accident analysis of record. The licensee initiated AR 2664276 to document the discrepancy in the peak suppression pool temperature throughout the USAR and initiated actions to revise FSAR Section A3.8.3.1 and Table 15.2.9–1 to coincide with the most recent revision to EPU–T0400.

The inspectors determined that the failure to update the USAR in accordance with 10 CFR 50.71(e), "Periodic Update of the FSAR," with the most accurate version of calculated peak suppression pool temperature during an accident was a performance deficiency. The performance deficiency was determined to be minor in accordance with

IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated September 7, 2012; however, the reactor oversite program’s significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance, therefore, it was necessary to address this violation which impeded the NRC’s ability to regulate using traditional enforcement to adequately deter non-compliance. The inspectors reviewed this issue in accordance with IMC 0612 and the NRC Enforcement Policy. Violations of 10 CFR 50.71(e) are dispositioned using the traditional enforcement process because they are considered to be violations that potentially impede or impact the regulatory process. The inspectors reviewed Section 6.1.d.3 of the NRC Enforcement Policy and determined this violation was Severity Level IV because the licensee’s failure to update the USAR as required by 10 CFR 50.71(e) had not yet resulted in any unacceptable change to the facility or procedures. No cross cutting aspect was assigned because traditional enforcement violations are not assessed for cross cutting aspects. (Section 4OA5.2)

Severity Level IV. The inspectors identified a Severity Level IV NCV of Title 10 *Code of Federal Regulations* (CFR) 50.71(e), “Periodic Update of the FSAR”, for the licensee’s failure to update the FSAR after implementation of license amendment 149, for extended power uprate. Specifically, the licensee did not update USAR Section 10.4.7.1.2 “Performance Requirements,” for the condensate and feedwater system with the design requirements for a reactor thermal power rating of 3473 MWt. The licensee entered the issue into their CAP as AR 02656128 and is preparing a technical change package to update the USAR.

The inspectors determined that the failure to update the USAR in accordance with 10 CFR 50.71(e), “Periodic Update of the FSAR,” with the design requirements for the condensate and feedwater system for a reactor thermal power rating of 3473 MWt was a performance deficiency. The performance deficiency was determined to be minor in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated September 7, 2012; however, the reactor oversite program’s significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance, therefore, it was necessary to address this violation which impeded the NRC’s ability to regulate using traditional enforcement to adequately deter non-compliance. The inspectors reviewed this issue in accordance with NRC IMC 0612 and the NRC Enforcement Policy. Violations of 10 CFR 50.71(e) are dispositioned using the traditional enforcement process because they are considered to be violations that potentially impede or impact the regulatory process. The inspectors reviewed Section 6.1.d.3 of the NRC Enforcement Policy and determined this violation was Severity Level IV because the licensee’s failure to update the USAR as required by 10 CFR 50.71(e) had not yet resulted in any unacceptable change to the facility or procedures. No cross cutting aspect was assigned because traditional enforcement violations are not assessed for cross cutting aspects. (Section 4OA5.3)

REPORT DETAILS

Summary of Plant Status

The unit was operated at or near full power during the inspection period with the following exceptions:

- On April 13, 2016, power was reduced to approximately 90 percent to perform troubleshooting of increased vibration on the 'B' turbine driven reactor feed pump.
- On April 14, 2016, power was reduced to approximately 58 percent to remove the 'B' turbine driven reactor feed pump from service and returned to 85 percent with the motor driven feed pump in service.
- On April 21, 2016, power was reduced to approximately 61 percent to remove the motor driven feed pump from service and to place the 'B' turbine driven reactor feed pump into service. The unit was returned to full power on April 23, 2016.
- On May 15, 2016, the unit was shut down to perform scheduled refueling outage C1R16.
- On May 26, 2016, reactor start up commenced and the unit was returned to full power on May 30, 2016.
- On June 5, 2016, power was reduced to 85 percent to perform a rod sequence exchange and turbine bypass valve testing. The unit was returned to full power the same day.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness of Offsite and Alternate AC Power Systems

a. Inspection Scope

The inspectors verified that plant features and procedures for operation and continued availability of offsite and alternate alternating current (AC) power systems during adverse weather were appropriate. The inspectors reviewed the licensee's procedures affecting these areas and the communications protocols between the transmission system operator (TSO) and the plant to verify that the appropriate information was being exchanged when issues arose that could impact the offsite power system. Examples of aspects considered in the inspectors' review included:

- coordination between the TSO and the plant during off-normal or emergency events;
- explanations for the events;
- estimates of when the offsite power system would be returned to a normal state; and

- notification from the TSO to the plant when the offsite power system was returned to normal.

The inspectors also verified that plant procedures addressed measures to monitor and maintain availability and reliability of both the offsite AC power system and the onsite alternate AC power system prior to or during adverse weather conditions. Specifically, the inspectors verified that the procedures addressed the following:

- actions to be taken when notified by the TSO that the post-trip voltage of the offsite power system at the plant would not be acceptable to assure the continued operation of the safety-related loads without transferring to the onsite power supply;
- compensatory actions identified to be performed if it would not be possible to predict the post-trip voltage at the plant for the current grid conditions;
- re-assessment of plant risk based on maintenance activities which could affect grid reliability, or the ability of the transmission system to provide offsite power; and
- communication between the plant and the TSO when changes at the plant could impact the transmission system, or when the capability of the transmission system to provide adequate offsite power was challenged.

The inspectors also reviewed corrective action program (CAP) items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their CAP in accordance with station corrective action procedures.

This inspection constituted one readiness of offsite and alternate AC power systems sample as defined in Inspection Procedure (IP) 71111.01–05.

b. Findings

No findings were identified.

.2 Readiness for Impending Adverse Weather Condition—Severe Thunderstorm Watch

a. Inspection Scope

Since thunderstorms with potential tornados and high winds were forecast in the vicinity of the facility for May 11, 2016, the inspectors reviewed the licensee's overall preparations/protection for the expected weather conditions. On May 11, 2016, the inspectors walked down the main power transformers, reserve auxiliary transformers and the emergency reserve auxiliary transformers, in addition to the licensee's emergency AC power systems, because their safety-related functions could be affected or required as a result of high winds or tornado-generated missiles or the loss of offsite power. The inspectors evaluated the licensee staff's preparations against the site's procedures and determined that the staff's actions were adequate. During the inspection, the inspectors focused on plant-specific design features and the licensee's procedures used to respond to specified adverse weather conditions. The inspectors also toured the plant grounds to look for any loose debris that could become missiles during a tornado. The inspector's evaluated operator staffing and accessibility of controls and indications for those systems required to control the plant. Additionally, the inspectors reviewed the Updated Safety Analysis Report (USAR) and performance requirements for systems selected for inspection, and verified that operator actions were

appropriate as specified by plant specific procedures. The inspectors also reviewed a sample of CAP items to verify that the licensee identified adverse weather issues at an appropriate threshold and dispositioned them through the CAP in accordance with station corrective action procedures. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

Material Unsecure in the Secured Material Zone

Introduction. The inspectors identified a finding of very low safety significance for the failure to ensure material placed within the transformer secured material zone was secured as required by station procedure MA–AA–716–026, "Station Housekeeping/ Material Condition Program," Revision 14. Specifically, the inspectors identified unsecured scaffold poles and knuckles within the licensee established secure material zone.

Description. On May 11, 2016, the inspectors were performing a walkdown of the outside transformer areas due to impending adverse weather expected later that day. During the walkdown the inspectors identified a forklift containing scaffold poles and knuckles within the designated secure material zone. The material was not secured and was unattended.

Procedure MA–AA–716–026, "Station Housekeeping/Material Condition Program," Attachment 11, "CPS Exclusion and Secured Material Zones," stated the secured material zone had been established to help prevent damage to transformers in normal wind conditions as well as adverse weather conditions. Step 1.2 stated, "Parking of vehicles with materials in open or exposed storage areas is not allowed in the secured material zone." Step 1.4 stated, "Scaffold planks and unsecured scaffold parts must be secured in a manner that would prevent it from becoming a missile hazard in the event of severe weather."

The material identified was within the secured material zone designated by the maps contained in procedure MA–AA–716–026. Specifically, the material was within the immediate vicinity of the main power transformers. The inspectors concern was that the material could become a missle hazard in adverse weather conditions, impacting the transformers and causing a loss of power that would cause a reactor SCRAM.

The issue with unsecured materials located near the transformer yard was documented in previous inspection reports (IR) as an NCV in NRC IR 05000451/2014004 and as a FIN in IR 05000451/2015004. In each occasion unsecured material was easily identified by inspectors while performing walkdowns prior to the onset of impending adverse weather conditions. The inspectors noted that during daily planning meetings, plant management discussed the changing weather conditions and the need to ensure plant walkdowns occurred, but as evidenced by the presence of unsecured material in a secure material zone, supervisors or mangers did not ensure there was sufficient field presence to reinforce standards and expectations.

The licensee documented this issue in Action Request (AR) 02668245 and removed the material from the secure material zone, prior to the impending adverse weather.

Analysis. The inspectors determined the licensee's failure to ensure material within the "secured material zone" was adequately secured in accordance with procedure MA–AA–716–026, "Station Housekeeping/ Material Condition Program," was a performance deficiency. Specifically the inspectors identified unsecured scaffold poles and knuckles within the licensee's established secure material zone. The performance deficiency was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because, it was associated with the Initiating Events Cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and is therefore a finding. Specifically, by not securing material in the vicinity of main power transformers, the material could become a missile and impact the transformers causing a potential reactor SCRAM. Using 0609, Attachment 4, "Initial Characterization of Findings at Power," and Appendix A, "The Significance Determination Process for Findings at Power," issued June 19, 2012, the finding was screened against the Initiating Events Cornerstone and determined to be of very low safety significance (Green) because the finding did not involve the complete or partial loss of a support system that contributes to the likelihood of, or cause an initiating event and did not affect mitigation equipment.

The inspectors determined that this finding had a cross-cutting aspect in the area of human performance in the aspect of field presence, where leaders are commonly seen in the work areas of the plant observing, coaching, and reinforcing standards and expectations. Specifically, since initial identification of the issue the inspectors have noted that while discussions on when to perform walkdowns took place, the supervisors or managers did not ensure sufficient field presence to reinforce the standards and expectations, leading to material continuing to be easily found by the inspectors. (H.2)

Enforcement. The inspectors did not identify a violation of a regulatory requirement associated with this finding. Procedure MA–AA–716–026 was not required by either the TS or 10 CFR 50, Appendix B. The licensee has entered this issue into their corrective action program as action request AR 02668245. Because this finding does not involve a violation and is of very low safety significance, it is identified as a Finding.
(FIN 05000461/2016002–01: Material Unsecure in the Secured Material Zone)

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

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

- emergency reserve auxiliary transformer while maintenance was being performed on the reserve auxiliary transformer 'B';
- Division 2 shutdown service water (SX) while maintenance was being performed on Division 1 SX;

- Division 1 and 2 essential switchgear cooling following maintenance on the systems; and
- fire pump 'A' while maintenance was being performed on Fire pump 'B'.

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

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

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

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

- Fire Zone A–5, Division 2 battery room – elevation 781';
- Fire Zone A–2n, Division 2 switchgear room – elevation 781';
- Fire Zone CB–4, Division 1 cable spreading room – elevation 781';
- Fire Zone D–7, Division 3 diesel generator (DG) heating, ventilation and air conditioning (HVAC) room – elevation 762'; and
- Fire Zone D–8, Division 1 DG HVAC room – elevation 781'.

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

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

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

b. Findings

No findings were identified.

1R06 Flooding (71111.06)

.1 Underground Vaults

a. Inspection Scope

The inspectors selected underground bunkers/manholes subject to flooding that contained cables whose failure could disable risk-significant equipment. The inspectors determined that the cables were not submerged, that splices were intact, and that appropriate cable support structures were in place. In those areas where dewatering devices were used, such as a sump pump, the device was operable and level alarm circuits were set appropriately to ensure that the cables would not be submerged. In those areas without dewatering devices, the inspectors verified that drainage of the area was available, or that the cables were qualified for submergence conditions. The inspectors also reviewed the licensee's corrective action documents with respect to past submerged cable issues identified in the corrective action program to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following underground bunkers/manholes subject to flooding:

- Cable Vault 0SHA 1D, Division 1 SX;
- Cable Vault 0SHA 1C, Division 3 SX ; and
- Cable Vault 0SHB 1D, Division 1 SX.

Specific documents reviewed during this inspection are listed in the Attachment to this report. This inspection constituted one underground vaults sample as defined in IP 71111.06–05.

b. Findings

(1) Inspection Fails to Identify Safety Related Cables Submerged in Cable Vault

Introduction. The inspectors identified a finding of very low safety significance and associated non-cited violation (NCV) of Title 10 of the *Code of Federal Regulations* (CFR) 50, Appendix B, Criterion XVI, "Corrective Action Program," for the failure to identify a condition adverse to quality. Specifically, the licensee failed to identify that

portions of the Division 1 SX safety-related cables, which were not rated for submergence, were under water.

Description. On March 30, 2016, the licensee performed an inspection of underground cable vault 0SHA 1D, which contained the safety-related Division 1 SX electrical cables. The inspection was performed in accordance with CY–CL–3221–02, "Operating Cable Vault Pumping Stations." Step 4.1.2.a. of this procedure stated, "If cable vault high high-level is lit then coordinate with Facilities and/or FIN [fix it now team] to determine actual vault level of vaults containing safety related cables using a high beam spotlight. For cables that are submerged, notify the main control room and initiate an issue report."

As part of the internal flooding protection portion of the baseline inspection program, the inspectors were observing the cable vault activities. When the inspectors arrived at the cable vault location licensee personnel indicated they had completed their inspection and had not identified any submerged cables. The inspectors proceeded to independently verify that the cables were not submerged and noted the cable tray containing the Division 1 SX cables was near the top of the cable vault and the water line was towards the bottom of the cable vault. The inspectors also saw that the cable tray bent down towards the bottom of the cable vault. The inspectors questioned the maintenance personnel on whether they were able to discern if the lower portion of the cable tray was in contact with the water. After the inspectors pointed this out, the maintenance personnel performed a more in depth inspection and identified the cables were submerged at the location identified by the inspectors. Further investigation by the inspectors determined that the maintenance personnel were not provided any drawings, procedures, training or a pre-job brief that detailed the configuration of the cables within the cable vault. Additionally, the maintenance personnel performing the inspection were not familiar with the cable vaults and did not identify the cable tray bent towards the bottom of the cable vault. This prevented them from inspecting that portion of the cables to determine if they were submerged.

In 2007, the component design basis inspection team issued an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" to the licensee for having continuously submerged safety-related cables. In October of 2014 when the licensee was conducting their first periodic inspection of the safety-related cable vaults, the licensee identified that six vaults contained water to a level where the cables were submerged. After reviews and discussion with subject matter experts from NRC headquarters, the inspectors validated the cables were not qualified for submergence. As a result in 2014, the NRC issued another NCV, for the failure to maintain the SX safety-related cables in an environment for which they were designed. The corrective actions taken in response to these violations included installing the cable vault pumping stations and performing additional inspections when the lights indicated a high-high water level in the vaults.

Based on these previous issues, the licensee had all the necessary information to recognize the configuration of the cables within the cable vaults, and identify whether the cables were submerged when preforming inspections in response to high-high level indications. The licensee documented the current issue in the CAP program as action requests AR 02648507 and AR 02648804. The immediate corrective actions included performing an extent of condition on all the safety-related cable vaults and pumping the water out of the vaults to ensure cables were not submerged.

Analysis. The inspectors determined the licensee's failure to identify a condition adverse to quality was contrary to 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action Program," and was a performance deficiency. Specifically, the licensee failed to identify that portions of the Division 1 SX safety related cables, which are not rated for submergence, were under water. The performance deficiency was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because the finding was associated with the Mitigating Systems Cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, because the shutdown service water cables are not rated for submergence, they could degrade and affect the reliability of the shutdown service water system. Using IMC 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process (SDP) for Findings at Power," issued June 19, 2012, the finding was screened against the Mitigating Systems cornerstone and determined to be of very low safety significance (Green) because the inspectors answered "Yes" to the question "does the SSC [structure, system, and component] maintain its operability or functionality?". Specifically, the SX system submerged cables did not cause the SX system to be inoperable or nonfunctional.

The inspectors determined that this finding had a cross-cutting aspect in the area of human performance in the aspect of resources, where leaders ensure that personnel, equipment and other resources are available and adequate to support nuclear safety. Specifically, the individuals performing the inspection did not have the necessary resources, such as training, procedures, drawings or a detailed pre-job brief to identify the cables sloped downwards in the cable vault and were submerged in the water. (H.1)

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

Contrary to the above, on March 30, 2016, the licensee failed to promptly identify a condition adverse to quality. Specifically, during a cable vault inspection, the licensee failed to identify the safety-related Division 1 SX cables were in a submerged environment and these cables were not designed to be in a submerged environment. After the licensee completed their inspection of the associated cable vault without identifying that the safety-related cables were submerged, the inspectors identified there was a portion of the cable vault that had not been inspected, which contained submerged safety-related cables. Subsequently, the licensee performed an extent of condition and pumped down additional cables vaults where they identified submerged cables. Because this violation was of very low safety significance and was entered into the licensee's CAP as AR 02648804 and AR 02648507, this violation is being treated as an NCV, consistent with section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000461/2016002–02: Inspection Fails to Identify Safety-Related Cables Submerged in Cable Vault.)**

(2) Failure to Properly Install Cable Vault Mitigating Equipment

Introduction. The inspectors identified a finding of very low safety significance for the failure to incorporate human performance standards when developing work package

instructions in accordance with MA–AA–716–010, “Maintenance Planning,” Revision 23. Specifically, the licensee did not assure the cable vault dewatering system installation and maintenance WO included the appropriate details to troubleshoot and install the cable vault sump pumps and float switches. This resulted in installation of the equipment in a manner that prevented detection and removal of water from the cable vaults, allowing cables to remain submerged undetected.

Description. On March 30, 2016, the licensee performed an inspection of underground cable vault 0SHA 1D, containing safety-related Division 1 SX electrical cables, in response to an installed water level indication system alerting operators that level was approaching a point where cables could become submerged. Per station procedure CY–CL–3221–02, “Operating Cable Vault Stations,” Revision 9, the licensee would remove water and perform a visual inspection of the vault to determine if any of the cables were submerged. The licensee pumped water from the vault, which cleared the water level indication, and then completed a visual inspection without identifying any submerged cables. The NRC inspectors independently observed that some of the cables in the vault were actually submerged. This issue was described in section IR06.1(1). This was an unexpected condition because the installed water level indication system should alert operators whenever the cables are submerged.

The licensee documented this issue as AR 02648507 and performed an extent of condition which identified four vaults containing submerged cables, with no associated water level indications. Upon further inspection the licensee identified the sump pumps and the float switches were installed in a manner that prevented detection and adequate removal of water from the cable vaults, allowing cables to remain submerged undetected. Complete inspections of the ten safety related cable vaults revealed that four of the sump pumps were not upright. Nine of the cable vaults had incorrect float switch settings.

The cable vault dewatering system was installed in 2009 under WO 1254898–06, “Installation of Cable Vault Dewatering Pumps and Panels.” The cable vault dewatering project was in response to an NCV issued in 2007 for having continuously submerged safety-related cables not qualified for submergence. The dewatering system was considered a maintenance tool and the licensee did not develop drawings or any design documents related to the placement of the pumps or the float switches. The licensee relied on contractors to be able to install the equipment, in a manner that would achieve the function of alerting operators prior to the cables becoming submerged, without specific instructions.

In October of 2014, the licensee performed the first inspection of the safety-related cable vaults and identified six vaults with submerged cables. The licensee documented this issue in AR 2404378 and performed troubleshooting and repair activities in accordance with WO 1778369, “Troubleshoot/Rework Solar Pumps in Cable Vaults,” which was classified as a level 2 WO. The WO contained the following instructions: “Troubleshoot sump pumps at the following cable vaults to identify deficiencies,” “Rework solar sump pumps to correct deficiencies,” “Verify solar pumps work correctly,” “Upon completion of maintenance activities, ensure affected components have been restored.” The WO did not include instructions on how to verify the system was working appropriately or how to properly install the equipment to ensure it was capable of meeting its function.

Procedure MA–AA–716–010, “Maintenance Planning,” Revision 23, Section 4.10.13 stated, “Technical human performance standards shall be incorporated when developing work package instructions to preclude worker HU [human performance] errors.” Step 3 of this section described the use of vague instructions and stated, “No “troubleshoot and repair as necessary” type instructions in level 1 and 2 work packages,” and “Assure appropriate detail to remove and install components is provided.” Contrary to this, the procedures used to install and perform maintenance on portions of the dewatering system did not included technical human performance standards to preclude worker HU errors. Specifically, the licensee used “troubleshoot and repair as necessary” type instructions and did not include instructions on how to remove and install the components.

In order to ensure the cables would be maintained in a dry condition, the licensee relied on the indications provided by the cable vault dewatering system to determine whether an inspection was required and whether it was necessary to pump water out of the vaults. Specifically, ER–AA–300–150, Revision 2, “Cable Vault Monitoring Program,” provided guidance for monitoring cables. It stated that underground structures containing critical cables shall be periodically inspected and pumped to maintain cables as dry as possible. Critical cables were defined as any cables required to support safety, reliability and power generation or any other function deemed critical at the station; the SX cables fell within this category. Procedure CY–CL–3221–02, provided the Clinton Power Station specific instructions for pumping down the cable vaults that experienced water intrusion in order to ensure the cables inside the vaults were maintained dry. This procedure relied on proper sump pump placement and the level indications provided by the float switches so that operations could pump down the vaults and perform additional inspections.

The corrective actions performed by the licensee included placing the sump pumps in the right location and adjusting the float switches to ensure the indications would alert operators when the vaults needed to be pumped. The licensee also performed an apparent cause evaluation and determined the cause for why the sump pumps and float switches were not set appropriately. The procedures did not provide the enhanced instruction and detail required to completely understand the layout of the cable vaults to reliably place the pumps and float switches on the cable vault pumping systems.

Analysis. The inspectors determined that the failure to incorporate human performance standards when developing work package instructions in accordance with MA–AA–716–010, “Maintenance Planning,” Revision 23, was a performance deficiency. Specifically, the licensee did not assure the cable vault dewatering system installation and maintenance WO included the appropriate details to troubleshoot and install the cable vault sump pumps and float switches. This resulted in installation of the equipment in a manner that prevented detection and removal of water from the cable vaults, allowing cables to remain submerged undetected. The performance deficiency was determined to be more than minor, in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated September 7, 2012, because if left uncorrected the performance had the potential to lead to a more significant safety concern. Specifically, by not appropriately installing the sump pumps and float switches, the cables would be allowed to remain submerged undetected. Using IMC 0609, Attachment 4, “Initial Characterization of Findings,” and Appendix A, “The Significance Determination Process (SDP) for Findings at Power,” issued June 19, 2012, the finding was screened against the Mitigating Systems cornerstone and determined to be of very

low safety significance (Green) because the inspectors answered "Yes" to the question "does the SSC maintain its operability or functionality?". Specifically, the SX system submerged cables did not cause the SX system to be inoperable or nonfunctional. This finding has a cross-cutting aspect in the area of human performance in the aspect of conservative bias, where individuals use decision making practices that emphasize prudent choices over those that are simply allowable. Specifically, because the licensee classified the cable vault dewatering system as a maintenance tool, they decided it was not necessary to include specific instructions within the WOs related to ensure the troubleshooting and re-installation activities were performed appropriately. (H.14)

Enforcement. The inspectors did not identify a violation of a regulatory requirement associated with this finding, because the equipment associated with this finding was not safety-related. The licensee has entered this issue into their corrective action program as action request AR 02668245. Because this finding does not involve a violation and is of very low safety significance, it is identified as a Finding.
(FIN 05000451/2016002–03: Failure to Install Cable Vault Mitigating Equipment)

1R08 Inservice Inspection Activities (71111.08)

From May 9, 2016, to May 27, 2016, the inspectors conducted a review of the implementation of the licensee's Inservice Inspection (ISI) Program for monitoring degradation of the reactor coolant system, risk-significant piping and components and containment systems.

The reviews described in Sections 1R08.1 and 1R08.5 below count as one inspection sample as described by Inspection Procedure 71111.08–05.

.1 Piping Systems Inservice Inspection

a. Inspection Scope

The inspectors observed and reviewed records of the following Non-Destructive Examination (NDE) required by the American Society of Mechanical Engineers, (ASME) Section XI Code, and/or 10 CFR 50.55a to evaluate compliance with the ASME Code, Section XI and Section V, requirements, and if any indications and defects were detected, to determine whether these were dispositioned in accordance with the ASME Code or an NRC approved alternative requirement. Due to limited NDE activity, only one type of NDE activity/sample was available for observation or review.

- Perform 100 percent UT [ultra-sonic testing] of 1SX01AB–30 Pipe ([Work Order] WO 1790538)

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

- Containment IWE/IWL In-Service Inspection (WO 1703749)

The inspectors reviewed records of the following risk-significant pressure boundary ASME Code Section XI Class 1, 2, and 3 welds fabricated since the beginning of the last refueling outage to determine if the licensee: followed the welding procedure;

applied appropriate weld filler material; and implemented the applicable Section XI or construction Code NDEs and acceptance criteria. Additionally, the inspectors reviewed the welding procedure specification and supporting weld procedure qualification records to determine if the weld procedure was qualified in accordance with the requirements of Construction Code and the ASME Code Section IX.

- Install FLEX Low Pressure Core Spray Connection for Flex Pumps (WO 1690874)
- Repair Reactor Water Clean Up Pump B Seal Weld (WO 1701300)

b. Findings

(1) Inadequate Ultrasonic Examination for Service Water System Pipe Repair

Introduction. On May 17, 2016, the inspectors identified a finding of very-low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," for the licensee's failure to ensure that nondestructive testing was controlled and accomplished using qualified procedures in accordance with applicable codes and standards. Specifically, the licensee did not implement an angle beam ultrasonic (UT) examination to detect cracking in a degraded service water system (SX) pipe prior to implementation of a weld overlay repair.

Description. The inspectors identified that the licensee had not performed an adequate UT examination of the SX pipe prior to installing a weld overlay repair and were concerned that undetected cracks may exist that would degrade the pipe repair.

On December 8, 2015, the licensee applied an overlay repair to safety-related SX pipe 1SX01AB–30" in accordance with WO 01790538 (perform 100 percent UT of 1SX01AB–30") and EC 0403229 which implemented an NRC approved ASME Section XI Code Case N–661–2" Alternative Requirements for Wall Thickness Restoration of Classes 2 and 3 Carbon Steel Piping for Raw Water Service, Section XI, Division 1." Condition "3" of this Code Case stated that, "The area where the weld overlay is to be applied must be examined using ultrasonic methods to demonstrate that no crack-like defects exist." The licensee elected to apply a zero degree transducer during the UT examinations of the thinned piping surface prior to applying a weld overlay repair to meet the Condition 3 provision. This type of UT examination was effective at measuring thickness, but would not be able to detect planar flaws (e.g. cracks) within the pipe base metal subject to the overlay repair. For example, Paragraph T–571.3, "Tubular Products," of Article V, "Nondestructive Examination" of the ASME Code requires piping to be examined in accordance with SE–213, "Standard Practice for Ultrasonic Examination of Metal Pipe and Tubing," or SE–273, "Standard Practice for Ultrasonic Examination of Longitudinal Welded Pipe and Tubing," and these standards require use of a pulsed ultrasonic angle beam transducer capable of detecting planar flaws (e.g. cracks).

The inspectors were concerned that failure to use an appropriate UT examination to detect cracking could allow for an undetected crack to propagate into and through the overlay repair resulting in an inservice pipe failure. As an immediate corrective action, the licensee performed UTs of the weld overlay area using both a 45 and 60 degree angle beam transducers. No crack-like flaws were detected. The licensee entered the failure to apply an appropriate UT examination into the corrective action program (AR–02671724).

Analysis. The inspectors determined that the failure to ensure that UT examination of pipe 1SX01AB–30" was controlled and accomplished using qualified procedures in accordance with applicable codes and standards was contrary to 10 CFR 50, Appendix B, Criterion IX and a performance deficiency. The inspectors determined that this issue was more-than-minor in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," dated September 7, 2012, because the inspectors answered "yes" to the more than minor question, "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern?". Specifically, the use of an unqualified UT examination for detection of cracks could result undetected cracks that propagate to failure during service.

In accordance with Table 2, "Cornerstones Affected by Degraded Condition or Programmatic Weakness," of IMC 609, Attachment 4, "Initial Characterization of Findings," issued June 19, 2012, the inspectors checked the box under the Mitigating Systems Cornerstone because degradation of the safety-related service water system could degrade short term heat removal. The inspectors determined this finding was of very-low safety significance (Green) based on answering "yes" to the questions in Part A of Exhibit 2, "Mitigating Systems Screening Questions," in IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued on June 19, 2012. Specifically, the inspectors answered "yes" to the screening question "If the finding is a deficiency affecting the design or qualification of a mitigating SSC [structures, systems, or components], does the SSC maintain its operability or functionality?" because the licensee subsequently performed appropriate UT examinations and confirmed that cracks were not present.

The inspectors determined that the primary cause of the failure to perform the UT in accordance with Code Case requirements was related to the cross-cutting component of Human Performance, "Procedure Adherence." Specifically, the licensee failed to follow processes, procedures, and work instructions to ensure that the appropriate UT examination was applied to the degraded SX pipe. (H.8)

Enforcement. Title 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," states that, "Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements."

Contrary to the above, on December 8, 2015, the licensee performed nondestructive testing (UT examination) on pipe 1SX01AB–30" in accordance with WO 01790538 without using a UT procedure that was qualified in accordance with applicable codes and standards to detect cracking. Because this violation was of very-low safety significance, and was entered into the CAP as AR 02671724, this violation is being treated as an NCV, consistent with Section 2.3.2.a of the NRC Enforcement Policy. **(NCV 05000461/2016002–04: Inadequate Ultrasonic Examination for Service Water System Pipe Repair)**

.2 Identification and Resolution of Problems

a. Inspection Scope

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

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

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

b. Findings

(1) Lack of Acceptance Criteria for Containment Visual Examinations

Introduction. The inspectors identified a finding of very-low safety significance and associated NCV of 10 CFR 50.55a(g)(4). Specifically, the licensee failed to define acceptance criteria for containment visual examinations. Consequently, active containment liner degradation on a containment penetration was identified and returned to service without comparison to defined acceptance criteria.

Description. On May 18, 2016, the inspectors identified that no defined acceptance criteria had been developed for containment visual examinations as required by the ASME Code Section XI. The inspectors were concerned that without acceptance standards, unacceptable containment degradation may be returned to service and adversely affect containment leakage or structural integrity.

A containment visual examination is required to be conducted during each Code period (e.g., every 3 – 4 years) in accordance with Section XI, Article IWE of the ASME Boiler and Pressure Vessel Code to identify degradation that could affect the containment structural integrity or leak tightness. During the May 2015 refueling outage, the licensee conducted a visual examination of containment in accordance with procedure ER–AA–335–018, Revision 10, "Visual Examination of ASME IWE Class MC and Metallic Liners of IWL Class CC Components." However, this procedure did not contain acceptance criteria for the general and detailed visual examinations as required by Article IWE–3500, "Acceptance Standards," of the Section XI of the ASME Code, 2001 edition with 2003 addenda. The visual exam revealed areas of light, medium, and heavy corrosion on containment surfaces subject to ASME Code examinations. These degraded conditions were recorded in Examination Reports C1R15–001 through C1R15–030 and in AR 2502259 dated May 18, 2015.

The inspectors reviewed the results of the containment visual exam conducted during May 2015 refueling outage to determine whether the lack of acceptance criteria had adversely affected containment integrity. The inspectors identified multiple examples of visual examination records with recordable indications of corrosion and flaking paint that were returned to service without comparison to defined acceptance criteria. For example, in report C1R15–029, the licensee identified medium to heavy rusting and flaking paint in the vicinity of penetration EA0215–1K3E and accepted this condition based on WO 1703749 and engineering judgement. Without a defined basis for acceptance (e.g., criteria), the inspectors were concerned that the condition of the liner was not adequately monitored to ensure containment integrity.

The licensee documented this performance deficiency in the CAP as AR 2671728. Operability for the containment was established by a visual examination indicating that little material wastage has occurred.

Analysis. The inspectors determined that the failure to define and incorporate acceptance criteria in the containment visual examination procedure as required by 10 CFR 50.55a(g)(4) was a performance deficiency. The inspectors determined that this issue was more-than-minor in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because the inspectors answered "yes" to the more-than-minor question, "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern" in that active containment penetration degradation may not be properly evaluated and/or promptly corrected?". Specifically, the inspectors were concerned that without acceptance standards, unacceptable containment degradation may be returned to service and adversely affect containment leakage or structural integrity. The inspectors determined this finding was of very-low safety significance (Green) based on answering "no" to Questions B.1 and B.2 of the Exhibit 3, "Barrier Integrity Screening Questions," in IMC 0609, Attachment A, "The Significance Determination Process (SDP) for Findings At-Power," issued on June 19, 2012. Specifically, the inspectors answered "no" to the screening question associated with an actual open pathway (e.g., breach) in the containment and "no" to the question associated with reduction in function of hydrogen igniters in containment. A subsequent visual examination performed by the licensee confirmed only marginal degradation of the liner thickness. The inspectors determined that this finding had a cross-cutting aspect in the area of human performance in the aspect of consistent process, where individuals use a consistent, systematic approach to make decisions. Specifically, the lack of acceptance criteria allowed various interpretations for disposing of identified conditions that were inconsistent. (H.13)

Enforcement. Title 10 CFR Part 50.55a(g)(4), "Inservice Inspection Standards Requirement for Operating Plants," requires that, "Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) that are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements…set forth in Section XI of editions and addenda of the ASME Boiler and Pressure Vessel Code…that become effective subsequent to editions specified in paragraphs (g)(2)…" The 2004 Edition of the ASME Code Section XI, Articles IWE–3510.1 "General" and IWE–3511.1 "General," required in part "The Owner shall define acceptance criteria for visual examination of containment surfaces."

Contrary to the above, as of May 18, 2016, the licensee failed to define acceptance criteria for the visual examination of containment surfaces. At the conclusion of the inspection, the licensee was developing visual examination acceptance criteria to restore compliance with this NRC regulation. Because this finding is of very-low safety significance, and has been documented in the CAP as AR 2671728, this violation is being treated as an NCV consistent with Section 2.3.2.a of the NRC Enforcement Policy. **(NCV 05000461/2016002–05: Lack of Acceptance Criteria for Containment Visual Examinations)**

(2) Failure to Perform Surface Examination Prior to Weld Repair of a Reactor Water Cleanup System Pipe

Introduction. The inspectors identified a finding of very-low safety significance and associated NCV of 10 CFR 50.55a(g)(4). Specifically, the licensee failed to perform a surface examination prior to completion of a weld repair to correct a reactor water cleanup (RWCU) system pipe leak. Consequently the piping was returned to service without ensuring that the original defect was removed.

Description. On May 19, 2016, the inspectors identified that the licensee failed to perform a surface examination prior to repairing a pinhole leak in small bore piping in the RWCU system. The inspectors were concerned that without the surface examination, the extent of the defect causing the pinhole leak would go undiscovered, which may lead to through-wall cracking and leakage that could cause a small loss-of-coolant-accident (LOCA).

On October 28, 2015, an operator discovered a steam leak in pipe 1G33C001B, located in the RWCU system, which is a safety-related ASME Class 3 pipe. The leak caused a small spill of reactor coolant and the temperature in the room to exceed its maximum normal temperature. In response, the licensee entered EOP–8 and procedures 4001.01, "Reactor Coolant Leakage," and 4979.06, "Radioactive Spill." The leak was documented in AR 2578269. On October 29, 2015, the licensee created WO 1701300 to repair the leak. The licensee used a burr bit and drill to remove weld material down to the base metal. The licensee performed a visual inspection of the base metal, and then the weld was repaired using a process consistent with Section III requirements. The licensee performed a final visual inspection and declared the weld acceptable.

Because the affected pipe is a 0.5" line, no Repair/Replacement plan was required. However, IWA 4422.2.2 required that a surface examination be performed before the weld repair was conducted unless the full cross section of the weld or base material was removed, or if the examination of the excavation cannot be performed or would not yield meaningful results. During this repair, the full cross section of the weld was not removed, and a surface examination was both possible and would have provided meaningful results. Thus, the licensee was required to have performed a surface exam on the metal prior to welding. In addition, the work order lacked instruction to perform the surface exam unless one of the two exception conditions exist.

The licensee documented this performance deficiency in the CAP as AR 02671726 and AR 02685332. The licensee was developing a work order to inspect the area at the first available opportunity.

Analysis. The inspectors determined that the failure to perform the surface examination prior to weld repair of RWCU pipe 1G33C001B as required by 10 CFR 50.55a(g)(4) was a performance deficiency. The inspectors determined that this issue was more-than-minor in accordance with IMC 0612, Appendix B, because it adversely affect the Initiating Events Cornerstone attribute of barrier integrity and because the answer to the question of "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern" was yes. Specifically, the lack of a surface exam may result in the entire defect not being removed during the repair and the potential existed for a cracked pepe to remain in service. This could lead to a repeat leak of reactor coolant. The inspectors determined this finding was of very-low safety significance (Green) based on answering "no" to Question A.1 and A.2 of the Exhibit 1,

"Initiating Events Screening Questions," in IMC 0609, Attachment A, "The Significance Determination Process (SDP) for Findings At-Power." Specifically, the inspectors answered "no" to the screening question associated with a reactor coolant system leak exceeding the leak rate for a small LOCA and "no" to the screening question associated with systems used to mitigate a LOCA. A subsequent visual examination of the weld repair revealed an absence of cracking and the licensee also planned to perform a follow-up surface examination of the repaired area to look for cracking. The inspectors determined that this finding had a cross-cutting aspect in the area of human performance in the aspect of resources, where leaders ensure that personnel, equipment, procedures and other station resources are available and adequate to support nuclear safety. Specifically, the work order that performed the work did not specify a surface examination of the base metal prior to welding. (H.1)

Enforcement. Title 10 CFR Part 50.55a(g)(4), "Inservice Inspection Standards Requirement for Operating Plants," requires that, "Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) that are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements…set forth in Section XI of editions and addenda of the ASME Boiler and Pressure Vessel Code…that become effective subsequent to editions specified in paragraphs (g)(2)…" The 2004 Edition of the ASME Code Section XI, Sub-Article IWA-4422.2.2, "Defect Removal Followed by Welding or Brazing" paragraph (a) required in part, "Surface examination of the defect removal area is required prior to welding."

Contrary to the above on October 29, 2015, the licensee failed to complete a surface examination of the defect removal area prior to repair welding on line 1G33C001B in the RWCU system. The licensee has prepared a work order to perform a surface exam of the existing weld and surrounding area. Because this finding is of very-low safety significance, and has been documented in the CAP as AR 2671726 and AR 2685332, this violation is being treated as an NCV consistent with Section 2.3.2.a of the NRC Enforcement Policy. **(NCV 05000461/2016002–06: Failure to Perform Surface Examination Prior to Weld Repair of a Reactor Water Cleanup System Pipe)**

1R11 Licensed Operator Requalification Program (71111.11)

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

a. Inspection Scope

On June 22, 2016, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification training. The inspectors verified that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and that training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

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

- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements.

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

b. Findings

No findings were identified.

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

a. Inspection Scope

On May 16, 2016, the inspectors observed operators performing plant shutdown activities. This was an activity that required heightened awareness or was related to increased risk. The inspectors evaluated the following areas:

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

The performance in these areas was compared to pre-established operator action expectations, procedural compliance and task completion requirements.

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

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations

a. Inspection Scope

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

- 345kV and 138kV switchyards; and

- leak detection system.

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

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

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

This inspection constituted two quarterly maintenance effectiveness samples as defined in IP 71111.12–05.

b. Findings

No findings were identified.

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

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

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

- planned yellow during reserve auxiliary transformer 'B' system outage window;
- emergent unplanned yellow due to the Division 1 SX room cooler fan failing;
- unplanned yellow due to severe weather in the vicinity of the unit; and
- planned green with both trains of the standby liquid control system (SLC) inoperable for testing

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope

of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

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

b. Findings

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- AR 02669197: Engineering Analysis of Standby Gas Treatment Heater Trip Units;
- EC 405744: Minimum Wall Thickness Evaluation of VO03DB–10;
- AR 02585989: Control Room Ventilation Supply to Main Control Room Backdraft Damper Did Not Auto Shut;
- Division 1 Emergency Diesel Generator fuel oil below minimum TS requirements; and
- EC 405720: Evaluation of Lost Parts Identified during Clinton Reload 16.

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

This operability inspection constituted five samples as defined in IP 71111.15–05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modifications:

- EC 405139: Time Delay Addition to High Level Isolation Logic for Heater Drains; and
- Safety Evaluation 89–0122 Reactor Water Cleanup.

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

This inspection constituted two permanent plant modification samples as defined in IP 71111.18–05.

b. Findings

(1) Failure to Obtain License Amendment prior to Operating Reactor Water Cleanup Bypass Switches

Introduction. The inspectors identified a Severity Level IV non-cited violation of 10 CFR 50.59(a)(1), “Changes, Tests, and Experiments,” and an associated Green finding for the licensee’s failure to perform an adequate written safety evaluation to provide the basis that changes to the USAR and station procedures did not involve an unreviewed safety question. Specifically, the licensee changed the USAR and station procedures to allow operators to a defeat the safety function of the RWCU isolation valves to prevent unwarranted isolation signals during normal operation without obtaining prior Commission approval.

Description. On January 25, 2016, control room personnel placed the “A” reactor water cleanup filter demineralizer in hold for backwash and pre-coat per station procedure CPS 3303.01, “Reactor Water Cleanup,” Section 8.1.3, and station procedure CPS 3302.02, “Reactor Water Cleanup Filter Demineralizer ‘A’ Operating Procedure,” Sections 8.2 and 8.5.

While placing the “A” filter demineralizer back into service per station procedure CPS 3302.02, Section 8.6, the control room received a reactor water cleanup differential flow alarm. The control room operators placed both divisions of RWCU differential flow

instruments in bypass rendering the instruments inoperable, resulting in a loss of the isolation function. The licensee entered Technical Specification (TS) 3.3.6.1, Action D.1, “place channel in trip in 24 hours” and Action E.1, “restore reactor water cleanup isolation capability in 1 hour.”

The procedure section to place the “A” filter demineralizer in service was completed the same day and the control room operators placed both divisions of RWCU differential flow instruments in normal, performed a channel check and exited TS 3.3.6.1 actions D.1 and E.1.

After reviewing the logs on the following day the inspectors asked the control room operators what provided the allowance to place both divisions of RWCU differential flow instruments in bypass, defeating the isolation valve safety function. The inspectors were told that the allowance was in the normal operating procedure and was derived from a change made to the USAR in 1989. The inspectors requested the 50.59 evaluation performed to make the changes to the USAR and station procedures for review.

The licensee provided Safety Evaluation 89–0122 for the inspectors to review. The safety evaluation was prepared in order to evaluate the acceptability of bypassing both divisions of leak detection in order to prevent unwarranted isolations of the RWCU system until a permanent solution to design deficiencies, which resulted in the generation of the false isolation signals, was implemented. The procedure change stated that to prevent inadvertent system isolations, due to design deficiencies within the RWCU system causing flow perturbations and/or hydraulic transients during normal operation of the system that the leak detection divisional bypass switches could be placed in bypass. This removed the safety function of the isolation valves.

Prior to implementing the changes, the USAR stated that the RWCU system high differential flow trip could be bypassed for instrument channel maintenance, testing or calibration only. Additionally, as stated in the USAR the RWCU system high differential flow trip is bypassed by an automatic timing circuit during normal RWCU system surges. This time delay bypass prevents inadvertent system isolation during system operational changes; therefore, the existing design had already taken the licensee’s basis for the change into account. The inspectors also noted that the procedure change included a statement that allowing the operators to place the switches in bypass to prevent unwarranted isolation signals may be used until a design modification is implemented.

This issue was evaluated by the licensee prior to 1999; therefore, the inspectors evaluated the issue against the requirements that were in place prior to the amendment of 10 CFR 50.59 in 1999. At that time the licensee was allowed to make changes in the facility as described in the safety analysis report (SAR) and conduct tests or experiments not described in the SAR without prior Commission approval, unless the proposed change, test or experiment involved a change in the technical specifications incorporated into the license or an unreviewed safety question. The requirements stated that a proposed change, test, or experiment shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequence of an accident or malfunction of equipment important to safety previously evaluated in the SAR may be increased; or (ii) if a possibility for an accident or malfunction of a different type than evaluated previously in the safety analysis report may be created; or (iii) if the margin of the safety as defined in the basis for any technical specification is reduced. Additionally the requirements stated that the licensee shall maintain records of changes in the facility

and of changes in procedures made pursuant to this section (50.59), to the extent that these changes constitute changes in the facility as described in the SAR or to the extent that they constitute changes in procedures as described in the SAR. These records must include a written safety evaluation which provides the bases for the determination that the change, test or experiment does not involve an unreviewed safety question.

The inspector's review determined the system was originally designed with a time delay to prevent inadvertent system isolations. The licensee documented design deficiencies in condition reports and changed station procedures to allow the safety function to be removed to prevent unwanted system isolations. The safety evaluation primarily focused on impacts to the RWCU system which had no safety function and rather than focusing on impacts to the leak detection system which provides safety functions during design basis accidents. The RWCU leak detection system was evaluated as part of the licensee's safety evaluation and that analysis stated that the proposed change would remove automatic isolation capability for the system and the lack of automatic isolation may affect the offsite dose consequence in the event of a RWCU line break.

Based upon the above the inspectors determined that this was an increase in the consequence of an accident or malfunction of equipment important to safety previously evaluated in the SAR and therefore involved an unreviewed safety question requiring prior Commission approval.

The licensee has documented the issue in the corrective action program as action request (AR) 02685337 and planned to change station procedures to prevent placing the RWCU leak detection divisional bypass switches in bypass except for instrument channel maintenance, testing or calibration.

Analysis. The inspectors determined that the licensee's failure to perform an adequate written safety evaluation to provide the basis that changes to the USAR and station procedures did not involve an unreviewed safety question was a performance deficiency. Specifically, the licensee changed the USAR and station procedures to allow operators to place the RWCU leak detection divisional bypass switches in bypass without obtaining prior Commission approval. The performance deficiency was determined to be more than minor 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 Initiating Events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using IMC 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process (SDP) for Findings at Power," issued June 19, 2012, the finding was screened against the Initiating Events cornerstone and determined to be of very low safety significance (Green) because the finding did not result in exceeding the reactor coolant system leak rate for a small LOCA and did not affect other systems used to mitigate a LOCA resulting in a total loss of their function (e.g. Interfacing System LOCA).

No cross cutting aspect was assigned because the inspectors determined the performance deficiency was not indicative of current plant performance.

Enforcement. Violations of 10 CFR 50.59 are dispositioned using the traditional enforcement process because they are considered to be violations that potentially impede or impact the regulatory process. This issue was reviewed by the licensee

under a safety evaluation performed prior to 1999, therefore the issue was evaluated against the 10 CFR 50.59 requirements applicable when the evaluation was performed. Title 10 CFR 50.59(a)(1) stated, in part, that the holder of a license authorizing operation of a utilization facility may make changes in the facility as described in the safety analysis report without prior Commission approval, unless the proposed change involved an unreviewed safety question. Title 10 CFR 50.59(a)(2) stated, in part, that a proposed change shall be deemed to involve an unreviewed safety question if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased.

Title 10 CFR 50.59(b)(1) stated, in part, that the licensee shall maintain records of changes in the facility to the extent that these changes constitute changes in the facility as described in the safety analysis report. These records must include a written safety evaluation which provides the bases for the determination that the change does not involve an unreviewed safety question.

Contrary to the above, in December 1989, the licensee made changes to the USAR and station procedures without prior Commission approval that involved an unreviewed safety question. Specifically, the licensee changed the USAR and station procedures to allow operators to place the RWCU leak detection divisional bypass switches in bypass without providing a written evaluation that the changes were not an unreviewed safety question. The licensee will be changing station procedures to prevent placing the RWCU leak detection divisional bypass switches in bypass except for instrument channel maintenance, testing or calibration. In accordance with the Enforcement Policy, Section 6.1.d.2, the violation was classified as a Severity Level IV Violation because the underlying technical issue was of very low safety significance. Because this violation was of very low safety significance, was not repetitive or willful, and was entered into the licensee's corrective action program as issue report AR 02685337, it is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000461/2016002–07: Failure to Obtain License Amendment prior to Operating Reactor Water Cleanup Bypass Switches)**

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

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

- testing of the emergency reserve auxiliary transformer;
- testing of the fuel building equipment access double doors;
- testing of the division 1 SX cooling fan;
- testing of the 'B' main steam line instrument line flex connection;
- testing of time delay relay 2–VX6CA, switchgear 1A heat removal condensing unit 1VX06CA;
- testing of the scram valve indication on hydraulic control units (HCUs);
- testing of the shutdown service water outlet line vacuum breaker valve 1SX348A; and

- testing of main steam isolation valve 1B21F022C inboard isolation valve.

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the USAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them in the CAP and that the problems were being corrected commensurate with their importance to safety.

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

b. Findings

No findings were identified.

1R20 Outage Activities (71111.20)

.1 Refueling Outage Activities

a. Inspection Scope

The inspectors reviewed the Outage Safety Plan (OSP) and contingency plans for the refueling outage (RFO), conducted May 15–26, 2016, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the RFO, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below:

- licensee configuration management, including maintenance of defense-in-depth commensurate with the OSP for key safety functions and compliance with the applicable TS when taking equipment out of service;
- implementation of clearance activities and confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing;
- installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication, accounting for instrument error;
- controls over the status and configuration of electrical systems to ensure that TS and operational requirements manual requirements were met, and controls over switchyard activities;
- monitoring of decay heat removal processes, systems, and components;

- controls to ensure that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system;
- reactor water inventory controls including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss;
- controls over activities that could affect reactivity;
- maintenance of secondary containment as required by TS;
- licensee fatigue management, as required by 10 CFR 26, Subpart I;
- refueling activities, including fuel handling;
- startup and ascension to full power operation, tracking of startup prerequisites, walkdown of the drywell (primary containment) to verify that debris had not been left which could block emergency core cooling system suction strainers, and reactor physics testing; and
- licensee identification and resolution of problems related to RFO activities.

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

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

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

- CPS 9843.01V015, “Leak Rate Testing of RCIC Head Spray” (routine test);
- CPS 9861.03 D001; “Upper Airlock Barrel Test” (routine test);
- CPS 9813.01, “Control Rod Time Testing” (routine test);
- CPS 9054.01, “RCIC System Operability Check” (routine test);
- CPS 9053.07, “RHR B Pump and RHR B Water Leg Pump Operability” (inservice test); and
- CPS 9054.02, “RCIC Valve Operability Checks” (containment isolation valve).

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

- did preconditioning occur;
- the effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the USAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current;

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

Documents reviewed are listed in the Attachment to this report.

This inspection constituted four routine surveillance testing samples, one in-service test sample, and one containment isolation valve sample as defined in IP 71111.22, Sections–02 and–05.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

.1 Training Observation

a. Inspection Scope

The inspector observed a simulator training evolution for licensed operators on June 29, 2016, which required emergency plan implementation by a licensee operations crew. This evolution was planned to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and

ensure that the licensee evaluators noted the same issues and entered them into the corrective action program. As part of the inspection, the inspectors reviewed the scenario package and other documents listed in the Attachment to this report.

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

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety and Public Radiation Safety

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

.1 Radiological Hazard Assessment (02.02)

a. Inspection Scope

The inspectors assessed the licensee's current and historic isotopic mix, including alpha emitters and other hard-to-detect radionuclides. The inspectors evaluated whether survey protocols were reasonable to identify the magnitude and extent of the radiological hazards.

The inspectors determined if there have been changes to plant operations since the last inspection that may have resulted in a significant new radiological hazard for onsite individuals. The inspectors evaluated whether the licensee assessed the potential impact of these changes and implemented periodic monitoring, as appropriate, to detect and quantify the radiological hazard. The inspectors reviewed the last two radiological surveys from selected plant areas and evaluated whether the thoroughness and frequency of the surveys were appropriate for the given radiological hazard.

The inspectors conducted walkdowns of the facility, including radioactive waste processing, storage, and handling areas to evaluate material conditions and performed independent radiation measurements as needed to verify conditions were consistent with documented radiation surveys.

The inspectors assessed the adequacy of pre-work surveys for select radiologically risk significant work activities.

The inspectors evaluated the Radiological Survey Program to determine if hazards were properly identified. The inspectors discussed procedures, equipment, and performance of surveys with radiation protection staff and assessed whether technicians were knowledgeable about when and how to survey areas for various types of radiological hazards (i.e., hot particles, alpha emitters, airborne radioactivity).

The inspectors reviewed work in potential airborne areas to assess whether air samples were being taken appropriately for their intended purpose and reviewed various survey records to assess whether the samples were collected and analyzed appropriately. The inspectors also reviewed the licensee's program for monitoring contamination which has the potential to become airborne.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.2 Instructions to Workers (02.03)

a. Inspection Scope

The inspectors reviewed select radiation work permits used to access high radiation areas and evaluated the specified work control instructions or control barriers. The inspectors also assessed whether workers where made aware of the work instructions and area dose rates.

The inspectors reviewed electronic alarming dosimeter dose and dose rate alarm setpoint methodology. For selected electronic alarming dosimeter occurrences, the inspectors assessed the worker's response to the alarm, the licensee's evaluation of the alarm, and any follow-up investigations.

The inspectors reviewed the licensee's methods for informing workers of changes in plant operations or radiological conditions that could significantly impact their occupational dose.

The inspectors reviewed the labeling of select containers of licensed radioactive material that could cause unplanned or inadvertent exposure to workers.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.3 Contamination and Radioactive Material Control (02.04)

a. Inspection Scope

The inspectors observed locations where the licensee monitors material leaving the radiologically controlled area and assessed the methods used for control, survey, and release of material from these areas. As available, the inspectors observed health physics personnel surveying and releasing material for unrestricted use.

The inspectors observed workers leaving the radiologically controlled area and assessed their use of tool and personal contamination monitors and reviewed the licensee's criterial for use of the monitors.

The inspectors assessed whether instrumentation was used at its typical sensitivity levels based on appropriate counting parameters or whether the licensee had established a de facto release limit.

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

inspectors also evaluated whether any transactions, since the last inspection, involving nationally tracked sources were reported in accordance with 10 CFR 20.2207.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.4 Radiological Hazards Control and Work Coverage (02.05)

a. Inspection Scope

The inspectors evaluated ambient radiological conditions during tours of the facility. The inspectors assessed whether the conditions were consistent with applicable posted surveys, radiation work permits, and worker briefings.

The inspectors evaluated the adequacy of radiological controls, such as required surveys, radiation protection job coverage, and contamination controls. The inspectors evaluated the licensee's use of electronic alarming dosimeters in high noise areas as high radiation area monitoring devices.

The inspectors assessed whether radiation monitoring devices were placed on the individual's body consistent with licensee procedures. The inspectors assessed whether the dosimeter was placed in the location of highest expected dose or that the licensee properly employed an NRC approved method of determining effective dose equivalent.

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

For select airborne area radiation work permits, the inspectors reviewed airborne radioactivity controls and monitoring, the potential for significant airborne levels, containment barrier integrity, and temporary filtered ventilation system operation.

The inspectors examined the licensee's physical and programmatic controls for highly activated or contaminated materials stored within pools and assessed whether appropriate controls were in place to preclude inadvertent removal of these materials from the pool.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.5 High Radiation Area and Very High Radiation Area Controls (02.06)

a. Inspection Scope

The inspectors observed posting and physical controls for high radiation areas and very high radiation areas to assess adequacy.

The inspectors conducted a selective inspection of posting and physical controls for high radiation areas and very high radiation areas to assess conformance with performance indicators.

The inspectors reviewed procedural changes to assess the adequacy of access controls for high and very high radiation areas to determine whether procedural changes substantially reduced the effectiveness and level of worker protection.

The inspectors assessed the controls the high radiation areas greater than 1 rem/hour and areas with the potential to become high radiation areas greater than 1 rem/hour for compliance with Technical Specifications and procedures.

The inspectors assessed the controls for very high radiation areas and areas with the potential to become very high radiation areas. The inspectors also assessed whether individuals were unable to gain unauthorized access to these areas.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.6 Radiation Worker Performance and Radiation Protection Technician Proficiency (02.07)

a. Inspection Scope

The inspectors observed radiation worker performance and assessed their performance with respect to radiation protection work requirements, the level of radiological hazards present, and radiation work permit controls.

The inspectors assessed worker awareness of electronic alarming dosimeter set points, stay times, or permissible dose for radiologically significant work as well as expected response to alarms.

The inspectors observed radiation protection technician performance and assessed whether the technicians were aware of the radiological conditions and radiation work permit controls and whether their performance was consistent with training and qualifications for the given radiological hazards.

The inspectors observed radiation protection technician performance of radiation surveys and assessed the appropriateness of the instruments being used, including calibration and source checks.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.7 Problem Identification and Resolution (02.08)

a. Inspection Scope

The inspectors assessed whether problems associated with radiological hazard assessment and exposure controls were being identified at an appropriate threshold and were properly addressed for resolution. For select problems, the inspectors assessed the appropriateness of the corrective actions. The inspectors also assessed the licensee's program for reviewing and incorporating operating experience.

The inspectors reviewed select problems related to human performance errors and assessed whether there was a similar cause and whether corrective actions taken resolve the problems.

The inspectors reviewed select problems related to radiation protection technician error and assessed whether there was a similar cause and whether corrective actions taken resolve the problems.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

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

.1 Problem Identification and Resolution (02.05)

a. Inspection Scope

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

These inspection activities constituted one sample as defined in IP 71124.03–05.

b. Findings

No findings were identified.

2RS4 Occupational Dose Assessment (71124.04)

.2 Problem Identification and Resolution (02.06)

a. Inspection Scope

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

These inspection activities constituted one sample as defined in IP 71124.04–05.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Mitigating Systems Performance Index—Emergency AC Power System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) - Emergency AC Power System performance indicator for the period from the third quarter of 2015 through the first quarter of 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99–02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, MSPI derivation reports, issue reports, event reports and NRC Integrated Inspection Reports for the period of July 1, 2015, through March 31, 2016, to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one MSPI emergency AC power system sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index—High Pressure Injection Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index - High Pressure Injection Systems performance indicator for the period from the second quarter of 2015 through the first quarter of 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99–02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, MSPI derivation reports, event reports and NRC Integrated Inspection Reports for the period of April 1, 2015, through March 31, 2016, to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable

NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one MSPI high pressure injection system sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index—Heat Removal System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index - Heat Removal System performance indicator for the period from the second quarter of 2015 through the first quarter of 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99–02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, MSPI derivation reports, and NRC Integrated Inspection Reports for the period of April 1, 2015, through March 31, 2016, to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one MSPI heat removal system sample as defined in IP 71151–05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

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

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

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's CAP at an appropriate threshold, that adequate attention was being given to timely corrective

actions, and that adverse trends were identified and addressed. Attributes reviewed included: identification of the problem was complete and accurate; timeliness was commensurate with the safety significance; evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's CAP as a result of the inspectors' observations are included in the Attachment to this report.

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

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

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

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

b. Findings

No findings were identified.

.3 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening discussed in Section 4OA2.2 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the 6-month period of January 1, 2016, through June 30, 2016, although some examples expanded beyond those dates where the scope of the trend warranted.

The review also included issues documented outside the normal CAP in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance

reports, self-assessment reports, and Maintenance Rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's CAP trending reports. Corrective actions associated with a sample of the issues identified in the licensee's trending reports were reviewed for adequacy.

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

b. Observations

The previous semi-annual trend review from July 1, 2015, to December 31, 2015, identified a trend related to procedure adherence. The procedural adherence trend encompassed both safety-related components and activities as well as non-safety-related components and activities. The issues identified as part of the trend associated with the safety-related components and activities were documented as a violation of NRC requirements. The issues identified as part of the trend associated with the non-safety-related components and activities did not represent a violation of NRC requirements; however, those issues did fail to meet station standards and were documented as a finding. The inspectors have seen improvement in this area within the last six months due to corrective actions put in place by the licensee. The inspectors will continue to monitor procedure use over the next six months to ensure the corrective actions were effective at providing sustainable results.

The problem identification and resolution inspection performed in October 2015 identified a violation for the licensee's failure to identify conditions adverse to quality and place them into the corrective action program. Since then the inspectors have noticed additional issues with the licensee identifying conditions adverse to quality and placing them into the corrective action process. These issues have resulted in additional violations issued to the licensee. The inspectors will continue to monitor the effectiveness of corrective actions in place and any additional actions put in place in response to the recent violations.

The inspectors have noticed a decline in the number of action request being written at the site since the announcement to cease operations at the site in June of 2017. Station management is also aware of the decline.

c. Findings

No findings were identified.

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

.1 (Closed) Licensee Event Report 05000461/2016–003–00: Bypassing Both Divisions of Reactor Water Cleanup Leak Detection System is a Reportable Loss of Safety Function

a. Inspection Scope

On May 23, 2016, the licensee submitted licensee event report (LER) 2016–003–00, which discussed that when both reactor water cleanup system leak detection divisional bypass switches are placed into bypass, removing the automatic isolation function for the reactor water cleanup system, it is a reportable condition unless it is to support planned maintenance or surveillance testing.

In 1989 the licensee had added instructions to station procedures allowing operators to place both bypass switches into bypass to prevent unwarranted reactor water cleanup system isolations until a permanent solution to design deficiencies, which resulted in the generation of the false isolation signals, was implemented. The licensee incorrectly believed the action was not reportable because the actions were being taken as part of planned maintenance activities. The inspectors discussed the issue with the licensee and details can be reviewed in NRC IR 05000461/2016001–03, "Failure to report a condition that could have prevented fulfillment of a safety function," Section 1R15.1.b (2). The inspectors also discussed a violation of 10 CFR 50.59 requirements regarding this issue in Section 1R18 of this report. This LER is closed.

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

b. Findings

No additional findings were identified.

.2 (Closed) Licensee Event Report 05000461/2015–005–00: Containment Ventilation Radiation Monitors Inoperable During Operations with the Potential for Draining the Reactor Vessel

On March 16, 2016, the licensee submitted LER 2015–005–00, which discussed a violation of TS while in mode 5 during refueling outage C1R15. During the outage the licensee secured the containment building ventilation system and the drywell purge system. To secure the systems the isolation dampers were closed and no air flow went through the ducts. The ducts contain radiation monitors that were required to be operable during any operation to prevent draining the reactor vessel (OPDRV) in progress. With the dampers closed and no air flow past the radiation monitors the monitors were not operable. The licensee performed three OPDRVs without operable radiation monitor and failed to enter the appropriate TS limited conditions for operation. The inspectors discussed the issue with the licensee and details can be reviewed in IR 05000461/2015–04, "Failure to enter appropriate TS action statement for inoperable radiation monitors during OPDRV activities," Section 4OA3. This LER is closed.

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

.3 (Closed) Licensee Event Report 05000461/2014–005–01: Failure of Shutdown Service Water Pump Results in Loss of Division 3 Emergency Diesel Generator and High Pressure Core Spray Safety Functions

On December 31, 2015, the licensee submitted LER 2014–005–01, which was a revision to the original LER closed in report IR 2015001 with a white violation 05000461/2015011–03," Failure of the Division 3 Shutdown Service Water Pump due to an Inadequate Bushing Design," Section 4OA3.2.

The LER was updated with information provided from vendor failure analysis and a root cause evaluation performed by the licensee. The inspectors reviewed the additional information in the LER revision and found it to be accurate and without further regulatory issues. The corrective actions were reviewed during a subsequent 95001 inspection and the results can be reviewed in IR 2012008. This LER is closed.

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

.4 (Closed) Licensee Event Report 05000461/2013–008–00 and 05000461/2013–008 01: Failure of Division 1 Transformer Leads to Isolation of Instrument Air Supply to Containment, Lowering Scram Pilot Air Header Pressure, and Manual Reactor Scram

On February 3, 2014, the licensee submitted LER 2013–008–00, which discussed a failure of the 480 volt Unit Sub A 4160/480 volt stepdown transformer (0AP05E2) which resulted in the loss of power to all Division 1 equipment at the site. Additionally, the event caused a loss of instrument air that caused containment isolations that removed air from the scram header that resulted in operators taking actions to manually scram the reactor prior to automatic initiation.

The licensee determined that the failed transformer would have to be removed and sent off site for failure analysis. The work was performed in C1R15, spring 2015, to remove the transformer. The licensee had the transformer evaluated by three separate vendors to determine the cause of the failure and submitted LER 2013–008–01 on June 28, 2016.

The most probable cause of the cause for the failure was a turn to turn failure of the high side windings due to insulation breakdown over time, prior to its expected end of life. The licensee was able to utilize a spare transformer installed for a potential second unit at the site to complete repairs and restore power to Division 1 equipment.

The inspectors reviewed the failure analyses, design basis documents, operating procedures and maintenance documents associated with the transformer and determined that there were no additional issues requiring further review. This LER is closed.

This event follow-up review constituted two samples as defined in IP 71153–05.

4OA5 Other Activities

.1 Institute of Nuclear Power Operations Plant Assessment Report Review

a. Inspection Scope

The inspectors reviewed the final report for the INPO/WANO plant peer review conducted in August 2015. The inspectors reviewed the report to ensure that issues identified were consistent with the NRC perspectives of licensee performance and to verify if any significant safety issues were identified that required further NRC follow-up.

b. Findings

No findings were identified.

.2 Review of Updated Safety Analysis Report Values

a. Inspection Scope

The inspectors posed questions regarding why values of peak suppression pool temperature were different in different sections of the updated safety analysis report (USAR). The inspectors then reviewed the Licensee's response documented in IR 2651634, "NRC Followup Questions From IR 2642391 – TECH SPEC LDI."

b. Findings

(1) Failure to Update the Updated Safety Analysis Report—Peak Suppression Pool Temperature

Introduction. The inspectors identified a Severity Level IV NCV of 10 CFR 50.71(e), "Periodic Update of the FSAR," for the licensee's failure to update the FSAR after updating a Safety Analysis Calculation. Specifically, the licensee did not update USAR Section A3.8.3.1 and Table 15.2.9–1 to coincide with the most recent updates to the accident analysis of record.

Description. The inspectors identified on April 5, 2016, that all the references to peak suppression pool temperature within the USAR were not the same. The licensee initiated IR 2651634 and reached the following conclusion. In 2002, the licensee calculated the peak suppression pool temperature value in Extended Power Uprate Task T0400 (EPU–T0400) Containment System Response, Revision 0, at 182.6 degrees Fahrenheit (F). This was submitted by the licensee in the EPU License Amendment. In 2006, the licensee approved Revision 0C of EPU–T0400. This minor revision corrected the peak suppression pool temperature for the effects of running 2 additional emergency core cooling system (ECCS) pumps and documented the impact of General Electric (GE) letter SC06–01, "Worst Single Failure for Suppression Pool Temperature Analysis." This revision calculated the peak suppression pool temperature to be 184.5 degrees F. Updated Safety Analysis Report Change 2006–13 revised Sections A3.8.3.1 and 6.2.1.1.3.1 to reflect the newly established temperature.

In 2009, the licensee approved Revision 0F of EPU–T0400. This minor revision revised the peak suppression pool temperature due to a conversion to GE–14i fuel. The temperature increase due to GE–14i fuel was provided by GE and was added to the results of the GOTHIC analysis. This revision calculated the peak suppression pool temperature to be 182.2 degrees F. Updated Safety Analysis Report Change 2009–014 revised Section 6.2.1.1.3.1 to show the correct suppression pool temperature, however USAR Section A3.8.3.1 was not included in this revision. This change in temperature was completed as part of License Amendment 190. As part of the extent of condition review it was found that USAR Table 15.2.9–1 lists the Sequence of Events for Failure of the RHR Shutdown cooling. Here the Peak Suppression Pool Temperature is noted as 182.6 degrees F, which was in the original EPU–T0400. This was missed in the subsequent revisions of the EPU task report.

Analysis. The inspectors determined that the failure to update the FSAR in accordance with 10 CFR 50.71(e), "Periodic Update of the FSAR," with the most accurate version of calculated peak suppression pool temperature during an accident was a performance deficiency. The NRC determined this violation was associated with a minor performance deficiency because there was no safety consequence associated with the performance deficiency. The performance deficiency was determined to be minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012; however, the reactor oversite program's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance, therefore, it was necessary to address this violation which impeded the NRC's ability to regulate using traditional enforcement to adequately deter non-compliance. The inspectors reviewed this issue in accordance with NRC IMC 0612 and the NRC Enforcement Policy. Violations of 10 CFR 50.71(e) are dispositioned using

the traditional enforcement process because they are considered to be violations that potentially impede or impact the regulatory process. The inspectors reviewed Section 6.1.d.3 of the NRC Enforcement Policy and determined this violation was Severity Level IV because the licensee's failure to update the USAR as required by 10 CFR 50.71(e) had not yet resulted in any unacceptable change to the facility or procedures. No cross cutting aspect was assigned because traditional enforcement violations are not assessed for cross cutting aspects.

Enforcement. Title 10 CFR 50.71(e) required, in part, that licensees shall periodically update the FSAR, originally submitted as part of the application for the operating license, to assure that the information included in the report contains the latest information developed. This submittal shall include the effects of all the changes necessary to reflect information and analysis submitted to the Commission by the licensee or prepared by the licensee pursuant to Commission requirement since the submittal of the original FSAR, or as appropriate, the last update to the FSAR under this section. The interval between updates must not exceed 24 months.

Contrary to the above, from 2006 until 2009, the licensee had not updated the USAR to reflect the change to the value for peak suppression pool temperature found in Table 15.2.9–1, and from 2009 until June 30, 2016, to reflect the change in peak suppression pool temperature found in Section A3.8.3.1 and Table 15.2.9–1. The licensee initiated IR 2664276 to document the discrepancy in the peak suppression pool temperature throughout the USAR and initiated actions to revise USAR Section A3.8.3.1 and Table 15.2.9–1 to coincide with the most recent revision to EPU–T0400. In accordance with the Enforcement Policy, Section 6.1.d.3, the violation was classified as a Severity Level IV Violation. Because this violation was of very low safety significance, was not repetitive or willful, and was entered into the licensee's corrective action program as issue report AR 02594259, it is being treated as a Severity Level IV Violation, consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000461/2016002–08: Failure to Update the USAR–Peak Suppression Pool Temperature)**

.3 Review of Potential Operation of Three Reactor Feed Pumps During Power Operations

a. Inspection Scope

As documented in AR 02652425, the 'B' turbine driven feed pump (TDRFP) was noted to have an increase in pump vibration data indicating a potential issue with pump operation. As part of the licensee's troubleshooting process potential activities included operating the two turbine driven reactor feed pumps with the motor driven feed pump to adjust pump speed on the 'B' TDRPF to collect data while maintaining the unit at full power. The inspectors reviewed the USAR, other plant basis documentation and station procedures to monitor the activities and ensure compliance.

b. Findings

(1) Failure to Update the Updated Safety Analysis Report—Condensate and Feedwater System

Introduction. The inspectors identified a Severity Level IV NCV of 10 CFR 50.71(e), "Periodic Update of the FSAR," for the licensee's failure to update the FSAR after implementation of license amendment 149 for extended power uprate. Specifically, the

licensee did not update FSAR section 10.4.7.1.2, “Performance Requirements,” for the condensate and feedwater system with the design requirements for a reactor thermal power rating of 3473 MWt.

Description. On April 7, 2016, an operator reported an audible noise coming from the ‘B’ TDRFP room to the control room operators. The operators sent technicians into the field that measured vibration data on the pump. Vibration on the pump was 0.22 in/sec which was an increase from the last data taken on January 15, 2016, when it was recorded as 0.14 in/sec. The alert level was 0.25 in/sec and the fault level was 0.35 in/sec. The issue was entered into the licensee’s corrective action program as action request AR 02652425.

The increase was sufficient enough for the licensee to begin troubleshooting to evaluate the pump condition and to determine if pump repairs were required. After development of a troubleshooting plan, the licensee began collecting data on April 11, 2016, and completed their evaluation on April 14, 2016. Based on the information collected the licensee determined that the pump would be taken out of service to repair an internal pump bearing. During the data collection and evaluation period the licensee discussed potentially operating the plant with both TDRFPs and the motor driven reactor feed pump operating at the same time.

On April 15, 2016, the inspectors reviewed the site’s FSAR to determine if there were any limitations or requirements associated with operating all three pumps while at full power conditions since the FSAR states that the motor driven pump is provided for startup and standby use. During this review the inspectors noted that Section 10.4.7.1.2 of the USAR contained the performance requirements for the condensate and feedwater system and the performance requirements were for a reactor thermal power of 2894 MWt. In 2002, the licensee received a licensee amendment to implement an extended power uprate that allowed operation up to a reactor thermal power of 3473 MWt. The licensee had implemented the amendment but the FSAR section had not been updated to include the performance requirements for operating at the new reactor thermal power.

The licensee entered the issue into the corrective action program as AR 02656128. The licensee is reviewing the USAR for extent of condition associated with power uprate and is preparing a technical change package to update the USAR.

Analysis. The inspectors determined that the failure to update the USAR in accordance with 10 CFR 50.71(e), “Periodic Update of the FSAR,” with the design requirements for the condensate and feedwater system for a reactor thermal power rating of 3473 MWt was a performance deficiency. The performance deficiency was determined to be minor in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated September 7, 2012; however, the reactor oversite program’s significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance, therefore, it was necessary to address this violation which impeded the NRC’s ability to regulate using traditional enforcement to adequately deter non-compliance. The inspectors reviewed this issue in accordance with NRC IMC 0612 and the NRC Enforcement Policy. Violations of 10 CFR 50.71(e) are dispositioned using the traditional enforcement process because they are considered to be violations that potentially impede or impact the regulatory process. The inspectors reviewed Section 6.1.d.3 of the NRC Enforcement Policy and

determined this violation was Severity Level IV because the licensee's failure to update the USAR as required by 10 CFR 50.71(e) had not yet resulted in any unacceptable change to the facility or procedures. No cross cutting aspect was assigned because traditional enforcement violations are not assessed for cross cutting aspects.

Enforcement. Title 10 CFR 50.71(e) required, in part, that licensees shall periodically update the FSAR, originally submitted as part of the application for the operating license, to assure that the information included in the report contains the latest information developed. This submittal shall include the effects of all the changes necessary to reflect information and analysis submitted to the Commission by the licensee or prepared by the licensee pursuant to Commission requirement since the submittal of the original FSAR, or as appropriate, the last update to the FSAR under this section. The interval between updates must not exceed 24 months.

Contrary to the above, since 2002, the licensee had not updated the FSAR with the design requirements for the condensate and feedwater system for a reactor thermal power rating of 3473 MWt. The licensee initiated AR 02656128 to document the issue and the licensee is preparing a technical change package to update the USAR with the required information. In accordance with the Enforcement Policy, Section 6.1.d.3, the violation was classified as a Severity Level IV Violation. Because this violation was of very low safety significance, was not repetitive or willful, and was entered into the licensee's corrective action program as issue report AR 02594259, it is being treated as a Severity Level IV Violation, consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000461/2016002–09: Failure to Update the Updated Safety Analysis Report – Condensate and Feedwater System)**

4OA6 Management Meetings

.1 Exit Meeting Summary

On July 14, 2016, the inspectors presented the inspection results to Mr. T. Stoner, Site Vice President and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The inspection results for the areas of radiological hazard assessment and exposure controls with Mr. T. Stoner, Site Vice President, and other members of the licensee staff on May 20, 2016.

- The inspection results for the in-service inspection activities with Mr. T. Stoner, Site Vice President, and other members of the licensee staff on May 27, 2016.

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

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

T. Stoner, Site Vice President
B. Kapellas, Plant Manager
R. Bair, Chemistry Manager
R. Champley, Shift Operations Superintendent
J. Cunningham, Maintenance Director
C. Dunn, Operations Director
C. Engelhardt, Acting Work Management Director
M. Friedmann, Emergency Preparedness Manager
S. Gackstetter, Engineering Director
M. Heger, Senior Manager Plant Engineering
N. Hightower, Radiation Protection Manager
T. Krawyck, Senior Manager Plant Engineering
W. Marsh, Security Manager
S. Minya, Operations Training Manager
D. Shelton, Regulatory Assurance Manager
J. Ward, Organizational Effectiveness Manager

U.S. Nuclear Regulatory Commission

K. Stoedter, Chief, Reactor Projects Branch 1
W. Schaup, Clinton Senior Resident Inspector
E. Sanchez-Santiago, Clinton Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000461/2016002–01	FIN	Material Unsecure in the Secured Material Zone (Section 1R01)
05000461/2016002–02	NCV	Inspection Fails to Identify Safety Related Cables Submerged in Cable Vault (Section 1R06)
05000461/2016002–03	FIN	Failure to Properly Install Cable Vault Mitigating Equipment (Section 1R06)
05000461/2016002–04	NCV	Inadequate Ultrasonic Examination for Service Water System Pipe Repaired (Section 1R08)
05000461/2016002–05	NCV	Lack of Acceptance Criteria for Containment Visual Examinations (Section 1R08)
05000461/2016002–06	NCV	Failure to Perform Surface Examination Prior to Weld Repair of a Reactor Water Cleanup System Pipe (Section 1R08)
05000461/2016002–07	SLIV /NCV	Failure to Obtain License Amendment prior to Operating Reactor Water Cleanup Bypass Switches (Section 1R18)
05000461/2016002–08	SLIV	Failure to Update the Updated Safety Analysis Report (USAR) – Peak Suppression Pool Temperature (Section 4OA5)
05000461/2016002–09	SLIV	Failure to Update the Updated Safety Analysis Report (USAR) – Condensate and Feedwater System (Section 4OA5)

Closed

05000461/2016–003–00	LER	Bypassing Both Divisions of Reactor Water Cleanup Leak Detection System is a Reportable Loss of Safety Function
05000461/2015–005–00	LER	Containment Ventilation Radiation Monitors Inoperable During Operations with the Potential for Draining the Reactor Vessel (OPDRVS)
05000461/2014–005–01	LER	Failure of Shutdown Service Water Pump Results in Loss of Division 3 Emergency Diesel Generator and High Pressure Core Spray Safety Functions
05000461/2013–008–00	LER	Failure of Division 1 Transformer Leads to Isolation of Instrument Air Supply to Containment, Lowering Scram Pilot Air Header Pressure, and Manual Reactor Scram
05000461/2013–008–01	LER	Failure of Division 1 Transformer Leads to Isolation of Instrument Air Supply to Containment, Lowering Scram Pilot Air Header Pressure, and Manual Reactor Scram

LIST OF DOCUMENTS REVIEWED

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

1R01 Adverse Weather Protection

- MA–AA–716–026; "Station Housekeeping/Material Condition Program," Revision 13
- CPS 4302.01; "Tornado High Winds," Revision 21F
- OP–AA–108–111–1001; "Severe Weather and Natural Disaster Guidelines," Revision 12
- SY–AA–101–146; "Severe Weather Preparation and Response," Revision 1
- CPS 3501.01; "High Voltage Auxiliary Power System," Revision 28c
- CPS 3501.01E001; "High Voltage Auxiliary Power System Electrical Lineup," Revision 14
- CPS 3502.01; "480 VAC Distribution," Revision 9b
- CPS 3502.01E001; "480 VAC Distribution Electrical Lineup," Revision 9b
- CPS 3505.01; "345 & 138 kV Switchyard (SY)," Revision 19e
- CPS 3505.01E001; "Switchyard Electrical Lineup," Revision 11c
- CPS 3505.01V001; "Switchyard Valve Lineup," Revision 8c
- CPS 3506.01; "Diesel Generator and Support Systems (DG)," Revision 37b
- CPS 4201.01; "Loss of DC Power," Revision 8b
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- CPS 9054.02; “Reactor Core Isolation Cooling Valve Operability Checks,” Revision 42b
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- Radioactive Source Inventory Report; dated December 17, 2015
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- RWP CL–1–16–00902; CiR16 FF Activities No Cavity Access; Revision 1
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- Radiological Surveys; Drywell; Various Records
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- AR 02433616; Bristol Compressor Failed Grade D Air Testing; dated January 7, 2015
- AR 0289833; Contractor Respiratory Program Approval; dated April, 23, 2015
- AR 02579330; RP ID: Grade D Breathing Air Compressors; dated October 30,2015
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- AR 02585030; RP ID: RCA Access Control Screen Message Wrong; dated November 10, 2015
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- RP–AA–222; Methods for Estimating Internal Exposure From In Vivo and In Vitro Bioassay Data; Revision 5
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- 10CFR61; Dry Active Waste Analysis; dated May 6, 2015

4OA1 Performance Indicator Verification

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- LS–AA–2001; "Collecting and Reporting of NRC Performance Indicator Data," Revision 14
- MSPI Derivation Report; "High Pressure Injection System Unavailability Index"
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- AR 02485729; "1PI–DG186, DG 1C Fuel Filter Outlet Pressure Gauge Damaged"
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- AR 02501737; "PMT Steam Leak at RCIC Turbine Low Pressure"
- AR 02501752; "RCIC Required Manual Trip During 95 Relay Testing"
- AR 02531797; "Division 3 SX Carrier Water Line Has Failed"
- AR 02528036; "Received Annunciator 5064–2A Not Available Div 3 SX"

4OA2 Identification and Resolution of Problems

- AR 02491689; "NOS ID: Quality Level 1 Part Found in Turbine"
- AR 02494259; "NRC SRI Question Concerning MCR Panel Doors"
- AR 02495871; "C1R15 LL: Alt Shutdown Cooling Temperature Probe Not Installed"
- AR 02496113; "C1R15 Tape Over Bio Shield Door Latch"
- AR 02498674; "Division 2 DG Unexpected Auto-Start During 9080.25 Restoration"
- AR 02501695; "9861.03D012 Re-performed due to Invalid Test"
- AR 02502655; "9861.03D0012 Drywell Air Lock Seal LLRT Enhancement"
- AR 02504689; "ZTP – RPT was Unaware of the NEED to Use RP–CL–503–1002 ATT 2"
- AR 02513521; "Observation on Use of SA–AA–117 for ISFSI Project"
- AR 02518477; "NRC Observation of MCR Back Panel Door Control"
- AR 02527228; "ZTP: Procedure Use and Place Keeping HU/THU"
- AR 02527455; "NRC ID: Unsecured Material Located Near Transformers"
- AR 02546038; "NOS ID: 1019.05 Approved Storage Area Requirements Not Met"
- AR 02549001; "Unexpected Loss of AR/PR Lan ZTP"

- AR 02552248; “NRC Questions Use of OP-CL-108-101-1003 Attachment 5”
- AR 02552999; “NRC Debrief Potential Violation on RR Bay and Secondary Containment”
- AR 02565900; “NRC Identified Unsecure Material in a Secured Material Zone”
- AR 02566423; “NRC ID – Material in Material Exclusion Zone”
- AR 02567911; “No LMS Qualification Check Prior to Work Performed’
- AR 02592159; “Tracking of Installed Gauge for 1PIFC015A”
- AR 02595926; “NCV 2015003-01, Procedure Adherence”
- AR 02599215; “NOS ID: Four Wheel Carts Not Secured”
- AR 02600726; “Trend IR for Procedure Adherence Issues”
- AR 02605894; “Perform an ACE on Procedural Adherence – REF WGE 02600726”
- AR 02639317; “NRC Question on VC B Operability Determination”
- AR 02648507; “OSHA 1D Cable Vault Cables in the Water with Red Light Out”
- AR 02648804; “NRC Identified Cable Submerged in Cable Vault OSHA-1D”

4OA5 Other Activities

- ACE 2511697; “Severity Level IV Violations Cause Evaluations,” Report Date 7/09/2015

LIST OF ACRONYMS USED

AC	Alternating Current
ADAMS	Agencywide Document Access Management System
AR	Action Request
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CFR	Code of Federal Regulations
DG	Diesel Generator
DRP	Division of Reactor Projects
EC	Engineering Change
ECCS	Emergency Core Cooling System
EPU	Extended Power Uprate
F	Fahrenheit
FIN	Fix it Now
FSAR	Final Safety Analysis Report
GE	General Electric
HVAC	Heating Ventilation and Air Conditioning
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
IR	Issue Report
LER	Licensee Event Report
LLC	Limited Liability Corporation
LOCA	Loss of Coolant Accident
NCV	Non-Cited Violation
NDE	Non-destructive Examination
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
OPDRV	Operation to Prevent Draining the Reactor Vessel
OSP	Outage Safety Plan
PARS	Publicly Available Records System
PI	Performance Indicator
PM	Preventative Maintenance
PMT	Post-Maintenance Testing
RCIC	Reactor Core Isolation Cooling
RFO	Refueling Outage
RHR	Residual Heat Removal
RWCU	Reactor Water Cleanup
SAR	Safety Analysis Report
SDP	Significance Determination Process
SLC	Stand-by Liquid Control
SSC	System, Structure, and Component
SX	Service Water
TDRFP	Turbine Driven Reactor Feed Pump
TS	Technical Specification
TSO	Transmission system Operator
USAR	Updated Safety Analysis Report
UT	Ultrasonic Examination
WO	Work Order

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Sincerely,

/RA/

Karla Stoedter, Chief
Branch 1
Division of Reactor Projects

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