



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
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LISLE, IL 60532-4352

November 4, 2015

Mr. Larry Weber
Senior VP and Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

SUBJECT: DONALD C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2
NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000315/2015007; 05000316/2015007

Dear Mr. Weber:

On October 2, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution (PI&R) biennial inspection at your Donald C. Cook Nuclear Power Plant, Units 1 and 2. The NRC inspection team discussed the results of this inspection with Mr. J. Gebbie and other members of your staff. The inspection team documented the results of this inspection in the enclosed inspection report.

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

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

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

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

L. Weber

-2-

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 Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Kenneth Riemer, Chief
Branch 2
Division of Reactor Projects

Docket Nos. 50-315; 50-316
License Nos. DPR-58; DPR-74

Enclosure:
IR 05000315/2015007; 05000316/2015007
w/Attachment: Supplemental Information

cc w/encl: Distribution via LISTSERV®

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 05000315; 05000316
License Nos: DPR-58; DPR-74

Report No: 05000315/2015007; 05000316/2015007

Licensee: Indiana Michigan Power Company

Facility: Donald C. Cook Nuclear Power Plant, Units 1 and 2

Location: Bridgman, MI

Dates: September 14 through October 2, 2015

Inspectors: B. Bartlett, Project Engineer, Region III (Team Lead)
J. Lennartz, Project Engineer, Region III
J. Maynen, Senior Security Inspector, Region III
N. Shah, Project Engineer, Region III
M. Doyle, Region III, Inspector in Training

Approved by: Kenneth Riemer, Chief
Branch 2
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

Inspection Report (IR) 05000315/2015007, 05000316/2015007; 09/14/2015 – 10/2/2015; Donald C. Cook Nuclear Power Plant, Units 1 and 2: Biennial Problem Identification and Resolution (PI&R) Inspection.

This inspection was performed by four NRC regional inspectors. No findings of significance or violations of NRC requirements were identified during this inspection. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Problem Identification and Resolution

On the basis of the samples selected for review, the team concluded that implementation of the corrective action program (CAP) at D. C. Cook was effective. The licensee had a low threshold for identifying problems and entering them into the CAP. Items entered into the CAP were screened and prioritized in a timely manner using established criteria; were properly evaluated commensurate with their safety significance; and corrective actions for conditions adverse to quality were generally implemented in a timely manner, commensurate with their safety significance. Operating experience was entered into the CAP and appropriately evaluated for applicability to station activities and equipment. The use of operating experience was integrated into daily activities. Audits and self-assessments were performed at appropriate frequencies and at an appropriate level to identify issues. The assessments reviewed were thorough and effective in identifying site performance deficiencies, programmatic concerns, and improvement opportunities. On the basis of interviews conducted during the inspection, workers at the site expressed freedom to raise safety concerns without fear of retaliation. The inspectors did not identify any impediments to the health of the safety-conscious work environment at D. C. Cook.

NRC-Identified and Self-Revealed Violations

None

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution (71152B)

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

.1 Assessment of the Corrective Action Program Effectiveness

a. Inspection Scope

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

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

The inspectors selected the Essential Service Water (ESW) system for a detailed review. The ESW system was selected based upon its risk significance and that a detailed plant walk down had not been performed within the last 18 months. For the ESW system a five year review was performed. The inspectors' review was to determine whether the licensee staff were properly monitoring and evaluating the performance of this system through effective implementation of station monitoring programs. A five year review on the ESW system was also undertaken to assess the licensee staff's efforts in monitoring for system degradation due to aging aspects. The inspectors also performed partial system walkdowns of the diesel generators to determine if there were readily identifiable issues with the system and if any identified issues were adequately described in the CAP and system health documents.

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

b. Assessment

(1) Effectiveness of Problem Identification

Based on the results of the inspection, the inspectors concluded that problem identification was generally effective. Based on the information reviewed, the inspectors determined that D. C. Cook personnel had a low threshold for initiating ARs; station personnel appropriately screened issues from both the NRC and industry operating experience at an appropriate level and entered them into the CAP when applicable; and identified problems were generally entered into the CAP in a complete, accurate, and timely manner.

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

Findings

No findings were identified.

(2) Effectiveness of Prioritization and Evaluation of Issues

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

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

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

There were no items identified by the inspectors in the backlogs of the CAP or maintenance that were risk significant, either individually or collectively. The inspectors reviewed the licensee's work order backlog and associated performance metric data and concluded that equipment issues were generally being addressed appropriately.

Observations

While the inspectors did not identify any ARs or Work Orders (WO) that were not being worked at the appropriate priority the inspectors did identify numerous examples where WO had the wrong priority level. The inspectors' review of the WO backlog identified examples where higher priority WOs remained open, one of them remained open after almost 9 years. A deeper assessment demonstrated that the WO had been completed

on the equipment in question but that insulation remained to be reinstalled, or painting remained to be performed or some other minor aspect remained to be completed. The licensee did not have a process by which the high priority designation could be removed from the WO even though the high priority portion of the work had been completed.

In other examples, the inspectors identified some very low priority WOs that remained in the backlog after more than 12 years. The issue identified was minor but had been placed on a low priority. The inspectors pointed that a low priority was not supposed to equate to no priority. The inspectors also pointed out that failure to complete even low priority work could lead to workers losing confidence that the CAP system could effectively address items needing repair. In one example after nine years a worker had written another AR to address a piece of equipment that had not yet been repaired. The new AR was closed to the existing open WO that has yet to be completed some three years later.

The inspectors reviewed the maintenance backlog for items categorized under its work management process as Work Priority 3A (should be worked within 21 days) and 3B (should be worked in the next component outage). The inspectors reviewed several 3A and 3B work orders on safety-related equipment which were more than one year old.

One example involved Work Order 55384527 which was written in 2011 to repair a leaking steam generator Power Operated Relief Valve (PORV) and was categorized as 3B in accordance with the licensee's work management process. The associated Action Request was closed upon the creation of the work order, but the work order had not yet been completed. The inspectors agreed with the licensee's conclusion that the steam generator PORV leakage did not render the PORV inoperable. However, the inspectors questioned how a 3B work order could be over 4 years old.

A second example involved WO 55421433 which was written to repair leakage identified as coming from the Unit 2 west ESW strainer. Upon removal of the strainer insulation to examine the suspected area, the licensee determined that the leakage was actually condensation and that no active leak was present. The portion of the work order pertaining to the repair of the leak was canceled. However, the work order remained open pending completion of the remaining tasks. It also remained categorized as a 3B work order because it was originally classified as a 3B priority. The inspectors questioned why the work order wasn't reclassified to a lower priority once it was determined that there was no active leak.

Licensee management stated that they were assessing what should be done about the older items in the backlog. The inspectors stated that the NRC conclusion was not new to the licensee, but it had also been presented within the last year to licensee management by internal organizations (Quality Assurance) and by other outside reviewing organizations. The licensee acknowledged this comment.

(3) Effectiveness of Corrective Actions

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

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

Observations

Three examples (minor significance) were identified where corrective actions implemented were different from the corrective action as developed/documented in the condition report; and, there was no documentation to justify why the implemented corrective action was different than the developed corrective action. Based on additional document reviews and questioning, the inspectors concluded in all cases that the corrective action taken was reasonable and appropriate:

- A corrective action (GT 2014-15348, Update Technical Data Book Figure with New Valve Position) was developed to revise the technical data book to reflect the new position for the ESW outlet valve from the containment spray heat exchanger (1-WMO-717) following ESW flow verification testing. However, the Technical Data Book valve position (8 turns from full closed) did not match the documented corrective action (7 turns from full closed).
- A corrective action was developed to implement “annual” quick hit self-assessments of the Performance Observation Program (AR 2013-12834, Performance Observation Program Assessments). However, the actual corrective action implemented was to perform assessments every two years. (The licensee generated AR 2015-12700, Integrated Self-Assessment Schedule was not Revised Properly, to address this observation.)

One example was identified where the success criteria for an effectiveness review (Root Cause Evaluation in AR 2013-10273, Cut Line Process Issue) was considered inappropriate:

The documented effectiveness review success criteria included verifying that no site clock resets directly caused by a lack of standards adherence had occurred since the corrective action to prevent recurrence had been implemented. The inspectors concluded that using no clock resets as a success criteria would only prove the corrective action to prevent recurrence did not fail; however, it would not measure the effectiveness of the corrective action (i.e., was there an overall reduction in issues caused by a lack of standards adherence.)

The examples in Section 2 above and in this section highlighted the inspectors’ observations that:

- Some corrective actions were being closed to work orders without ensuring that the work orders were completed; and
- WOs were not being re-reviewed for priority after their initial creation. The backlog of 3B work orders contained over 600 items, but many of those work orders did not currently meet the licensee’s work planning process requirements to be in the 3B category.

The licensee documented these observations in AR 2015-12836. Since a large majority of the backlog 3B work orders were for nonsafety-related systems, the inspectors concluded that the licensee's work management process was effective.

No findings were identified.

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

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

b. Assessment

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

The inspectors determined that it was unclear whether OE was properly evaluated as part of CAP cause evaluations. The inspectors identified several examples where as part of the evaluation, licensee staff identified applicable industry or internal OE, but did not discuss whether the failure to address the OE was a precursor to the event. It was unclear whether this was due to a failure to perform or document the evaluation. Licensee staff were subsequently able to determine that for the examples in question, the OE was not a precursor to the specific events. The licensee subsequently generated AR 2015-12776, "Disposition of OE Search Results," to evaluate whether OE was being properly evaluated during formal cause evaluations.

Findings

No findings were identified.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

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

b. Assessment

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

Observations

The inspectors reviewed the licensee's assessment of their self-assessment and benchmarking program. The provided assessments appeared to review and assess the compliance of their programs with existing procedural requirements and did not generally look at the effectiveness of the programs. However, the inspectors overall assessment of the self-assessment process did indicate that the programs appeared to meet licensee intended requirements for identifying issues.

Findings

No findings were identified.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The inspectors assessed the licensee's safety-conscious work environment through the reviews of the facility's employee concern program implementing procedures, discussions with coordinators of the employee concern program, interviews with personnel from various departments, and reviews of issue reports. The site's most recent safety culture assessment was reviewed and the employee concerns program coordinators were interviewed.

b. Assessment

Based on the results of the inspection, the inspectors did not identify any issues that suggested conditions were not conducive to the establishment and existence of a safety-conscious work environment at D. C. Cook. Information obtained during the interviews indicated that an environment was established where licensee employees felt free to raise nuclear safety issues without fear of retaliation; were aware of and generally familiar with the CAP and other processes, including the employee concerns program

and the NRC, through which concerns could be raised; and safety significant issues could be freely communicated to supervision.

Findings

No findings were identified.

4OA6 Management Meeting

.1 Exit Meeting Summary

On October 2, 2015, the inspectors presented the inspection results to Mr. J. Gebbie and other members of the licensee's staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Gebbie, Site Vice-President
S. Lies, Vice-President Engineering
M. Scarpello, Regulatory Assurance Manager
D. Wood, Radiation Protection Manager
K. Ferneau, Operations Director
R. Wynegar, Regulatory Assurance
S. Mitchell, Regulatory Assurance Supervisor
V. Gupta, Performance Improvement Supervisor
J. Ross, Plant Engineering Director

Nuclear Regulatory Commission

K. Riemer, Chief, Reactor Projects Branch 2

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

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

PLANT PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
PMP-2291-WMP-001	Work Management Process Flowchart	Revision 39
PMP-7030-CAP-001	Action Initiation	35
PMP-7030-OE-001	Operating Experience Program	27
PMP-7030-CAP-005	Conduct of CAP Evaluations	06
PMI-7030	Corrective Action Program	43
PMP-7030-CAP-002	Condition Action and Closure	29
12-EHP-5035-MRP-001	Maintenance Rule Program Administration	23
1-OHL-5030-SOM-004	Unit 1 Tours – Unit 1 Turbine Tour	69
1-OHP-4021-016-003	Component Cooling Water System Operation	37
1-OHP-4023-E-0	Reactor Trip or Safety Injection	38
1-OHP-4030-114-010	Containment Isolation	13
1-OHP-4030-132-027AB	AB Diesel Generator Operability Test (Train B)	44
12-EHP-5036-EQR-002	System Engineering	2
12-OHP-2110-CCA-001	Compensatory Measures and Contingency Actions	9
PMI-2351	10 CFR 50.59 and 10 CFR 72.48 Program Administration	0
PMP-2291-WMP-001	Work Management Process Flowchart	39
PMP-4010-HUR-002	Human Performance Program	44
PMP-4030-VLU-001	Valve Lineups and Position Control	9
12-EHP-4030-010-262	Ice Condenser Surveillance and Operability Evaluation	17
PMP-7030-OPR-001	Operability Determination	27
SPP-2060-SFI-202	Security Safeguards Contingency Actions	7
SPP-2060-SFI-510	Security Timeline Development	0
PMP-2291-WMP-001	Work Management Process Flowchart	39
01-OHL-4030-SOM-031	Unit 1 Tours – U1 Control Room M1 and 2 Shift Checks	47

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
AR 2014-13668	U1 Turbine Driven Auxiliary Feed Pump Tripped for Unknown Reasons Following	11/01/2014

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Reactor Trip	
AR 2014-7605	Nonconforming Material and Equipment Segregation	06/26/2014
AR 2014-13110	Essential Service Water (ESW) Flow Indicated to U1 West Containment Spray (CTS) Heat Exchanger (HX)	10/21/2014
AR 2013-14883	1-WRV-725 CD Emergency Diesel South Combustion Air Aftercooler	10/4/2013
AR 2013-1422	1-XTI-306 Unit 1 CD Emergency Diesel Generator After Air Cooler Indicates Low	1/30/2013
AR 2015-5842	E ESW Pump Discharge Strainer Auto Vent Trap Leaking By	4/23/2015
AR 2013-4055	AB ESW Inlet Flange Leaking During Surveillance	3/19/2013
AR 2015-1505	Operability Determination Evaluation Failed to Address Impacts on ESW Train in Opposite Unit	2/2/2015
AR 2012-14941	ESW Pump Bay Cleaning Criteria	11/30/2012
AR 2012-2543	1-PP-7E-MTR Oil Analysis	2/24/2012
AR 2013-13980	2-WMO-734 East Component Cooling Water (CCW) HX ESW Outlet Valve Conduit Loose	9/20/2013
AR 2014-7026	Thru Wall Piping Leak	6/11/2014
AR 2013-7701	U1 East ESW Strainer Basket Pinhole Leak Through Piping	5/23/2013
AR 2015-9533	Remove Oil from Upper Reservoir of 2-PP-7E-MTR	7/22/2015
AR 2015-8455	ESW Motor Oil Level Bands not Maintainable	6/28/2015
AR 2014-2526	Inconsistency in Guidance for ESW Motor Oil Levels	2/20/2014
AR 2012-11193	Evaluate Completeness of Generic Letter 89-13 Program	11/16/2012
AR 2014-7570	AFW Pump Room Coolers ISI	6/25/2014
AR 2014-15425	Unauthorized Configuration Change Found in 1-HV-AFP-WAC	12/15/2014
AR 2011-2037	1-HV-AFP-WAC has ESW Leak at Condenser	2/15/2011
AR 2014-4109	Workers Worked on Wrong Component	3/27/2014
AR 2012-2543	1-PP7E-MTR Oil Analysis	2/24/2012
AR 2013-1905	2-VRV-3215 has Signs of Surface Corrosion	2/8/2013
AR 2013-12834	Performance Observation Program Assessments	8/30/2013
GT 2014-15348	Update Technical Data Book Figure with New Valve Positions	12/11/2014

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
AR 2015-8283	Use of Industry and Internal Operating Experience (OE)	6/24/2015
AR 2013-13750	NRC Identified Problems With 2-BATT-AB Battery	9/17/2013
AR 2013-17121	U2C21 Lower Ice Condenser Walkdown—NRC Findings	11/6/2013
AR 2014-5687	Cracks and Spalling in Containment Structures—NRC Question	5/8/2014
AR 2014-10429	Minor Leak On 2CD Emergency Diesel Generator	9/5/2014
AR 2015-5809	Rust on Flash Suppressor	4/22/2015
AR 2014-11525	Loose Unistrut Above Control Room Ceiling	9/28/2014
AR 2014-11569	Unsafe Work Conditions for Reactor Pressure Vessel Internals Lift Rig	9/29/2014
AR 2015-7789	Radioactive Package Still Located in Radioactive Hold Cage	6/11/2015
AR 2013-12967	Containment Temperature (WRV) Controllers Not Set Per ECP [Engineering Calculation Procedure]	9/3/2013
AR 2014-11454	1-B-107A As Found Conditions Were Unsat as per procedure	9/27/2014
AR 2013-12921	Operator Burden Average Age Exceeded Goal	9/3/2013
AR 2013-12961	Failed to Perform Post-Maintenance Test on 2-QM-85	9/3/2013
AR 2015-7558	Control of Contractors/Lifting and Rigging	6/5/2015
AR 2014-12094	U1 AB1 Jacket Water Pump Flow Oscillations	10/6/2014
AR 2015-5945	AB D/G Lube Oil Sump Below ESOMs Admin Limit	4/25/2015
AR 2014-12121	Failed AB EDG Surveillance	10/6/2014
AR 2015-5589	2CD D/G Did Not Pass LOP/LOCA [Loss of Offsite Power/Loss of Cooling] Testing TS 3.8.1.13	4/18/2015
AR 2015-8560	Posted LHRA [Locked High Radiation Area] Locked With Non-Unique Lock	6/30/2015
AR 2014-4668	Unexpected Control Rod Motion in the Inward Direction	4/11/2014
AR 2015-4354	Air Line on 2AB D/G Found Broke	3/30/2015
AR 2015-5174	2-QRV-451 Packing Leak with Wet Boric Acid	4/11/2015
AR 2013-13581	1-DR-AUX361 Was Found Part Open by the NRC	9/13/2013
AR 2013-13506	Maintenance Rule Program Scope of AFW [Auxiliary Feed water] Manual Operator	9/12/2013

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Action	
AR 2014-10744	MA.1-1 continuing performance gap	9/12/2014
AR 2015-0163	Shift conditions identified	1/7/2015
AR 2015-0810	Not properly identifying process/procedure improvements	1/20/2015
AR 2015-2894	Enhanced barrier motorized gate #2 not operating as designed	3/2/2015
AR 2015-12670	Open Outage Work Orders Coded 3A	9/28/2015
AR 2015-12727	AFI identified in security	9/29/2015
AR 2015-12836	ARs are being closed to the Work Control process with no eval	10/1/2015
GT 2014-14659	HU Excellence Plan Actions and Tracking	11/24/2014
AR 2014-12789	U2 West CCP oil sample has small particulate in it	10/16/2014
AR 2014-14921	2-HV-AFP-EAC Middle Contactor Welded Shut	12/2/2014
AR 2014-15396	Incorrect repair process of ESW on 1-HV-AFP-WAC	12/12/2014
AR 2013-9251	Inadequate Calculations for ICP-0083	6/25/2013
AR 2014-15087	Fire Pump Setpoint and NEW Technical Requirements Manual Turbine Sprinkler Demand	12/5/2014
AR 2015-1622	ESW Cross-Tie Valve Leakage is no Accounted for in the Analysis	2/3/2015
AR 2015-1324	Non-Conservative ESW Strainer Differential Pressure Used in ESW Hydraulic Model	1/29/2015
AR 2013-14200	Weaknesses Were Noted in Some Extent of Causes	1/20/2015
AR 2015-12802	AFI Corrective Action Effectiveness	10/1/2015
AR 2015-6315	Unit 1 TDAFWP turbine Oil level Indication is High	5/22/2014
AR 2015-8972	Evaluate the Organizational Response to AR2015-6827	7/10/2015
AR 2015-8262	Temporary Diesel Shutdown Due to Smoking Electrical Cables	6/23/2015
GT 2013-16024	Conduct a Self-Assessment of Maintenance and Technical Training	6/20/2014
GT 2013-16023	Perform Operations Training Comprehensive Self-Assessment	5/23/2014
GT 2013-16022	QHSA {Quick Hit Self-Assessment} of Alternate Path Execution	4/25/2014
GT 2013-16018	QHSA Readiness for NRC Inspection	1/17/2014
GT 2013-3701	Training QHSA	9/27/2014
GT 2014-15633	QHSA in Preparation of Licensed Operator Requalification Inspection	2/16/2015

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
GT 2014-7662	QHSA on Conduct of On the Job Training and Task Performance Evaluation	1/20/2015
AR 2015-2460	Operations called the Equipment Operable Prematurely	2/18/2015

OPERATING EXPERIENCE

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
AR 2015-2480	Locked High Radiation Area Key Not Correct In the Key Inventory	2/19/2015
GT 2013-16262	IER [INPO Event Report] Level 2 Main Transformer Fire and Loss of Off-Site Power	10/24/2013
GR 2010-6869	OE31509 Inadequate Physical Barrier for Reactor Cavity	7/13/2010
GT 2015-2804	Review Regulatory Issue Summary 2015-03	2/27/2015
GT 2013-13107	NRC Information Notice 2013-14	9/5/2013
GT 2013-11191	Westinghouse Advisory Letter NSAL-13-4	8/2/2013
GT 2013-5925	NRC Information Notice 2013-07	4/19/2013
GT 2014-15072	NRC Information Notice 2014-15	12/5/2014
GT 2014-9194	IER Level 2 14-42 Supplemental Workers Cut An Energized Cable	8/5/2014

AUDITS, ASSESSMENTS AND SELF-ASSESSMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
PA-13-07	Nuclear Industry Evaluation Program Audit of D.C. Cook Nuclear Plant Nuclear Oversight	10/11/2013
PA-14-07	Operations	8/25/2014
PA-13-08	Engineering, Design Control and In-Service Inspection Program	10/17/2013
PA-14-01	Radiological Environmental Monitoring and Process Control Program	3/14/2014
GT 2014-0937	Quick Hit (QH) Self-Assessment for Maintenance Rule Program	1/20/2014
GT 2014-1200	Operating Experience Program	12/31/2014
GT 2013-13868	QH Self-Assessment for NRC Radiological Hazard and Exposure Control Inspection	9/19/2013
GT 2013-6469	QH Self-Assessment for Predictive Maintenance Program	4/30/2013
GT 2014-14109	QH on High Radiation Area Controls	11/10/2014
GT 2014-2360	QH Self-Assessment for Non-Plant Clearance Permit	2/18/2014
GT 2013-6177	Repeat Maintenance QH Self-Assessment	4/24/2013

OPERATING EXPERIENCE

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
GT 2014-15628	ALARA Pre-NRC Inspection QH Self-Assessment	12/18/2014
GT 2014-4494	QHSA for FAC Program	6/5/2014
GT 2015-2086	Full Self-Assessment for Technical Conscience (IER 14-20)	7/13/2015

CONDITION REPORTS GENERATED DURING INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
AR 2015-12811	Open Question on Wrong Cable Determined Root Cause Evaluation	10/1/2015
AR 2015-12825	Human Performance not Documented in AR 2014-15087, Fire Pump Setpoints	10/1/2015
AR 2015-12776	Results of OpE Searches Might Not be Utilized	9/30/2015
AR 2015-12018	An NRC Violation was not Classified Correctly in the CAP	9/14/2015
AR 2015-12814	Effectiveness Review Criteria not Appropriate	10/1/2015
AR 2015-12820	Lack of Traceability due to Poor Documentation	10/1/2015
AR 2015-12670	Work Orders Contain Wrong Priority Code of 3A well After They Should Have Been Down Graded.	9/28/2015
AR 2015-12310	Essential Service Water Valve 2-ESW-298 has a small amount of rust on it.	9/20/2015
AR 2015-12486	Wrong Classification Level on NRC Identified AR	9/23/2015
AR 2015-12187	OpE Evaluation for the Failure of Switch Lockout Relays Needed More Justification	9/17/2015
AR 2015-12248	Old Not Active Fuel Oil Leak on Valve 1-DF-107C	9/18/2015
AR 2015-12115	Assignment #4 Not Closed Properly for AR 2015-1394, Security Informal Process	9/16/2015
AR 2015-12151	AR Not Generated for the Post-Maintenance Test Failure of the Unit 2 Main Turbine Lube Oil Filter Pump	9/17/2015
AR 2015-12262	Lack of Discussion or Documentation of the HU Aspects of Some Issues in the CAP	9/18/2015
AR 2015-12309	Control Room Ventilation Unit Valve 2-VRV-315 is Rusted and Needs to be Repaired	9/20/2015
AR 2015-12700	Corrective Action Implemented did Not Match the Corrective Action Specified in the CAP	9/29/2015
AR 2015-12128	The Flow Balance Position of Valve 1-WMO-717 was Recorded Incorrectly	9/16/2015
AR 2015-12490	AR 2015-040 on Improper Work Order	9/23/2015

OPERATING EXPERIENCE

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Instructions was Screened as a CNAQ Instead of as a CAQ	
AR 2015-12193	Diesel Generator 1AB Cylinder 4R Copper Lube Oil Return Line has a Dent	9/17/2015
AR 2015-12150	NRC Violation Documented in AR2014-12055 had Action that was Improperly Closed without being Completed	9/20/2015
AR 2015-12836	ARs that get Closed to the WO System Don't Always Receive an Evaluation	9/17/2015
GT 2015-13353	Training Assignments to Address AR2015-12811 Were Too Narrow	10/14/2015

ROOT CAUSES AND APPARENT CAUSES REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
AR 2011-14229	GL 89-13 Inspection on 2-HV-AFP-EAC Over Plug Limit	12/7/2011
AR 2014-9877	Foreign Material Exclusion Cover Installed on AB D/G Vent Caused Indicator Problems	8/21/2014
AR 2014-12294	Unexpected voltage found in 1-11D during cleaning	10/9/2014
AR 2014-15396	Incorrect Repair Process of ESW Leak on 1-HV-AFP-WAC	12/12/2014
AR 2012-11462	Pinhole Leak from ESW Outlet Piping on U2 West CCW Heat Exchanger	9/19/2012
AR 2013-10273	Cut Line Process Issue	7/17/2013
AR 2015-10367	U1 East ESW Pump Abnormal Conditions After Shutdown	8/10/2015
AR 2013-18063	Glycol Chiller Inadvertent Lead Lift	11/22/2013
AR 2013-16909	Loss of Control Room Annunciators During LOOP/LOCA	11/2/2013
AR 2015-2480	LHRA [Locked High Radiation Area] Key Not Correct in the Key Inventory	2/19/2015
AR 2015-2084	Foreign Material Sucked Into U2 Middle Heater Drain Pump Motor	2/12/2015
AR 2013-13283	Work Performed on 1-QT-133-AB Without Using WO [Work Order] or Clearance	9/9/2013
AR 2014-03688	NRC Observation Regarding Performance of 50.59 Products	3/19/2014
AR 2014-3805	Inspection of the CCW Heat Exchangers	3/21/2014
AR 2014-5093	Security Time-lines	4/23/2014
AR 2014-6315	UI turbine driven auxiliary feedwater pump turbine oil level indication is high	5/22/2014
AR 2014-12121	Failed Unit 1 AB D/G Surveillance	10/6/2014
AR 2015-1394	Security informal processes	1/30/2015

WORK ORDERS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
55350544-33	Upgrade the U2 West ESW Pump	10/8/2009
55365185-01	Install U2 ESW Vacuum Breaker on East Header	1/31/2011
55362926-01	Fabricate and Install U2 ESW Vacuum Breaker	10/14/2010
55362925-01	Fabricate and Install U1 East ESW Vacuum Breaker	2/9/2011
55366041-01	Fabricate and Install U1 West ESW Vacuum Breaker	2/23/2011
55449679-01	U2 West ESW Pump Chlorine Injection Line Broke Off at Pump	7/31/2014
55456547	1-WMO-717 Remove/Install New Valve	11/24/2014
55350616-01	2-HV-AFP-EAC Replace Room Cooler	4/1/2015
55430105-01	1-PP-120-CD Diesel Driven Fuel Oil Pump Leak	3/9/2015
55433451-01	1-WRV-725 Emergency Diesel South Combustion Air Aftercool	10/9/2013
55231506	MTI, 1-DGAB-VRCKT, Perform Bench Test & Burn In (NLI)	
55348865-05	MTI, 1-DGAB-VRCKT; Replace NLI Voltage Regulator	
55384527	Unit 2 #3 SG PORV Leak-By	
55406892	2-PP-10E, pump O/B Seal Leakage	
55421433	2-OME-34W, Leakage Identified from Unit 2 West ESW Strainer	
55442114	DG1CD Fuel Oil Day Tank Low Level Alarm Setpoint	
55462204	Extent of Condition Inspection on 2-HV-AFP-EAC	

OTHER

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
12-EHP-8913-001-002, Data Sheet 1	U2 Turbine Driven Auxiliary Feed Pump Room Cooler HX Inspection Report	5/26/2015
12-EHP-8913-001-002, Data Sheet 1	U1 West Motor Driven Auxiliary Feed Pump Room Cooler HX Inspection Report	8/17/2015
01-OHL-5030-SOM-004	Unit 1 ESW Pump Room Tour	Revision 69
02-OHL-5030-SOM-006	Unit 2 EWS Pump Room Tour	Revision 66
	Unit 1 and Unit 2 ESW System Health Reports	4 th Quarter 2010 -2 nd Quarter 2015
	ESW Maintenance Rule (a)(1) Consideration	2/10/15

OTHER

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Unit 1 Emergency Diesel Generator (D/G) System Health Reports for 2nd – 4th Quarters 2014	
	Unit 1 EDG System Health Reports for 1st – 2nd Quarters 2015	
	Maintenance Rule a(1) Action Plan for Unit 1 AB EDG	6/30/2015
	Maintenance Rule a(1) Action Plan for Unit 1 AB EDG—return to a(2)	9/1/2015
Calculation MD-12-ESW-111-N EC-54270	ESW Hydraulic Analyses for Replacement of Containment Spray Heat Exchanger	Revision 6
	50.59 Screening for TS Basis Change Request	4/9/2015
	Initial Screening Committee meeting package for September 15, 2015	
	Maintenance Department Leadership Review Meeting minutes from 3Q14 and 4Q14 meetings	
	Management Screening Committee meeting package for September 16, 2015	
	Performance Assurance Field Observations of Initial Screening Committee Meetings held on May 22, 2015 and August 19, 2015	
	Reason Code Handbook; dated July 31, 2015	
EC-0000054270	Unit 1 and Unit 2 Glycol and Ice Bed Temperatures for August and September of 2015	
	Revise Unit 2 Ice Basket Weight Acceptance Criteria for Unit 2 Cycle 22	0

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access Management System
AFW	Auxiliary Feedwater
ALARA	As Low As Reasonably Achievable
AR	Action Request
CAP	Corrective Action Program
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CTS	Containment Spray
D/G	Diesel Generator
ESW	Essential Service Water
IMC	Inspection Manual Chapter

IR	Inspection Report
LHRA	Locked High Radiation Area
LOCA	Loss-of-coolant Accident
LOOP	Loss of Off-Site Power
NRC	U.S. Nuclear Regulatory Commission
OE	Operating Experience
PARS	Publicly Available Records System
PI&R	Problem Identification and Resolution
PORV	Power Operated Relief Valve
QHSA	Quick Hit Self-Assessment
SDP	Significance Determination Process
WO	Work Order

L. Weber

-2-

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Sincerely,

/RA/

Kenneth Riemer, Chief
Branch 2
Division of Reactor Projects

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