



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

May 9, 2013

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

**SUBJECT: D. C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2 – NRC INTEGRATED
INSPECTION REPORT 05000315/2013002 and 05000316/2013002**

Dear Mr. Weber:

On March 31, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your D. C. Cook Nuclear Power Plant, Units 1 and 2. The enclosed report documents the results of this inspection, which were discussed on April 11, 2013, with Mr. J. Gebbie, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

One NRC identified and one self-revealing finding of very low safety significance (Green) were identified during this inspection. One finding was determined to involve a violation of NRC requirements. Additionally, a licensee-identified violation, which was determined to be of very low safety significance, is listed in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest these non-cited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at D. C. Cook.

If you disagree with a cross-cutting aspect assignment 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 D. C. Cook.

L. Weber

-2-

In accordance with 10 CFR 2.390 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 Document 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/

John B. Giessner, Chief
Branch 4
Division of Reactor Projects

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

Enclosure: Inspection Report 05000315/2013002 and 05000316/2013002
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: 05000315/2013002; 05000316/2013002

Licensee: Indiana Michigan Power Company

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

Location: Bridgman, MI

Dates: January 1 through March 31, 2013

Inspectors: J. Ellegood, Senior Resident Inspector
P. LaFlamme, Resident Inspector
J. Lennartz, Project Engineer
N.J. Feliz Adorno, Reactor Engineer
M. Phalen, Senior Health Physicist
R. K. Walton, Senior Operating Licensing Examiner

Approved by: John B. Giessner, Chief
Branch 4
Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY OF FINDINGS.....	1
REPORT DETAILS	3
Summary of Plant Status	3
1. <i>REACTOR SAFETY</i>	3
1R01 Adverse Weather Protection (71111.01).....	3
1R04 Equipment Alignment (71111.04)	4
1R05 Fire Protection (71111.05).....	5
1R06 Flooding (71111.06)	6
1R11 Licensed Operator Requalification Program (71111.11)	7
1R12 Maintenance Effectiveness (71111.12)	9
1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)	10
1R15 Operability Determinations and Functional Assessments (71111.15)	11
1R19 Post-Maintenance Testing (71111.19).....	11
1R20 Outage Activities (71111.20)	12
1R22 Surveillance Testing (71111.22).....	13
2. <i>RADIATION SAFETY</i>	14
2RS3 In-Plant Airborne Radioactivity Control and Mitigation (71124.03).....	14
2RS4 Occupational Dose Assessment (71124.04).....	17
3. <i>OTHER ACTIVITIES</i>	22
4OA1 Performance Indicator Verification (71151)	22
4OA2 Identification and Resolution of Problems (71152)	24
4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153).....	29
4OA5 Other Activities	30
4OA6 Management Meetings.....	32
4OA7 Licensee Identified Violations	32
SUPPLEMENTAL INFORMATION.....	1
Key Points of Contact	1
List of Items Opened, Closed and Discussed	2
List of Documents Reviewed	3
List of Acronyms Used	11

SUMMARY OF FINDINGS

Inspection Report (IR) 05000315/2013002, 05000316/2013002; 01/01/2013 – 3/31/2013;
D. C. Cook Nuclear Power Plant, Units 1 & 2; Identification and Resolution of Problems; Other
Activities

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. Two Green findings were identified. One finding was considered a non-cited violation (NCV) of NRC regulations. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross Cutting Areas" dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated June 7, 2012. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process" Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Initiating Events

- Green: One self-revealing finding of very low safety significance (Green) with an associated NCV of Technical Specification (TS) 5.4.1 occurred because of a failure to implement plant procedure OHI-4000, Conduct of Operations (COOP). While responding to oscillating levels in steam generator (SG) #4 following a signal position controller failure and resultant power transient, control room operators failed to follow conduct of operations procedure requirements for establishing a control band for controllers placed in manual. This failure contributed to SG levels becoming unstable and rising to within 1 percent of the level for an automatic turbine trip and resultant reactor trip. The licensee stabilized the plant and restored controllers to automatic. Corrective actions included a debrief of personnel in the control room and a lessons learned to all operations personnel. The licensee entered the issue into the corrective action program.

The inspectors determined that the failure to implement the COOP procedure during at power operation was a licensee performance deficiency that warranted an evaluation in accordance with the Significance Determination Process (SDP). The inspectors concluded that performance deficiency was more than minor because it was associated with the Initiating Event cornerstone attribute of human performance and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability. Since the performance deficiency did not result in a reactor trip, the inspectors concluded that the finding was of very low safety significance. The finding includes the H.4(c) cross-cutting aspect in the work practices component of the human performance area because supervisory personnel in the control room did not provide effective oversight to support nuclear safety. Specifically, supervisory command and control was not effective while responding to a SG level transient that approached the turbine trip setpoint. (Section 4OA2)

Cornerstone: Mitigating Systems

- Green. The inspectors identified a finding of very low safety significance for the failure to follow operability evaluation procedural guidance. Specifically, an evaluation was conducted for past-operability of the residual heat removal and containment spray systems due to the discovery of a void in the containment recirculation sump suction piping. However, the evaluation relied on computer software that has not been benchmarked to demonstrate its applicability to the type of analyses being conducted. This finding was entered into the licensee's Corrective Action Program (CAP) to revise the affected evaluation of past-operability. Reanalysis using other appropriate methods determined the piping was operable.

The performance deficiency was more than minor because it was associated with the Mitigating System Cornerstone attribute of equipment performance and adversely affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. In addition, the performance deficiency was more than minor because it was associated with the Barrier Integrity cornerstone attribute of structure, system, component, and barrier performance and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding screened as of very low safety significance (Green) because it was a design deficiency confirmed not to result in loss of operability. Specifically, the licensee performed an alternate operability determination which reasonably concluded the residual heat removal system was operable. In addition, it did not represent an actual open pathway in the physical integrity of reactor containment or involve an actual reduction in function of hydrogen igniters in the reactor containment. This finding did not involve enforcement action because no violation of regulatory requirements was identified. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 4OA5.1.b)

B. Licensee-Identified Violations

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

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near 100 percent power until March 24, 2013, when the licensee commenced a down power to 53 percent for planned steam generator safety valve testing. The licensee recommenced a down power on March 26, 2013, for a planned refueling outage. The licensee entered Mode 3 on March 27, 2013, and remained shut down for the rest of the inspection period.

Unit 2 operated at or near 100 percent power for the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Impending Adverse Weather Condition –Snowfall mixed with freezing rain and sleet conditions

a. Inspection Scope

On Thursday, February 7, 2013, a winter weather advisory was issued for expected snow, freezing rain and sleet conditions. The inspectors observed the licensee's preparations and planning for the significant winter weather potential. The inspectors reviewed licensee procedures and discussed potential compensatory measures with control room personnel. The inspectors focused on plant management's actions for implementing the station's procedures for ensuring adequate personnel for safe plant operation and emergency response would be available. The inspectors conducted a site walkdown of various plant structures and systems to check for maintenance or other apparent deficiencies that could affect system operations during the predicted significant weather. 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. Specific documents reviewed during this inspection are listed in the Attachment to this report.

This inspection constituted one readiness for impending adverse weather condition sample as defined in Inspection Procedure (IP) 71111.01-05.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

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

- Unit 1 AB emergency diesel generator (EDG) system with Unit 1 CD EDG out of service;
- Unit 1 south control room air conditioning (CRAC) system with Unit 1 north CRAC system out of service; and
- Unit 2 south CRAC system with Unit 2 north CRAC system out of service.

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

These activities constituted three partial system walkdown samples as defined in IP 71111.04-05.

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

During the week of February 25, 2013, the inspectors performed a complete system alignment inspection of the Unit 1 auxiliary feedwater (AFW) system to verify the functional capability of the system. This system was selected because it was considered both safety significant and risk significant in the licensee's probabilistic risk assessment. The inspectors walked down the system to review mechanical and electrical equipment lineups; electrical power availability; system pressure and temperature indications, as appropriate; component labeling; component lubrication; component and equipment

cooling; hangers and supports; operability of support systems; and to ensure that ancillary equipment or debris did not interfere with equipment operation. A review of a sample of past and outstanding WOs was performed to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the CAP database to ensure that system equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment to this report.

These activities constituted one complete system walkdown sample 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 40A; Unit 1 4kilovolt AB switch gear room;
- Fire Zone 69; auxiliary building 650 elevation;
- Fire Zones 44A/B; Unit 1 east and west containment spray heat exchanger rooms; and
- Fire Zones 63B/C; Unit 2 east and west centrifugal charging pump rooms.

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

The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event.

Using the documents listed in the Attachment to this report, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's CAP. Documents reviewed are listed in the Attachment to this report.

These activities constituted four quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On March 6, 2013, the inspectors observed fire brigade activation for an unannounced fire drill that simulated an electrical fire in the turbine building. Based on this observation, the inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that the licensee staff identified deficiencies; openly discussed them in a self-critical manner at the drill debrief; and took appropriate corrective actions. Specific attributes evaluated were:

- proper wearing of turnout gear and self-contained breathing apparatus;
- proper use and layout of fire hoses;
- employment of appropriate fire fighting techniques;
- sufficient firefighting equipment brought to the scene;
- effectiveness of fire brigade leader communications, command and control;
- search for victims and propagation of the fire into other plant areas;
- smoke removal operations;
- utilization of pre-planned strategies;
- adherence to the pre-planned drill scenario; and
- drill objectives.

Documents reviewed are listed in the Attachment to this report.

These activities constituted one annual fire protection inspection sample as defined in IP 71111.05-05.

b. Findings

No findings were identified.

1R06 Flooding (71111.06)

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the UFSAR, engineering calculations, and abnormal operating procedures to identify licensee commitments. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the circulating water systems. The inspectors also reviewed the licensee's corrective action documents with respect to past flood-related items identified in the corrective action program to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following plant area to assess the adequacy of watertight doors and

verify drains and sumps were clear of debris and were operable, and that the licensee complied with its commitments:

- Unit 1/2 auxiliary building 573 foot elevation.

Specific documents reviewed during this inspection are listed in the Attachment to this report. This inspection constituted one internal flooding sample as defined in IP 71111.06-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program (71111.11)

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

a. Inspection Scope

On February 20, 2013, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator regualification training to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

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

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator regualification program simulator sample as defined in IP 71111.11 and satisfied the inspection program requirement for the resident inspectors to observe a portion of an in-progress annual regualification operating test during a training cycle in which it was not observed by the NRC during the biennial portion of this IP.

b. Findings

No findings were identified.

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

a. Inspection Scope

On March 27, 2013, the inspectors observed the control room operators perform a reactor trip from 15 percent power and subsequent cool down as planned for the Unit 1 refueling outage. This was an activity that required heightened awareness and was related to increased risk. The inspectors evaluated the following areas:

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

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

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

b. Findings

No findings were identified.

.3 Biennial Written and Annual Operating Test Results (71111.11A)

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the Biennial Written Examination, and the Annual Operating Test administered by the licensee from February 6, 2013, through March 8, 2013, as required by 10 CFR 55.59(a). The results were compared to the thresholds established in Inspection Manual Chapter 0609, Appendix I, "Licensed Operator Requalification SDP," to assess the overall adequacy of the licensee's Licensed Operator Requalification Training (LORT) Program to meet the requirements of 10 CFR 55.59. (Section 02.02)

This inspection constituted one annual licensed operator requalification examination results sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

.4 Biennial Review (71111.11B)

a. Inspection Scope

The following inspection activities were conducted during the week of February 25, 2013, to assess: 1) the effectiveness and adequacy of the facility licensee's implementation and maintenance of its systems approach to training (SAT) based LORT Program, put into effect to satisfy the requirements of 10 CFR 55.59. The documents reviewed are listed in the Attachment to this report.

- Licensee Regualification Examinations (10 CFR 55.59(c); SAT Element 4 as defined in 10 CFR 55.4): The inspectors reviewed the licensee's program for administration of the LORT annual operating tests to assess the licensee's ability to develop and administer examinations that are acceptable for meeting the requirements of 10 CFR 55.59(a).

The inspectors observed the administration of the annual operating test to assess the licensee's effectiveness in conducting the examinations, including the conduct of evaluations of individual operator and crew performance, and post-examination analysis. The inspectors evaluated the performance of two crews in parallel with the facility evaluators during four dynamic simulator scenarios, and evaluated various licensed crew members concurrently with facility evaluators during the administration of several job performance measures. (Section 02.05)

This inspection constituted one Biennial Licensed Operator Regulation Program sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

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

- Unit 1 nuclear instrumentation system; and
- Unit 1/2 radiation monitoring systems.

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)

b. 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:

- elevated risk due to essential service water work, week of February 18;
- elevated risk due to transfer to de-ice line up, week of December 31;
- Unit 1 elevated risk due to emergent work on CD EDG, week of January 28; and
- elevated risk due to planned Unit 1 work on west residual heat removal system and N-Train battery, week of March 11.

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. Specific documents reviewed during this inspection are listed in the Attachment to this report.

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

c. Findings

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed the following issues:

- Unit 2 EDG auxiliary jacket water heater pump failure;
- Unit 2 SG stop valve dump valve, 2-MRV-212, failure to stroke within inservice test program limits;
- Unit 1/2 screen house traveling water screen system degradation;
- Unit 2 reactor coolant pump 21 motor upper thrust bearing temperature indication rise;
- Unit 1 east essential service water motor oil showing elevated iron levels;
- Unit 1 component cooling water system impacted by scaffolding; and
- Unit 1 power range nuclear instruments due to varying flux output.

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. Documents reviewed are listed in the Attachment to this report.

This operability inspection constituted seven samples as defined in IP 71111.15-05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

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

- Unit 1 turbine driven AFW pump relay modification;
- Unit 1 CD EDG following injector replacement;
- Unit 1 and Unit 2 steam generator nitrogen backup system supply to power operated relief valve modifications; and
- Unit 1 failed 4 kilovolt under voltage relay and replacement.

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

This inspection constituted four 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 and contingency plans for the Unit 1 refueling outage, which started on March 27, 2013, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the refueling outage, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below:

- 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; and
- controls over activities that could affect reactivity.

Documents reviewed during the inspection are listed in the Attachment to this report. Because the shutdown occurred at the end of the inspection period, the inspectors did not complete all elements of the inspection procedure. Additional inspection activities will occur in the second quarter inspection period.

This inspection did not constitute an inspection sample as defined in IP 71111.20-05.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

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:

- Unit 1 control rod testing;
- Unit 1 containment exhaust fan testing;
- Unit 1 and 2 reactor coolant system leakage;
- Unit 1 steam generator stop valve in-service test;
- Unit 1 SG safety valve lift setpoint in-service test;
- Unit 2 containment isolation valve stroke test; and
- Unit 2 west residual heat removal system test.

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

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

b. Findings

No findings were identified.

2. **RADIATION SAFETY**

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

This inspection constituted one sample as defined in IP 71124.03-05.

.1 Inspection Planning (02.01)

b. Inspection Scope

The inspectors reviewed the plant Final Safety Analysis Report to identify areas of the plant designed as potential airborne radiation areas and any associated ventilation systems or airborne monitoring instrumentation. Instrumentation review included continuous air monitors (continuous air monitors and particulate-iodine-noble-gas-type instruments) used to identify changing airborne radiological conditions such that actions to prevent an overexposure may be taken. The review included an overview of the Respiratory Protection Program and a description of the types of devices used. The inspectors reviewed Final Safety Analysis Report, TSs, and emergency planning documents to identify location and quantity of respiratory protection devices stored for emergency use.

Inspectors reviewed the licensee's procedures for maintenance, inspection, and use of respiratory protection equipment including self-contained breathing apparatus, as well as procedures for air quality maintenance.

The inspectors reviewed reported performance indicators to identify any related to unintended dose resulting from intakes of radioactive material.

c. Findings

No findings were identified.

.2 Engineering Controls (02.02)

b. Inspection Scope

The inspectors reviewed the licensee's use of permanent and temporary ventilation to determine whether the licensee uses ventilation systems as part of its engineering controls (in lieu of respiratory protection devices) to control airborne radioactivity. The inspectors reviewed procedural guidance for use of installed plant systems, such as containment purge, spent fuel pool ventilation, and auxiliary building ventilation, and assessed whether the systems are used, to the extent practicable, during high-risk activities (e.g., using containment purge during cavity floodup).

The inspectors selected installed ventilation systems used to mitigate the potential for airborne radioactivity, and evaluated whether the ventilation airflow capacity, flow path (including the alignment of the suction and discharges), and filter/charcoal unit efficiencies, as appropriate, were consistent with maintaining concentrations of airborne radioactivity in work areas below the concentrations of an airborne area to the extent practicable.

The inspectors selected temporary ventilation system setups (high-efficiency particulate air/charcoal negative pressure units, down draft tables, tents, metal "Kelly buildings," and other enclosures) used to support work in contaminated areas. The inspectors assessed whether the use of these systems is consistent with licensee procedural guidance and as-low-as-is-reasonably-achievable concept.

The inspectors reviewed airborne monitoring protocols by selecting installed systems used to monitor and warn of changing airborne concentrations in the plant and evaluated whether the alarms and setpoints were sufficient to prompt licensee/worker action to ensure that doses are maintained within the limits of 10 CFR Part 20 and the as-low-as-is-reasonably-achievable concept.

The inspectors assessed whether the licensee had established trigger points (e.g., the Electric Power Research Institute's "Alpha Monitoring Guidelines for Operating Nuclear Power Stations") for evaluating levels of airborne beta-emitting (e.g., plutonium-241) and alpha-emitting radionuclides.

c. Findings

No findings were identified.

.3 Use of Respiratory Protection Devices (02.03)

b. Inspection Scope

For those situations where it is impractical to employ engineering controls to minimize airborne radioactivity, the inspectors assessed whether the licensee provided respiratory protective devices such that occupational doses are as-low-as-is-reasonably-achievable. The inspectors selected work activities where respiratory protection devices were used to limit the intake of radioactive materials, and assessed whether the licensee performed an evaluation concluding that further engineering controls were not practical and that the use of respirators is as-low-as-is-reasonably-achievable. The inspectors also evaluated whether the licensee had established means (such as routine bioassay) to determine if

the level of protection (protection factor) provided by the respiratory protection devices during use was at least as good as that assumed in the licensee's work controls and dose assessment.

The inspectors assessed whether respiratory protection devices used to limit the intake of radioactive materials were certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration or have been approved by the NRC per 10 CFR 20.1703(b). The inspectors selected work activities where respiratory protection devices were used. The inspectors evaluated whether the devices were used consistent with their National Institute for Occupational Safety and Health/Mine Safety and Health Administration certification or any conditions of their NRC approval.

The inspectors reviewed records of air testing for supplied-air devices and self-contained breathing apparatus bottles to assess whether the air used in these devices meets or exceeds Grade D quality. The inspectors reviewed plant breathing air supply systems to determine whether they meet the minimum pressure and airflow requirements for the devices in use.

The inspectors selected several individuals qualified to use respiratory protection devices, and assessed whether they have been deemed fit to use the devices by a physician.

The inspectors selected several individuals assigned to wear a respiratory protection device and observed them donning, doffing, and functionally checking the device as appropriate. Through interviews with these individuals, the inspectors evaluated whether they knew how to safely use the device and how to properly respond to any device malfunction or unusual occurrence (loss of power, loss of air, etc.).

The inspectors chose multiple respiratory protection devices staged and ready for use in the plant or stocked for issuance for use. The inspectors assessed the physical condition of the device components (mask or hood, harnesses, air lines, regulators, air bottles, etc.) and reviewed records of routine inspection for each. The inspectors selected several of the devices and reviewed records of maintenance on the vital components (e.g., pressure regulators, inhalation/exhalation valves, hose couplings). The inspectors reviewed the respirator vital components maintenance program to ensure onsite personnel assigned to repair the vital components have received the appropriate manufacturer-approved training.

c. Findings

No findings were identified.

.4 Self-Contained Breathing Apparatus for Emergency Use (02.04)

b. Inspection Scope

Based on the Final Safety Analysis Report, TSs, and emergency operating procedure requirements, the inspectors reviewed the status and surveillance records of self-contained breathing apparatuses staged in-plant for use during emergencies. The inspectors reviewed the licensee's capability for refilling and transporting self-contained breathing apparatus air bottles to and from the control room and operations support center during emergency conditions.

The inspectors selected several individuals on control room shift crews and from designated departments currently assigned emergency duties (e.g., onsite search and rescue duties) to assess whether control room operators and other emergency response and radiation protection personnel (assigned in-plant search and rescue duties or as required by emergency operating procedures or the emergency plan) were trained and qualified in the use of self-contained breathing apparatuses (including personal bottle changeout). The inspectors evaluated whether personnel assigned to refill bottles were trained and qualified for that task.

The inspectors determined whether appropriate mask sizes and types are available for use (i.e., in-field mask size and type match what was used in fit-testing). The inspectors determined whether on-shift operators had any facial hair that would interfere with the sealing of the mask to the face and whether vision correction (e.g., glasses inserts or corrected lenses) was available as appropriate.

The inspectors reviewed the past 2 years of maintenance records for select self-contained breathing apparatus units used to support operator activities during accident conditions and designated as "ready for service" to assess whether any maintenance or repairs on any self-contained breathing apparatus unit's vital components were performed by an individual, or individuals, certified by the manufacturer of the device to perform the work. The vital components typically are the pressure-demand air regulator and the low-pressure alarm. The inspectors reviewed the onsite maintenance procedures governing vital component work to determine any inconsistencies with the self-contained breathing apparatus manufacturer's recommended practices. For those self-contained breathing apparatuses designated as "ready for service," the inspectors determined whether the required, periodic air cylinder hydrostatic testing was documented and up to date, and the retest air cylinder markings required by the U.S. Department of Transportation were in place.

c. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.05)

b. Inspection Scope

The inspectors evaluated 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 in the licensee CAP. The inspectors assessed whether the corrective actions were appropriate for a selected sample of problems involving airborne radioactivity and were appropriately documented by the licensee.

c. Findings

No findings were identified.

2RS4 Occupational Dose Assessment (71124.04)

This inspection constituted sample as defined in IP 71124.04-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the results of Radiation Protection Program audits related to internal and external dosimetry, (e.g., licensee's quality assurance audits, self-assessments, or other independent audits) to gain insights into overall licensee performance in the area of dose assessment and focus the inspection activities consistent with the principle of "smart sampling."

The inspectors reviewed the most recent National Voluntary Laboratory Accreditation Program accreditation report on the vendor's most recent results to determine the status of the contractor's accreditation.

A review was conducted of the licensee procedures associated with dosimetry operations, including issuance/use of external dosimetry (routine, multibadging, extremity, neutron, etc.), assessment of internal dose (operation of whole body counter, assignment of dose based on derived air concentration-hours, urinalysis, etc.), and evaluation of and dose assessment for radiological incidents (distributed contamination, hot particles, loss of dosimetry, etc.).

The inspectors evaluated whether the licensee had established procedural requirements for determining when external and internal dosimetry is required.

b. Findings

No findings were identified.

.2 External Dosimetry (02.02)

a. Inspection Scope

The inspectors evaluated whether the licensee's dosimetry vendor is National Voluntary Laboratory Accreditation Program accredited and if the approved irradiation test categories for each type of personnel dosimeter used are consistent with the types and energies of the radiation present and the way the dosimeter is being used, (e.g., to measure deep dose equivalent, shallow dose equivalent, or lens dose equivalent).

The inspectors evaluated the onsite storage of dosimeters before their issuance, during use, and before processing/reading. The inspectors also reviewed the guidance provided to rad-workers with respect to care and storage of dosimeters.

The inspectors assessed the use of active dosimeters (electronic personal dosimeters) to determine if the licensee uses a "correction factor" to address the response of the electronic personal dosimeter as compared to the passive dosimeter for situations when the electronic personal dosimeter must be used to assign dose. The inspectors also assessed whether the correction factor is based on sound technical principles.

The inspectors reviewed dosimetry occurrence reports or CAP documents for adverse trends related to electronic personal dosimeters, such as interference from electromagnetic frequency, dropping or bumping, failure to hear alarms, etc. The

inspectors assessed whether the licensee had identified any trends and implemented appropriate corrective actions.

b. Findings

No findings were identified.

.3 Internal Dosimetry (02.03)

Routine Bioassay (In Vivo)

a. Inspection Scope

The inspectors reviewed procedures used to assess the dose from internally deposited nuclides using whole body counting equipment. The inspectors evaluated whether the procedures addressed methods for differentiating between internal and external contamination, the release of contaminated individuals, the route of intake and the assignment of dose.

The inspectors reviewed the whole body count process to determine if the frequency of measurements was consistent with the biological half-life of the nuclides available for intake.

The inspectors reviewed the licensee's evaluation for use of its portal radiation monitors as a passive monitoring system to determine if instrument minimum detectable activities were adequate to determine the potential for internally deposited radionuclides sufficient to prompt additional investigation.

The inspectors selected several whole body counts and evaluated whether the counting system used had sufficient counting time/low background to ensure appropriate sensitivity for the potential radionuclides of interest. The inspectors reviewed the radionuclide library used for the count system to determine its appropriateness. The inspectors evaluated whether any anomalous count peaks/nuclides indicated in each output spectra received appropriate disposition. The inspector's reviewed the licensee's 10 CFR Part 61 data analyses to determine whether the nuclide libraries included appropriate gamma-emitting nuclides. The inspectors evaluated how the licensee accounts for hard-to-detect nuclides in the dose assessment.

b. Findings

No findings were identified.

Special Bioassay (In Vitro)

a. Inspection Scope

There were no internal dose assessments obtained using in vitro monitoring for the inspectors to review. The inspectors reviewed and assessed the adequacy of the licensee's program for in vitro monitoring (i.e., urinalysis and fecal analysis) of radionuclides (tritium, fission products, and activation products), including collection and storage of samples.

The inspectors reviewed the vendor Laboratory Quality Assurance Program and assessed whether the laboratory participated in an industry recognized Cross-Check Program including whether out-of-tolerance results were resolved appropriately.

b. Findings

No findings were identified.

Internal Dose Assessment – Airborne Monitoring

a. Inspection Scope

The licensee had not performed dose assessments using airborne/derived air concentration monitoring since the last inspection.

b. Findings

No findings were identified.

Internal Dose Assessment – Whole Body Count Analyses

a. Inspection Scope

The inspectors reviewed several dose assessments performed by the licensee using the results of whole body count analyses. The inspectors determined whether affected personnel were properly monitored with calibrated equipment and that internal exposures were assessed consistent with the licensee's procedures.

b. Findings

No findings were identified.

.4 Special Dosimetric Situations (02.04)

Declared Pregnant Workers

a. Inspection Scope

The inspectors assessed whether the licensee informs workers, as appropriate, of the risks of radiation exposure to the embryo/fetus, the regulatory aspects of declaring a pregnancy, and the specific process to be used for (voluntarily) declaring a pregnancy.

The inspectors selected individuals who had declared pregnancy during the current assessment period and evaluated whether the licensee's radiological monitoring program (internal and external) for declared pregnant workers is technically adequate to assess the dose to the embryo/fetus. The inspectors reviewed exposure results and monitoring controls employed by the licensee and with respect to the requirements of 10 CFR Part 20.

b. Findings

No findings were identified.

Dosimeter Placement and Assessment of Effective Dose Equivalent for External Exposures

a. Inspection Scope

The inspectors reviewed the licensee's methodology for monitoring external dose in non-uniform radiation fields or where large dose gradients exist. The inspectors evaluated the licensee's criteria for determining when alternate monitoring, such as use of multi-badging, was to be implemented.

The inspectors reviewed dose assessments performed using multibadging to evaluate whether the assessment was performed consistently with licensee procedures and dosimetric standards.

b. Findings

No findings were identified.

Shallow Dose Equivalent

a. Inspection Scope

The inspectors reviewed shallow dose equivalent dose assessments for adequacy. The inspectors evaluated the licensee's method (e.g., VARSKIN or similar code) for calculating shallow dose equivalent from distributed skin contamination or discrete radioactive particles.

b. Findings

No findings were identified.

Neutron Dose Assessment

a. Inspection Scope

The inspectors evaluated the licensee's neutron dosimetry program, including dosimeter types and/or survey instrumentation.

The inspectors reviewed neutron exposure situations (e.g., independent spent fuel storage installation operations or at-power containment entries) and assessed whether (a) dosimetry and/or instrumentation was appropriate for the expected neutron spectra, (b) there was sufficient sensitivity for low dose and/or dose rate measurement, and (c) neutron dosimetry was properly calibrated. The inspectors also assessed whether interference by gamma radiation had been accounted for in the calibration and whether time and motion evaluations were representative of actual neutron exposure events, as applicable.

b. Findings

No findings were identified.

Assigning Dose of Record

a. Inspection Scope

For the special dosimetric situations reviewed in this section, the inspectors assessed how the licensee assigns dose of record for total effective dose equivalent, shallow dose equivalent, and lens dose equivalent. This included an assessment of external and internal monitoring results, supplementary information on individual exposures, (e.g., radiation incident investigation reports and skin contamination reports), and radiation surveys and/or air monitoring results when dosimetry was based on these techniques.

b. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.05)

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 in the licensee CAP. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee involving occupational dose assessment.

b. Findings

No findings were identified.

3. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

4OA1 Performance Indicator Verification (71151)

.1 Unplanned Scrams per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams per 7000 Critical Hours performance indicator (PI) (IE01) at D. C. Cook Unit 1 and Unit 2 for the period from the first quarter 2012 thru the fourth quarter 2012. 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 6, dated October 2009, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports and NRC Integrated Inspection Reports for the period of January 1, 2012, to December 31, 2012, to validate the accuracy of the submittals. 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 two unplanned scrams per 7000 critical hour's samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Unplanned Scrams with Complications

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams with Complications PI (IE04) at D. C. Cook Unit 1 and Unit 2 for the period from the first quarter 2012 thru the fourth quarter 2012. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports and NRC Integrated Inspection Reports for the period of January 1, 2012, to December 31, 2012, to validate the accuracy of the submittals. 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 two unplanned scrams with complications samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Unplanned Power Changes per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Power Changes per 7000 Critical Hours PI (IE03) at D. C. Cook Unit 1 and Unit 2 for the period from the first quarter 2012 thru the fourth quarter 2012. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, maintenance rule records, event reports, and NRC Integrated Inspection Reports for the period of January 1, 2012, to December 31, 2012, to validate the accuracy of the submittals. 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 two unplanned power changes per 7000 critical hours samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.4 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures PI (MS05) at D. C. Cook Unit 1 and Unit 2 for the period from the first quarter 2012 through the fourth quarter 2012. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73," definitions and guidance, were used. The inspectors reviewed the licensee's operator narrative logs, operability assessments, maintenance rule records, maintenance work orders, issue reports, event reports, and NRC Integrated Inspection Reports for the period of January 1, 2012, to December 31, 2012, to validate the accuracy of the submittals. 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 two safety system functional failures samples 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 Selected Issue Follow-Up: Steam Generator Level Transient

b. Inspection Scope

The inspectors reviewed the apparent cause evaluation associated with a secondary plant transient that occurred on November 30, 2012. While raising power after repairing a leak on a steam generator (SG) level instrument, a steam control valve failed causing a rapid 5 percent power increase. The operations crew took appropriate immediate actions and stabilized the plant at 28 percent power. The control room operators noted that the feedwater regulation valve (FRV) for the #4 SG was oscillating and became concerned with FRV operation. In order to assess the FRV response, the licensee placed the FRV in manual. When this action did not produce the expected result, the licensee placed the main feed pump (MFP) speed controller in manual. Feedwater regulating valve response remained a concern. After about 20 minutes, the transient caused the secondary plant parameters to change, resulting in a decrease in SG level. While attempting to correct the low level, control room operators added too much water, too quickly, to the SG and level rose to within 1 percent of the high SG level turbine trip setpoint.

The inspectors assessed the apparent cause evaluation through comparison to the licensee's CAP. The inspectors assessed the operations crew by comparing the documented performance with applicable licensee procedures including OHI-4000, COOP and 1-OHP-4021-001-006, Power Escalation.

The inspectors also reviewed the controller failure that initiated the transient and noted that the component failed due to a manufacturing error. The controller had been

installed for several years and the nature of the defect precluded detection prior to the failure. The inspectors concluded that the controller failure was not reasonably within the licensee's ability to foresee and correct.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

c. Findings

Introduction: One self-revealing finding of very low safety significance (Green) with an associated NCV of TS 5.4.1 occurred because of a failure to implement plant procedures including COOP. While responding to oscillating levels in SG #4 following a signal position controller failure and resultant power transient, the control room operators failed to follow COOP procedure requirements for establishing a control band for controllers placed in manual. This failure contributed to SG level becoming unstable and rising to within 1 percent of the level for an automatic turbine trip and resultant reactor trip.

Description: On November 30, 2012, with Unit 2 power escalation in progress, the main turbine control valve "D" signal position controller failed causing a 5.3 percent reactor power increase and consequential steam generator oscillation in all four steam generators. After stabilizing the main turbine control valve and steam generator levels, the operations crew evaluated plant conditions and identified oscillations of the SG #4 FRV control signal. Although SG level remained at program level of 44 percent, the on-shift crew had concerns due to the FRV position oscillations. In an attempt to stabilize the signal, the control room operators took the west MFP to manual speed control. Per COOP, when controllers are taken to manual, a control band shall be established; however, the control room operators failed to establish a control band for pump differential pressure. When taking the controller to manual did not have the intended effect, control room operators placed SG #4 FRV in manual to dampen the oscillation. After placing the FRV in manual control, reactor operator (RO) #1 noted sluggish response from the controller. The shift crew began investigating the FRV response, including local observation by an auxiliary operator. During this time, reactor coolant system temperature rose, as expected, which caused SG pressure to rise and resulted in differential pressure across the MFP dropping from 135 psid to 35 psid. The licensee did not recognize this trend for about 15 minutes. Once recognized, RO#2 was assigned to relieve RO#1 of FRV control responsibilities. Reactor Operator #1 began increasing MFP speed to restore feed pump differential. Shortly thereafter, SG #4 received a low level deviation alarm. Reactor Operator #1 raised the rate of MFP speed increase, which initiated a rapid increase in #4 SG level. Level in #4 SG increased to the high level deviation alarm and reached 66 percent level before RO#2 could stop the level increase. At 67 percent level on two of three level indications on any steam generator, the turbine will trip and then the reactor will trip, as designed. The licensee subsequently placed the FRV in automatic and stabilized the plant.

During the approximately 20 minutes between placing the FRV in manual and reaching the highest level in the SG, the shift manager advised the unit supervisor (US) several times to restore the FRV to automatic. The US left the FRV in manual during this period because of concerns with the FRV performance. The licensee's subsequent investigation revealed that the US and shift manager did not have a common understanding of each other's intentions. Therefore, the US delayed ordering the FRV to be restored to automatic.

As part of the licensee's analysis, this scenario was replicated on the simulator. The licensee demonstrated in the simulator that had the operators restored the FRV to automatic or limited the speed increase on the MFP the SG level control issues would not have occurred.

The inspectors concluded that had control bands been established, the level transient would likely not occur.

Analysis: The inspectors determined that failure to implement the COOP procedure during at power operation was a licensee performance deficiency that warranted an evaluation in accordance with the SDP. In this event, the control room operator's failure to establish control bands for MFP differential pressure was an issue of concern because it resulted in a SG level transient that came within 1 percent of an automatic turbine trip and a resultant reactor trip. The inspectors reviewed the issue of concern in accordance with Inspection Manual Chapter (IMC) 0612 Appendix B, Issue Screening, issued September 7, 2012. Since the issue of concern does not include any willful aspects, the inspectors evaluated the issue using only the reactor oversight process. The inspectors concluded that the issue of concern was a more than minor performance deficiency because it was associated with the Initiating Event cornerstone attribute of human performance and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability. Specifically, the human performance errors in executing plant procedures resulted in a SG level transient that came within 1 percent of a plant trip. In accordance with IMC 0609, Appendix A, SDP for Findings at Power, Exhibit 1, Initiating Events Screening Questions, issued June 19, 2012, the finding screened as Green because no reactor trip occurred.

The finding includes the cross-cutting aspect H.4(c) in the work practices component of the human performance area because supervisory personnel in the control room did not provide effective oversight to support nuclear safety. Specifically, supervisory command and control was not effective while responding to a SG level transient that approached the turbine trip set point.

Enforcement: Technical Specification 5.4.1 requires, in part, that the licensee implement procedures recommended by Regulatory Guide 1.33. Regulatory Guide 1.33 recommends procedures for authorities and responsibilities for safe operation as well as procedures for operation of the feedwater system. The licensee satisfies these requirements, in part, through OHI-4000, Conduct of Operations. OHI-4000 Attachment 8, Step 3.7, requires that when a controller is placed in manual that the US shall provide a control band and that if a control band is not provided, the RO shall request a control band. Contrary to this requirement, on November 30, 2012, when the main feed pump controller was placed in manual, the US failed to provide a control band and RO#1 failed to request a control band. Consequently, a SG level transient occurred. Following the transient, the control room operators stabilized the plant and placed the controller in automatic. For corrective actions, the on-shift control room operators were debriefed and lessons learned were provided to all operations personnel.

Because the finding was of very low safety significance and the licensee entered the finding into their CAP as AR 2012-14938, this violation is being treated as an NCV, consistent with Section 2.3.2 of the enforcement policy (NCV 05000315/2013002-01, Failure to Establish Feed Pump Control Bands).

.4 Selected Issue Follow-Up: Work Hour Limitation Waivers Not Filled Out Apparent Cause Evaluation

b. Inspection Scope

The inspectors selected the following apparent cause evaluation for an in-depth review:

- AR 2013-1149, "Work Hour Limitation Waivers Not Filled Out"

The inspectors discussed the evaluation and associated corrective actions with licensee personnel and verified the following attributes while reviewing the apparent cause evaluation:

- complete and accurate problem identification in a timely manner commensurate with its safety significance and ease of discovery;
- extent of condition, generic implications, common cause and previous occurrences were considered;
- problem resolution was classified and prioritized commensurate with safety significance;
- apparent and contributing causes were identified; and
- appropriately focused corrective actions were identified.

The inspectors compared the information documented in the action request and its supporting documentation to the requirements of 10 CFR Part 26. The inspectors determined that a minor violation of 10 CFR Part 26.207 (a), Waivers and exceptions, occurred. Specifically, the licensee failed to grant waivers based upon fatigue assessments before workers exceeded working hours limitations specified in 10 CFR Part 26.205. 10 CFR part 26.205 states in part, "Licensees shall ensure that any individual's work hours do not exceed 26 hours in any 48 period." In this instance, 5 maintenance workers exceeded the limit by 2 hours and one worker exceeded the limit by 30 minutes.

10 CFR Part 26.207 permits the use of waiver requests to allow working hours to be exceeded to address circumstances that could not have been reasonably controlled. For waivers, 10 CFR part 26.207 (a)(4) requires licensees to document the basis for individual waivers. Contrary to this requirement, the licensee failed to document the waivers and fatigue assessments prior to allowing the covered workers to exceed their working hour limitations. The inspectors noted that the licensee validated that the workers had been assessed for fatigue but lack of documentation precluded an assessment of the adequacy of the assessment. Licensee procedure PMP-2060-WHL-001, "Working Hour Limitations for Covered Individuals," Section 3.10.2a states, "the approval for a waiver from working hour limitations shall be obtained before the individual exceeds any working hour limits." The inspectors determined that failure to document the waivers and fatigue assessments prior to allowing the covered workers to exceed their working hour limitations was a performance deficiency.

The inspectors compared this performance deficiency to the examples listed in IMC 0612 Appendix E, issue date August 11, 2009, and determined example 9b, "failure to assess individual's competency to perform duties prior to granting work hour waivers" was similar to this issue. Specifically, the failure to document the

fatigue assessment prior to exceeding working hour limitations was an isolated incident that did not become associated with a cornerstone attribute and did not adversely affect the cornerstone objective.

Consequently, this failure to comply with 10 CFR Part 26.207 constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

c. Findings

No findings were identified.

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

.1 (Closed) Licensee Event Report 05000316/2012-002-00

a. Inspection Scope

The inspectors reviewed the events and circumstances surrounding the April 30, 2012, Unit 2 automatic reactor trip that occurred in response to a main turbine trip. The inspectors reviewed control room logs, the post-trip review report and the root cause evaluation that was documented in AR 2012-5744, "Unit 2 Overall Differential Relay Actuation," to verify that the event was accurately reported.

On April 30, 2012, while at 92 percent power and ascending to 100 percent power, the Unit 2 generator volts-per-hertz differential relay actuated causing a turbine trip and subsequent reactor trip. An investigation by licensee personnel concluded that the relay actuation did not result from an actual electrical fault but instead resulted from a failure to install the relay per design.

In addition to reviewing the automatic reactor trip response, the inspectors reviewed the temperature transient that occurred during cool down that resulted from steam dump valve leakage to the main condenser, which required closing the main steam isolation valves and cooling down on the steam generator power operated relief valves. The inspectors verified that the reactor trip was uncomplicated, all major components functioned as designed, and that operator actions were appropriate. This issue resulted in a finding of very low safety significance (Green), which was documented in inspection report 05000316/2012003. No other safety issues were identified. This Licensee Event Report (LER) is closed.

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

b. Findings

No findings were identified.

4OA5 Other Activities

.1 (Closed) Unresolved Item 05000315/2012008-09; 05000316/2012008-09): Computer Program Used for Operability Evaluation Was Not Benchmarked

a. Inspection Scope

The NRC documented an unresolved item (URI) in Inspection Report 05000315/2012008; 05000316/2012008 (ML12229A576) involving the use of computer software Flow-3D for the past-operability evaluation of a void found in the containment recirculation sump suction piping. Specifically, the inspectors questioned if the use of this software was appropriate given that it was not benchmarked for this intended application. The issue was left unresolved pending the licensee's revised past-operability evaluation and determination of subsequent NRC courses of action. During this inspection period, the inspectors received information to resolve this issue.

The documents that were reviewed are included in the Attachment to this report. This review did not represent an inspection sample. This Unresolved Item (URI) is closed.

b. Findings

Operability Evaluation Relied on Alternate Methods Not Demonstrated to be Technically Appropriate

Introduction: The inspectors identified a finding of very low safety significance for the failure to follow operability evaluation procedural guidance. Specifically, an evaluation for past-operability of the residual heat removal and containment spray systems was conducted due to the discovery of a void in the containment recirculation sump suction piping. However, the evaluation relied on computer software that has not been benchmarked to demonstrate its applicability to the type of analyses being conducted.

Description: The licensee discovered a void in the containment recirculation sump suction piping in January 2009 affecting the 'B' train of residual heat removal and containment spray systems. The licensee captured this condition in the CAP as AR 00844125, removed the void and performed a past-operability evaluation using computer software Flow-3D Version 9.0. The inspectors noted procedure PMP-7030-OPR-001, "Operability Determination," referred to NRC Inspection Manual Part 9900 to assist in determining operability. NRC Regulatory Issue Summary 2005-20, Revision 1, "Revision to NRC Inspection Manual Part 9900 Technical Guidance, 'Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety,'" informed licensees that the NRC had revised NRC Inspection Manual Part 9900. Guidance provided in Appendix C, Section C.4 of the inspection manual stated, "the use of any analytical method must be technically appropriate to characterize the SSCs involved, the nature of the degraded or nonconforming condition, and specific facility design." It further stated general considerations for establishing this adequacy include, in part, acceptable alternative methods such as the use of "best estimate" codes, methods and techniques. The inspection guidance also stated "in these cases, the evaluation should ensure that the SSC's performance is not over-predicted by performing a benchmark comparison of the non-current licensing basis (CLB) analysis methods to the applicable CLB analysis methods."

When the inspectors questioned if the computer code used in the operability determination was verified against test data, the licensee determined no benchmark flow modeling was conducted for two-phase flow in piping. The inspectors, in consultation with Nuclear Reactor Regulation, determined the operability evaluation relied on a computer code that had not been demonstrated to be technically appropriate for the type of analyses being conducted; therefore, the bases for past operability were uncertain.

The licensee captured the inspectors' concerns in their CAP as AR 2012-8187. In addition, the licensee re-performed the past-operability evaluation using an analytical method which did not rely on computer software and reasonably concluded the affected systems had been operable.

The inspectors concluded that the licensee did not appropriately follow the guidance specified in the operability procedure. Following procedure guidance is a site standard.

Analysis: The inspectors determined that the failure to perform an operability evaluation using a methodology that was technically appropriate was a performance deficiency. Specifically, not using a technically appropriate methodology was contrary to the guidance in NRC Inspection Manual Part 9900, which was referenced in plant procedure PMP-7030-OPR-001. The performance deficiency was more than minor because it was associated with the Mitigating System Cornerstone attribute of equipment performance and adversely affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. In addition, the performance deficiency was more than minor because it was associated with the Barrier Integrity Cornerstone attribute of SSC and barrier performance and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the inspectors had reasonable doubt on the past operability of the 'B' residual heat removal and containment spray systems because the licensee's evaluation relied on inputs and a methodology that were not technically appropriate for the intended applications. Based on the size of the void and the complexities of void transport behavior at the affected location, it was not certain that a new or revised evaluation would result in the same operable conclusion. A technically inappropriate operability evaluation could reasonably result in an unrecognized inoperable condition, which could lead to a failure to evaluate if the condition warranted notification to the NRC.

The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," issue date June 19, 2012. Because the finding impacted the Mitigating Systems cornerstone, the inspectors screened the finding through IMC 0609 Appendix A, "The Significance Determination Process for Findings At-Power," issue date June 19, 2012, using Exhibit 2, "Mitigating Systems Screening Questions." The finding screened as of very low safety significance (Green) because it was a design deficiency confirmed not to result in loss of operability. Specifically, the licensee performed an alternate operability determination, which reasonably concluded the residual heat removal system was operable. Because the finding also impacted the Barrier Integrity cornerstone, the inspectors also screened the finding through IMC 0609 Appendix A, Exhibit 3, "Barrier Integrity Screening Questions." The finding screened as Green because it did not represent an actual open pathway in the physical integrity of reactor containment or involve an actual reduction in function of hydrogen igniters in the reactor containment.

The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not confirmed to reflect current performance due to the age of the performance deficiency.

Enforcement: This finding did not involve enforcement action because no violation of regulatory requirements was identified. The licensee entered this finding into its corrective action program as AR 2012-8187 and re-performed the operability evaluation (FIN 05000315/2013002-02; 05000316/2013002-02, Operability Evaluation Relied on Alternate Methods Not Demonstrated to be Technically Appropriate).

4OA6 Management Meetings

.1 Exit Meeting Summary

On April 11, 2013, the inspectors presented the inspection results to Mr. Joel Gebbie 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 In-Plant Airborne Radioactivity Control and Mitigation, and Occupational Dose Assessment were discussed with Mr. S. Lies and other licensee staff members on March 8, 2013. The inspectors confirmed that none of the potential report input discussed was considered proprietary. Proprietary material received during the inspection was returned to the licensee.
- On February 28, 2013, the inspectors presented the Licensed Operator Requalification Program inspection results to Mr. B. Evans and other members of the licensee staff. The licensee acknowledged the issues presented. In addition, on March 14, 2013, the inspectors conducted a telephone exit with Mr. B. Evans.
- The resolution of URI 05000315/2012008-09; 05000316/2012008-09 with Mr. M. Belleville on March 28, 2013.

4OA7 Licensee Identified Violations

The following violation of very low significance (Green) or Severity Level IV was identified by the licensee and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.

The licensee identified a violation of 10 CFR 50.9, completeness and accuracy of information, for submitting a revised Emergency Action Level (EAL) scheme that was inaccurate in a material respect. While implementing the scheme, the licensee identified that CA7 and CS7 require indication of vessel level that is below the lowest measurement capability of installed instrumentation. Due to system configuration, NLI-1000, the reactor vessel level full range instrument, cannot measure below a level of 612.8 feet. This creates a condition where the instrument would indicate that vessel level remained at 612.8 even though inventory might be well below 612.8. Without that information, entry into CA7 or CS7 may not occur.

After identifying the error, the licensee determined that a change to the EAL to conform to the as-configured plant could not be made without prior NRC approval. The licensee also discussed the condition with the NRC staff and provided a letter on October 26, 2012, regarding the error. The inspectors reviewed the information provided by the licensee and concluded that because the NRC approved the EAL and correction would require NRC approval, the erroneous information was material to the NRC and was a violation of 10 CFR 50.9. The inspectors reviewed the Enforcement Manual and Enforcement Policy and concluded that since the inaccurate information was identified after it was relied on to be accurate to approve the EAL scheme, enforcement action was warranted. Because the violation did not conform to any examples of Severity Level 1 through III, and there were no willful aspects, the inspectors determined that the violation was of Severity Level IV. Because the licensee identified the error, the inspectors concluded that the violation could be treated as a licensee identified NCV. The inspectors reviewed the issue under the Reactor Oversight Process and concluded that since the licensee had not implemented the inaccurate EALs and the EAL scheme in effect remained viable, there was no Reactor Oversight Process aspect to the issue.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

L. Weber, Senior Vice President, Chief Nuclear Officer
M. Belleville, Engineering Manager
D. Bowman, Operations Training
D. Cantrell, Operations Director
B. Evans, Operations Training Manager
J. Gebbie, Site Vice President
K. Henderson, Regulatory Affairs
R. Hite, Radiation Protection Manager
S. Lies, Engineering Vice President
S Partin, Plant Manager
M. Scarpello, Nuclear Regulatory Assurance Manager
R. Sieber, Training Manager
J. Stone, Security
A. Thompson, Emergency Planning
C. Wohlgamuth, Regulatory Affairs

Nuclear Regulatory Commission

J. Maynen, Security, Inspector
A. M. Stone, Chief, Engineering Branch 2

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000315/2013-01	NCV	Failure to Establish Feed Pump Control Bands (4OA2)
05000315/2013-02; 05000316/2013-02	FIN	Operability Evaluation Relied on Alternate Methods Not Demonstrated to be Technically Appropriate (4OA5.1.b)

Closed

05000315/2013-01	NCV	Failure to Establish Feed Pump Control Bands (4OA2)
05000316/2012002	LER	Unit 2 Reactor Trip from Generator Trip Due to Incorrect Relay Setting (4OA3)
05000315/2012008-09; 05000316/2012008-09	URI	Computer Program Used for Operability Evaluation Was Not Benchmarked (4OA5.1.a)
05000315/2013-02; 05000316/2013-02	FIN	Operability Evaluation Relied on Alternate Methods Not Demonstrated to be Technically Appropriate (4OA5.1.b)

Discussed

NONE

LIST OF DOCUMENTS REVIEWED

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

1R01 Adverse Weather Protection

- 12-OHL-4030-SOM-009, Unit 1/2 Tours- ISFSI, Revision 5
- AR 2013-1247, Work Order Did Not Plan for Operator Contingency Actions
- AR 2013-1546, Dry Cask Inlet Vents Partially Blocked By Snow
- AR 2013-1684, Dry-Cask-ISFSI-Hi-Storm Lower Vent Blockage
- AR 2013-1717, Ice Buildup on Junction Box For ISFSI Casks
- AR 2013-1739, Loud Banging Sound Coming from ISFSI Dry Casks
- PMP-4030-001-002, Administrative Requirements for Ventilation Boundary and High Energy Line Break Barriers, Revision 18

1R04 Equipment Alignment

- 12-OHP-4021-019-001, Operation of the essential Service Water System, Rev. 50
- 1-DCP-286, AFW Suction from ESW installation, Rev 0
- 1-DCP-286, AFW Suction from ESW, Rev 0A
- 1-OHP-4021-028-014, Operation of the Control Room Air Conditioning and Pressurization/Cleanup Filter Systems, Revision 32
- 1-OHP-4021-032-008AB, Operating DG1AB Subsystems, Revision 16
- 1-OHP-4021-056-001, Filling and Venting Auxiliary Feedwater System, Revision 30
- 1-OHP-4021-056-002, Auxiliary Feed Pump Operation System, Revision 30
- 1-OHP-4025 LS-3, Steam Generator 2/3 Level Control, Revision 3
- 2-OHP-4021-028-014, Operation of the Control Room Air Conditioning and Pressurization/Cleanup Filter Systems, Revision 34
- 2-OHP-4023 E-3, Steam Generator Tube Rupture, Revision 16
- AR 2010-5262, Oil dripping from Speed Increaser to Pump Coupling Guard
- AR 2010-5266, Oil Leaks from Thrust Bearing Housing and Fittings
- AR 2011-11880, Local Position Indicator Gear Train Does Not Match Actuator
- AR 2011-8322, Leak on Unit 2 AB EDG
- AR 2012-1512, Condensation Build up on Ceiling Above CRAC Duct Work
- AR 2012-7402, Fuel Oil Seep on 2AB EDG #3 Front Bank Fuel Oil Pump
- AR 2012-8392, 2-HV-ACRA-2 Needs to be Recharged
- AR 2012-9434, Oil Leaks Downstream of 2-PP-50W-ALOP
- AR 2013-1098, NRC Identified HELB Door Open
- AR 2013-1347, Fuel Injector Pump Spraying Fuel Oil on Diesel Surv.
- AR 2013-1891, Boric Acid Identified in Unit 2 Quad 1&4
- AR 2013-1910, Unit 2 Control Room Ventilation Duct Work Insulation Repair
- AR 2013-2247, Unit 1 Aux feed water piping need insulation
- AR 2013-2618, 2-CTS-139E has a body to bonnet BA leak
- AR 2013-3056, Auxiliary Feedwater Analysis Needed for ESW
- AR 2-HV-AES-1 Shaft Bearing is at 170F
- AR00000914, Back-up Suction Source for the AFW system is ESW system,
- AR-2011-10411, Air void detected in AH. Suction line to U2 TDAFW pump

- AR-2011-5272, 1-QT-506 COF exceeds calculation basis
- AR-2012-3749, U1 TDAFW turbine horizontal joint leakage
- AR-2012-4305, Evaluate AFW MRE function 12 for issue in AR 2011-12319
- AR2013-2741, Leaking Water valve
- DB-12-AFWS, Design Basis Document for the Auxiliary Feedwater System, Revision 5
- Flow Diagram Aux-Feedwater Unit 1, OP-15106A-60 Date 10-6-11
- Maintenance Rule Scoping, Auxiliary Feedwater System, April 2001
- MD-12-HV-006-N, Control Room Pressure Boundary Minimum Outside Air Requirement, Revision 2
- OP-12-5126-61, Auxiliary Steam System & Plant Heating Boiler-Water & Steam Units #1 & #2 Exceptions are Noted, Revision 61
- OP-1-5105A036, Flow Diagram Main Steam Unit No. 1 Sheet 2 of 3, October 14, 2011
- SOD-05600-001, Auxiliary Feed System, Revision 5
- System Health Report, Auxiliary Feedwater System Unit 1, 4th Quarter 2012
- WO-55237293, 1-AFW-54039, Functional Test and Rebuild/Replace

1R05 Fire Protection

- 113-055-A, Electrical Fire in U2 591 MCC PNL (2-21BLC) Fire Drill, March 8, 2013
- Fire Hazards Analysis, Revision 15
- Fire Pre Plan, Revision 13
- AR 2013-3914, Fire Brigade Drill Weaknesses
- AR 2013-3904, Inadequate condition evaluation

1R06 Flood Protection

- AR 2010-3494, Aux. Building Sump Level High Alarm Comes in Early
- AR 2010-9701, The Sump for 12-DLA-700 needs to be cleaned
- AR 2011-10585, High Level alarm on Aux Building Sump is Standing 12-DLA-700
- AR 2013-0702, Aux Sump Level Alarm Switch Set Point Needs to be Changed
- DCC-PV-12-MC17-N, Flood Protection Features Calculation, October 4, 2001
- SD-061206-001, Flooding Evaluation Report For D.C. Cook Nuclear Power Plant, Revision 2
- WO 55335246-01, 12-DLA-700, Clean/ Inspect and Functional Check, January 25, 2010
- WO 55390759-01, 12-DLA-700, Calibrate and PMT Level Switch, July 27, 2012

1R11 Licensed Operator Regualification Program

- Crew Simulator Evaluation Sheets for Shift A, Groups 1 and 3, February 27, 2013
- JPM RO-O-ADM14, Perform the Initial Offsite Notification, January 24, 2013
- JPM RO-O-E007A-U2, Transfer to Cold Leg Recirculation, January 24, 2013
- JPM RO-ON209-U2, Synchronize and Load 2AB DG, January 24, 2013
- JPM SR-O-E017, Perform the Duties of the Site Emergency Coordinator, January 24, 2013
- Licensed Operator Regualification, RQ-E-Ann-23, LOR Annual Operating Examination simulator Scenario #23, January 24, 2013
- Licensed Operator Regualification, RQ-E-ANN-45, LOR Annual Operating Examination Simulator, Scenario #45, January 24, 2013
- Scenario RQ-E-ANN-26, LOR Annual Operating Examination Scenario 26, January 24, 2013
- Scenario RQ-E-ANN-52, LOR Annual Operating Examination Scenario 52, January 24, 2013
- Various JPM Summary Sheets for Licensed Operators, February 27, 2013

1R12 Maintenance Effectiveness

- 12-THP-6010-RPI-802, Lower Containment Sping Filter Change and Grab Sampling, March 5, 2013
- 12-THP-6010-RPI-803, Operation of the Radiation Monitoring System (RMS), Revision 038
- AR 2011-10765, 1-NTR-55 Core Exit Thermocouple L-2 Failed
- AR 2011-10786, 1-NRI-31 Preamp has Failed
- AR 2011-11561, 1-NRI-36 as Found out of Tolerance
- AR 2011-11769, Critical Parameter Instrument Found out of Tolerance
- AR 2011-11785, 1-NRI-50 Failed 18-Month Calibration
- AR 2011-13511, Critical Parameter Found out of Spec
- AR 2012-11568, Failure of Power Range N-42
- AR 2012-14364, Critical Parameter Found out of Spec
- AR 2012-2270, Power Supply has Excessive Ripple
- AR 2012-2274, Critical Parameters Found out of Tolerance
- AR 2012-5100, Source Range Detector N-31 Indication is Failed Low
- AR 2012-8251, 2-NRI-35 Power Supply out of Tolerance
- AR 2013-1157, 1-NRI50-Lower Section Power Supply out of Tolerance
- AR 2013-2007, Check source mechanism on 1-VRS-1505 malfunctioned
- AR 2013-2513, 2-VRS-2200 Surveillance aborted due to conflicting procedure
- AR 2013-2650, 2-VRS-2500 was removed from service for work that could not be completed
- AR 2013-2757, Work control continues to no meet expectations
- AR 2013-3046, Relay found tripped during two minute rule
- AR 2013-3158, On the spot change required for procedure
- AR 2013-3283, 1-VRS-1505 Check Source Failed
- AR 2013-3420, Flux Differential Indicators Found out of Tolerance
- AR2012-7628, Core Exit Thermocouple 1-NTR-61 Reading Open Circuit
- Maintenance Rule Scoping Document, Nuclear Instrumentation, Revision 3
- Maintenance Rule Unavailability Performance Status, February 12, 2013
- Radiation Monitoring System Health Quarterly Reports 2011-2012
- Radiation Monitoring System Maintenance Rule Scoping Document, February 13, 2008
- SD-DCC-NEI01, Radiation Monitoring System, January 13, 1995
- System Health Report, Unit 1 Nuclear Instrumentation, 4th Quarter 2012
- Two-year Unavailability Report, Nuclear Instrumentation, February 2011 – 2013
- WO 55231252, 1-NRI-23-AMP Replace Power Supply and Preamplifiers
- WO 55356270, 1-NRI-23-SP-PS1-LV Replace Low Voltage Power Supply
- WO 55390842, 1-NRI-31 Preamp has Failed
- WO 55399399, Power Supply has Excessive Ripple
- WO-55258254-01, 2-XSO-632, Replace Control Solenoid, February 18, 2012
- WO-55258254-03, MTI, 2-XSO-632, Perform PMT/Leak Check, February 18, 2012
- WO-55334653-03, 2MRA-2702 Investigate Spiking on Channel, March 5, 2011
- WO-55341046-02, Investigate & Repair Relay 2-30-PHF & Photohelic 2-VFS-2526, December 24, 2011
- WO-55403876-02, MTI, 2-SRA-2905, Replace Connector on IB-2 to Microcomputer, October 27, 2012
- WO-55412706-01, MTRI, 2-ERS-2400, Investigate Channel Failure, February 2, 2013

1R13 Maintenance Risk Assessments and Emergent Work Control

- AR 2013-1347, Fuel Injector Pump Spraying Fuel Oil on Diesel Surv.
- Control room logs for week of 11 March

- Daily work list for week of 11 March
- PMP-2291-OLR-001, Online Risk Management, Revision 24 and 25
- Unit 1 and 2 Configuration Risk Management for week of 11 March
- Unit 1 and 2 Configuration Risk Management for week of 18 February

1R15 Operability Determinations and Functionality Assessments

- 12-EHP-5030-OIL-001, Oil Analysis Program, Revision 7
- 12-EHP-5200-MTR-001, Electric Motor Program, Revision 0
- 1-OHP-4024-123, Annunciator Response Circulating Water, Revision 20
- 2-OHP-4030-251-018, Steam Generator Stop Valve Dump Valve Surveillance Test, January 25, 2013
- AR 2011-3478, 1-PP-7E-MTR Oil Analysis
- AR 2012-2543, 1-PP-7E MTR Oil Analysis
- AR 2013-0031, Frequent nuisance Alarms in Unit 1 Control Room
- AR 2013-0904, Fuel Failure Indications in Unit 2
- AR 2013-0942, 2CD EDG Aux Jacket Water Pump Tripped
- AR 2013-1121, HELB Barrier Configured Improperly
- AR 2013-1164, 2-MRV-212 Failed Stroke Time
- AR 2013-1347, Fuel Injector Pump spraying fuel oil on diesel surv.
- AR 2013-1417, #21 RCP Upper Thrust Bearing Increasing Temperature Trend
- AR 2013-1902, 2-ESW-171S is Showing Signs of Corrosion
- AR 2013-1905, 2-VRV-325 Has Signs of Surface Corrosion
- AR 2013-2249, U-1 Frequent NI Flux deviation Alarms
- AR 2013-2257, AES Fan Charcoal Filter bypass damper did NOT open
- AR 2013-3029, Unexpected Control Rod Motion, March 1, 2013
- AR 2013-3044, Unexpected ½ Step Insertion of Unit 1 Control Bank D Rods
- AR-2013-1046, Unit One B South CW Condenser Fouling
- DB-12-EDGS, Emergency Diesel Generator Support Systems Design Basis Document, Revision 4
- DC 12-3085, EDG Components Tornado Modification, August 22, 1991
- Predictive Maintenance Watch List, February 11, 2013
- PS2-97021, Reactor Coolant Pumps No. 1&2, Revision 4+
- PS-2-97515 Control Penetration 2-116 Quad I Wiring Diagram, Revision 6
- Pump and Valve Inservice Test Program for Donald C. Cook Nuclear Plant Fourth Ten Year Interval, November 18, 2008
- VTD-INDR-0021, Worthington Installation, Operation and Maintenance and List of Parts for Centrifugal Pumps, Revision 1

1R19 Post-Maintenance Testing

- 1-OHP-4021-032-001CD, DG1CD Operation, January 30, 2013
- 1-OHP-4021-032-008CD, Operating DG1CD Subsystems, January 30, 2013
- 1-OHP-4030-132-027CD, CD Diesel Generator Operability Test, January 30, 2013
- 2-OHP-4030-251-018, Steam Generator Stop Valve Dump Valve Surveillance Test, January 25, 2013
- AR 2013-0454, PMT Method Was Changed on Day of Execution
- AR 2013-0454, PMT method was changed on day of execution
- AR 2013-1787, Missed Planning Opportunity an PMT Matrix Use
- AR 2013-2257, AES fan Charcoal filter bypass damper did NOT open
- AR 2013-2269, Steam leak on 2-MRV-223

- AR 2013-3046, Relay found tripped during two minute rule
- OP-1-98215, Turbine Driven Aux Feedwater Supply System Elementary Diagram, Revision 65
- WO 55401237-07, EC-51837, Relocate Relays in Unit 1 Control Room on Panel 1-GRB, January 10, 2013
- WO 55401237-51, EC-51837, Perform Post Maintenance Test of Unit 1 Relay 1-62-WMFL, January 10, 2013
- WO 55414481-13, EC-51837, Perform Post Maintenance Test of Unit 1 Relays 1-62-MSHLT-L and 1-62-MSHLT-R, January 10, 2013
- WO 55416809-04, 2-EPT-233/233 PMT Leak Check, March 19, 2013
- WO 55416807-08, 2-N-332 PMT Leak Inspection, March 22, 2013
- WO 55416807-11, 2-MRV-213/243 PMT Leak Check, March 20, 2013

1R20 Refueling and Other Outage Activities

- 1-OHP-4021-001-004, Plant Cooldown From Hot Standby to Cold Shutdown, Revision 66
- 1-OHP-4021-017-002, Placing in Service The residual Heat Removal System, Revision 26
- 1-OHP-4021-001-003, Power Reduction, Revision 52
- 1-OHP-4023-ES-0.1, Reactor Trip Response, Revision 26
- AR 2013-4315, 1-MRV-231 Fail to Close Upon Return to Neutral
- PMP-4100-SDR-001, Plant Shutdown Safety and Risk Management, March 31, 2013
- U1C25 Strategic Overview, March 14, 2013
- Unit-1 Cycle 25, NRC Department Outage Briefing,

1R22 Surveillance Testing

- 10-CPS-001, Clearance Permit System, February 13, 2013
- 12-EHP-4030-051-256, Main Steam Safety Valve Setpoint Verification With Lift Assist Device, Revision 17
- 12-EHP-5074-MOV-002, Motor Operated Valve Setpoint Control, February 13, 2013
- 12-IHP-5030-EMP-014, MOV Diagnostic Testing Using Viper Test System, Revision 011
- 1-IHP-4030-111-012, Safeguards (4KV) Buss Loss of Voltage and Degraded Bus Voltage Relay Channel Calibration and Tadot, March 1, 2013
- 1-OHP-4021-080—003, Operation of Generator Hydrogen Gas System, Revision 015
- 1-OHP-4030-112-015, Full length Control Rod Operability Test, Revision 9
- 1-OHP-4030-102-016, Reactor Coolant System Leak Rate Test, Revision 24
- 2-OHP-4030-202-016, Reactor Coolant System Leak Rate Test, Revision 28
- 2-OHP-4030-214-011, Containment Isolation and IST Valve Operability Test, February 14, 2013
- 2-OHP-4030-214-034, Local Valve Position Verification Test, Revision 12
- 2-OHP-4030-217-050W, West Residual Heat Removal Train Operability Test Modes 1-4, February 15, 2013
- 2-OHP-4030-251-018, Steam Generator Stop Valve Dump Valve Surveillance Test, February 20, 2013
- 1-OHP-4030-151-019F, Steam Generator Stop Valve Operability Test, March 27, 2013
- AR 2013-1454, Review and Align IST Procedure EHI-5071 w/NRC Inspection Manual
- AR 2013-2029, Failure to Review U2 Shiftly Surveillance
- AR 2013-2029, Failure to review U2 Shiftly Surveillance
- AR 2013-2055, Clearance for Tech Spec work not scheduled
- AR 2013-2802, Livingston Rd. power perturbation affected CHW system
- Figure 2-15.1 Safety Related Pump Inservice Test Hydraulic Reference, Revision 109
- Figure 2-15.2, Safety Related Pump Inservice Test Vibration Reference, Revision 89

- Figure 2-19.1, Power Operated Valve Strok Time Limits, January 25, 2013
- IPTE Briefing Guide for EDG Load Sequence Testing, March 7, 2013
- PMP-21 WO-55382872-01, 2-IMO-324-ACT PM for Diagnostic Test, 2-IMO-324 Perform As-Left Diagnostic
- PMP-2220-001-001, Foreign Material Exclusion (FME), February 8, 2013
- PMP-4030-EIS-001, Event-Initiated Surveillance Testing, Revision 28
- WO55398793, 1-HV-CEQ-2 Lube Cont. Ventilation, February 6, 2013
- WO55413840, Train A CEQ Fan Surveillance, February 7, 2013
- WO-55417679, 1-27-1-T11A, 4KV Bus Degraded/Loss O, March 1, 2013

2RS3 In-Plant Airborne Radioactivity Control and Mitigation

- 12-EHP-6040-128-100, 12-HV-TSC-FIL Technical Support Center Ventilation Test, Revision 08, January 16, 2013
- 12-THP-6010-RPC-515, Calibration of the Eberline Model AMS-4, Revision 05
- 12-THP-6010-RPI-805, Radiation Monitoring System Set-Points Revision 28
- 12-THP-6010-RPP-014, Total Effective Dose Equivalent (TEDE) Evaluation, Revision 08
- 12-THP-6010-RPP-315, HEPA Equipment Issue, Control and Maintenance, Revision 12
- 12-THP-6010-RPP-400, Radiological Job Coverage, Revision 15
- 12-THP-6010-RPP-403, Portable Air Sampling, Revision 20
- 12-THP-6010-RPP-405, Analysis of Airborne Radioactivity, Revision 16
- 1-EHP-4030-128-230, Unit 1 Control Room Tracer Gas Test, Revision 05
- 2-EHP-4030-228-228B, U2-HV-AES-2 Engineered Safety Feature Ventilation Surveillance, (Unit 2 Auxiliary Building), Revision 19, December 19, 2012
- 2-EHP-4030-228-229, U2-Control Room Emergency Ventilation Surveillance, (Unit 2 Main Control Room), Revision 17, April 11, 2012
- AR 2011-10017, Procedure Violation Relative to Relocation of HEPA
- AR 2012-03123, Breathing Air Bottles Stored in Spray Add Tank Room
- AR 2012-09777, Incorrect Formula in (Procedure) 12 THP-6010-RPP-400
- AR 2012-11520, HEPA Vacuum PAO Tests Expired
- Eberline AMS-4, Selected Calibration Records, various dates 2012
- EPP-2080-ERO-01, Emergency Response Resources Readiness, Revision 08
- ERO (Emergency Response Organization) – 1 Qualification List, March 4, 2013
- FPP-2281-RES-201, Maintenance and Repair of Respiratory Devices, Revision 10
- FPP-2281-RES-203, Breathing Air Systems, Revision 10
- FPP-2281-RES-209, Operation of Bauer Fill Systems, Revision 02
- FPP-2281-RES-210, Respirator Fit Testing with the Porta-Count, Revision 02
- GT 2011-14936, Quick Hit Self Assessment, Operations Fire Protection Respiratory for INPO Excellence, October 12, 2012
- MSA Firehawk Certified CARE Technicians, February 25, 2013
- MSA ProCheck3 Test Results, Complete SCBA Test, Selected Records, 2012
- NVLAP Certifications, Effective dates July 1, 2012 through June 30, 2013
- PMP-2281-RES-001, Control and Use of Respiratory Protection Devices, Revision 11
- Qualification Details for MSA Self-Contained Breathing Apparatus, GP-C-3005, March 4, 2013
- Qualification Details for MSA Ultra Elites Personally Assigned Respirator Fit Test, March 4, 2013
- Qualification Details for SCBA Functional Testing and Calibration, MSACARE, March 4, 2013
- TRI Air Testing, Grade D Quality Air, Selected Records 2012
- Unitech Services Group, DOP Test Results, Selected Records for Portable HEPA Ventilation Units, various dates 2012
- Whole Body Counts, Selected Records, 2013

2RS4 Occupational Dose Assessment

- 12-THP-6010-RPC-535, Calibrations of the ORTEC Fastscan Whole Body Counter FS-1, February 3, 2012 and February 7, 2013
- 12-THP-6010-RPC-535, Calibration of the ORTEC Fastscan Whole Body Counter FS-2, August 7, 2012
- 12-THP-6010-RPC-552, Calibration of the DMC-2000S Electronic Dosimeter, Revision 06
- 12-THP-6010-RPP-007, RP 06-03, Radiation Protection Calculations and Technical Bases Document, Internal Dose from Hard to Detect Radionuclides, January 22, 2013
- 12-THP-6010-RPP-007, RP-11-02, Passive Monitoring Sensitivity Examination, July, 21, 2011
- 12-THP-6010-RPP-104, Personnel Dosimetry Use in Varying Radiation Fields, Revision 12
- 12-THP-6010-RPP-121, Dose Monitoring for Declared Pregnant Woman (DPW), Revision 04
- 12-THP-6010-RPP-206, Internal Dose Assessment and Calculation, Revision 08
- 12-THP-6010-RPP-212, Operation of ORTEC Fastscan Whole Body Counter, Revision 05
- 12-THP-6010-RPP-406, DAC – Hour Tracking, Revision 09
- AR 2011-11870, Two Workers Received Unanticipated Dose Rate Alarms
- AR 2012-00084, Elevated Dose Rates in the 617'Demin Valve Gallery
- Declared Pregnant Worker, Selected Dosimetry Records, dated 2010 through 2012
- DMC-2000S Calibration Data Sheets, September 26, 2012
- PMP-6010-RPP-200, Internal Radiation Dose Monitoring, Revision 06
- RP-C-1301, Alpha Monitoring, Control, and Critical Survey Documentation, Revision 00

4OA1 Performance Indicator Verification

- AR 2012-5746, Closed U2 MSIVs due to Cooldown Following Reactor Trip
- PMP-7110-PIP-001, Data Sheet 1, Unplanned Scrams per 7,000 Critical Hours, 1st Quarter 2012 thru 4th Quarter 2012
- PMP-7110-PIP-001, Data Sheet 2, Unplanned Scrams with Complications, 1st Quarter 2012 thru 4th Quarter 2012
- PMP-7110-PIP-001, Data Sheet 3, Unplanned Power Changes per 7,000 Critical Hours, 1st Quarter 2012 thru 4th Quarter 2012
- PMP-7110-PIP-001, Data Sheet 8, Safety System Functional Failures, 1st Quarter 2012 thru 4th Quarter 2012

4OA2 Problem Identification and Resolution

- 2-OHP-4021-001-006, Power Escalation, Revision 45
- 2-OHP-4021-055-003, Placing a Main Feed Pump in service, Revision 29
- AR 2013-1012, Working Hour Limitations in Group Need to be Evaluated
- AR 2013-1149, PMP-2060-WHL-001 Waivers Not Completed
- AR 2013-1172, Six Maintenance Workers Exceeded Work Hour Limitations
- AR 2013-14838, Reactivity Event of November 30, 2012 in Unit 2
- AR 2013-14896, Main Turbine Left Outer Control Valve
- OHI-4000, Conduct of Operations: Standards, Revision 76
- PMP-2060-FFD-002, Performance of Fatigue Assessments, Revision 3
- PMP-2060-WHL-001, Working Hour Limitations for Covered Individuals, Revision 1

4OA3 Followup of Events and Notices of Enforcement Discretion

- AR 2012-5744, U2 Generator Trip/Turbine Trip Which Caused a Reactor Trip
- AR 2012-5746, Closed U2 MSIVs Due to Cool Down Following Reactor Trip

- AR 2012-5783, 2-URV-110 Steam Dump is Leaking By
- PMP-4010-TRP-001, April 30, 2012 Unit 2 Reactor Trip Review, May 1, 2012
- Unit 2 Control Room Logs, April 30-May 1, 2012

4OA5 Other Activities

- AR2012-8187, Adequacy of Past Operability Determination Questioned
- AR844125, 1-ICM-306 Downstream Piping Found Void of Water
- ALION-CAL-AEP-7354-02; D.C. Cook Unit 1 Operability Analysis to Evaluate Gas Void in ECCS Sump Suction Piping; April 16, 2009

4OA7 Licensee Identified Violations

- AEP-NRC-2012-97, LTR J. Gebbie to USNRC Document Control Desk, Emergency Action Level Scheme Implementation Change, October 26, 2012
- AR2012-12686, EAL Scheme, Revision 5, Can Not Be Implemented

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
AFW	Auxiliary Feedwater
CAP	Corrective Action Program
CLB	Current Licensing Basis
CFR	Code of Federal Regulations
CRAC	Control Room Air Conditioning
COOP	OHI-4000, Conduct of Operations
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
FRV	Feedwater Regulation Valve
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
LER	Licensee Event Report
MFP	Main Feed Pump
LORT	Licensed Operator Requalification Training
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
PI	Performance Indicator
RO	Reactor Operator
SAT	Systems Approach to Training
SDP	Significance Determination Process
SG	Steam Generator
SSC	Structure, System and Component
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
US	Unit Supervisor
WO	Work Order

L. Weber

-2-

In accordance with 10 CFR 2.390 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 Document 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/

John B. Giessner, Chief
Branch 4
Division of Reactor Projects

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

Enclosure: Inspection Report 05000315/2013002 and 05000316/2013002
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

DOCUMENT NAME: G:\DRPIII\COOK\DC Cook 2013 002.docx

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

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

OFFICE	RIII	RIII				
NAME	JLennartz:dtp	JGiessner				
DATE	05/08/13	05/09/13				

OFFICIAL RECORD COPY

Letter to L. Weber from J. Giessner dated May 9, 2013.

SUBJECT: D. C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2 – NRC INTEGRATED
INSPECTION REPORT 05000315/2013002 and 05000316/2013002

DISTRIBUTION:

Doug Huyck
RidsNrrDorLpl3-1 Resource
RidsNrrPMDCCook Resource
RidsNrrDirslrib Resource
Chuck Casto
Cynthia Pederson
Steven Orth
Allan Barker
Christine Lipa
Carole Ariano
Linda Linn
DRPIII
DRSIII
Patricia Buckley
Tammy Tomczak
ROPreports.Resource@nrc.gov