



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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May 5, 2010

Brian J. O'Grady, Vice President
Nuclear and Chief Nuclear Officer
Nebraska Public Power District
72676 648A Avenue
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Subject: COOPER NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT
05000298/2010002

Dear Mr. O'Grady:

On March 24, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Cooper Nuclear Station. The enclosed integrated inspection report documents the inspection findings, which were discussed on April 1, 2010 with Mr. Brian O'Grady, Site Vice President, and other members of your staff.

The inspections 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.

This report documents two NRC-identified violations of very low safety significance (Green). Both of these findings were determined to involve violations of NRC requirements. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as noncited violations, consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest the violations or the significance of the noncited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 612 E. Lamar Blvd, Suite 400, Arlington, Texas, 76011-4125; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Cooper Nuclear Station facility. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV, and the NRC Resident Inspector at Cooper Nuclear Station. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, and its enclosure, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's document 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/

Vince Gaddy, Chief
Project Branch C
Division of Reactor Projects

Docket: 50-298
License: DRP-46

Enclosure:
NRC Inspection Report 05000298/2010002
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 50-298

License: DRP-46

Report: 05000298/2010002

Licensee: Nebraska Public Power District

Facility: Cooper Nuclear Station

Location: 72676 648A Avenue
Brownville, NE 68321

Dates: January 1 through March 24, 2010

Inspectors: M. Chambers, Resident Inspector
P. Elkmann, Senior Emergency Preparedness Inspector
D. Reinert, Reactor Inspector
N. Taylor, Senior Resident Inspector
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Approved By: Vince Gaddy, Chief, Project Branch C
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000298/2010002; 01/01/2010 – 03/24/2010; Cooper Nuclear Station, Integrated Resident and Regional Report; Flood Protection Measures, Identification and Resolution of Problems.

The report covered a 3-month period of inspection by resident inspectors and announced baseline inspections by regional based inspectors. Two Green noncited violations of significance were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified Findings and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a noncited violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," regarding the licensee's failure to follow the requirements of Administrative Procedure 0.5, "Conduct of the Condition Reporting Process." Specifically, plant engineers performing an extent of condition review for errors in the internal flooding analysis failed to initiate condition reports for additional degraded or nonconforming conditions as they were identified. The licensee entered this issue in their corrective action program as CR-CNS-2010-01596.

The inspectors determined that Manual Chapter 0612, Appendix E, "Examples of Minor Issues" provided no sufficiently similar examples, and that the finding is more than minor because it is associated with the design control attribute of the mitigating systems cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the inspectors determined that the finding has very low safety significance because all of the items in the Table 4a mitigating systems cornerstone checklist were answered in the negative. The finding has a crosscutting aspect in the area of problem identification and resolution because the licensee failed to take appropriate corrective actions to address previously identified examples of employees not initiating condition reports during extent of condition reviews [P.1(d)] (Section 1R06).

- Green. The inspectors identified a noncited violation of 10 CFR, Part 50, Appendix B, Criterion III, "Design Control," for the licensee's use of an incorrect post-accident service water flow rate in the design basis calculation of record. Calculation NEDC 91-232 determined the minimum service water pump room temperature following a loss of offsite power. The minimum service water flow

during accident conditions is used to derive the heat input into the room by the service water pump motors. The calculation incorrectly assumed a value for the post-accident service water flow rate that was less conservative than the value defined in the updated final safety analysis report. In response to the inspectors' concerns, the licensee initiated Condition Report CR-CNS-2009-10389 and revised the affected calculation.

The inspectors determined that this performance deficiency was sufficiently similar to the not-minor-if description of Example 3.a, 3.l, 3.j and 3.k of Manual Chapter 0612, Appendix E, "Examples of Minor Issues" due to the fact the affected calculation had to be re-performed to demonstrate the operability of the service water system. As such, the inspectors determined that the finding was more than minor because it was associated with the design control attribute of the mitigating systems cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to mitigating events to prevent undesirable consequences. The inspectors determined that this performance deficiency was dissimilar from any other examples in Manual Chapter 0612, Appendix E. Using the Manual Chapter 0609 Exhibit 1, "Initial Screening and Characterization of Findings," the issue screened as having very low safety significance because it was a design deficiency confirmed not to result in loss of operability in accordance with NRC Manual Chapter Part 9900, Technical Guidance, "Operability Determination Process for Operability and Functional Assessment." The inspectors determined that no cross cutting aspect was applicable to this performance deficiency because the calculation error is not reflective of current performance (Section 4OA2).

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status

Cooper Nuclear Station began the inspection period at full power on January 1, 2010. On January 10, 2010, the degraded performance of a condensate booster pump forced the licensee to reduce power to approximately 74 percent, where the plant remained until repairs were completed. The plant returned to full power on January 16, 2010, where it remained until February 26, 2010 when power was reduced to 82 percent for planned maintenance activity on a reactor feed pump. The plant again returned to full power on March 2, 2010 where it remained for the rest of the inspection period.

1. REACTOR SAFETY

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

1R04 Equipment Alignment (71111.04)

Partial Walkdown

a. Inspection Scope

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

- January 19, 2010, Diesel generator 1 and diesel generator 2 during diesel generator 2 monthly surveillance run
- February 19, 2010, Emergency core cooling system vent modification
- March 16, 2010, Diesel generator 1 during Yellow risk window with diesel generator 2 unavailable

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 affect the function of the system, and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Updated Final Safety Analysis Report, technical specification requirements, administrative technical specifications, outstanding work orders, 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 inspected 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 corrective action program with the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of three partial system walkdown samples as defined in Inspection Procedure 71111.04-05.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Fire Inspection Tours

a. Inspection Scope

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

- February 10, 2010, 976 foot reactor motor generator set area, Zone 5B
- February 19, 2010, Cable spreading room, Zone 9A
- February 19, 2010, Emergency condensate storage tank area, Zone 7B
- March 2, 2010, Control room and secondary alarm station corridor, Zone 10B

The inspectors reviewed areas to assess if licensee personnel 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 had 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 affect equipment that 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, 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 corrective action program. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of four quarterly fire-protection inspection samples as defined in Inspection Procedure 71111.05-05.

b. Findings

No findings of significance were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On March 5, 2010, the inspectors observed a fire brigade activation, "Fire in the Vital Switchgear 1F". The observation 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 (1) proper wearing of turnout gear and self-contained breathing apparatus; (2) proper use and layout of fire hoses; (3) employment of appropriate fire fighting techniques; (4) sufficient firefighting equipment brought to the scene; (5) effectiveness of fire brigade leader communications, command, and control; (6) search for victims and propagation of the fire into other plant areas; (7) smoke removal operations; (8) utilization of preplanned strategies; (9) adherence to the preplanned drill scenario; and (10) drill objectives.

These activities constitute completion of one annual fire-protection inspection sample as defined in Inspection Procedure 71111.05-05.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, the flooding analysis, and plant procedures to assess susceptibilities involving internal flooding; reviewed the corrective action program to determine if licensee personnel identified and corrected flooding problems; inspected underground bunkers/manholes to verify the adequacy of sump pumps, level alarm circuits, cable splices subject to submergence, and drainage for bunkers/manholes; and verified that operator actions for coping with flooding can reasonably achieve the desired outcomes. The inspectors also inspected the areas listed below to verify the adequacy of equipment seals located below the flood line, floor and wall penetration seals, watertight door seals, common drain lines and sumps, sump pumps, level alarms, and control circuits, and temporary or removable flood barriers. Specific documents reviewed during this inspection are listed in the attachment.

- March 10, 2010, Northwest quad 881 foot and 859 foot levels

These activities constitute completion of one flood protection measures inspection sample as defined in Inspection Procedure 71111.06-05.

b. Findings

Introduction. The inspectors identified a Green noncited violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," regarding the licensee's failure to follow the requirements of Administrative Procedure 0.5, "Conduct of the Condition Reporting Process." Specifically, plant engineers performing an extent of condition review for errors in the internal flooding analysis failed to initiate condition reports for additional degraded or nonconforming conditions as they were identified.

Description. On September 16, 2009, the licensee's engineering staff performed plant walkdowns as a corrective action from CR-CNS-2009-09563, which had been written to document NCV 05000298/2009004-02, "Incorrect Assumptions and Loss of Configuration Control in Internal Flooding Analysis." Corrective Action 3 from this condition report directed the design engineering department to revise the internal flooding calculations. To do so, the licensee began a series of plant walkdowns to identify any differences between the analyzed conditions in the flooding calculations and the as-built configuration of the plant.

On March 3, 2010, the inspectors met with representatives from design engineering to review the results of the plant walkdowns, which had been documented in digital photographs and a computer spreadsheet. The walkdowns had identified a number of discrepancies between design and the as-built configuration, including the following:

- A flooding evaluation for the southwest quad 859 foot elevation assumed that water would drain through three large drain holes into the building sump. The largest of these three drain holes was discovered not to exist.
- A flooding evaluation for the northwest quad 859 foot elevation assumed that water would drain through large open holes into the building sump. Engineers discovered that the holes had been covered with duct tape during a maintenance activity (no attempt was made by the engineers to remove the tape).
- Flooding evaluations for numerous spaces assume that flooding doors are 36 inches wide. Door jams installed on at least 20 separate doors limit the available width for water to pass to 34.5 inches.
- A flooding evaluation for the train B residual heat removal heat exchanger room 931 foot elevation took credit for drainage through a floor penetration which was assumed to have a 3.75 inch sleeve. This sleeve was found to be 4 inches tall.

The inspectors learned that no condition reports had been initiated to document these newly-discovered degraded and/or nonconforming conditions. The responsible individuals believed that since the walkdowns were being conducted as a corrective action that additional condition reports were unnecessary. In addition, the engineers had calculated the potential flooding impact of each discrepancy and come to the conclusion

that operability was not threatened, again concluding that no new condition reports were necessary. The inspectors also learned that no attempt had been made to notify control room operators of the degraded and nonconforming conditions identified in the plant walkdowns. The inspectors determined that these degraded and non-conforming conditions affected the availability, reliability and capability of the mitigating systems in the affected spaces.

The inspectors noted that Administrative Procedure 0.5, "Conduct of the Condition Report Process," Revision 65, provides overall direction on the conduct of the corrective action program at Cooper Nuclear Station. Paragraph 7.1.3 provides the following standard for condition report initiation: "Employees and contractors are encouraged to write condition reports for a broad range of problems. Problems reported must include, but are not limited to, 'Adverse Conditions.'" The procedure goes on to define adverse conditions as, "an event, defect, characteristic, state, or activity that prohibits or detracts from safe, efficient nuclear plant operation. Adverse conditions include non-conformances, conditions adverse to quality, and plant reliability concerns." The inspectors determined that each of these observed conditions met the licensee's definition of an adverse condition, and the condition reports should have been initiated.

After meeting with the inspectors, the licensee initiated several condition reports including: CR-CNS-2010-01595 (southwest quad), CR-CNS-2010-01575 (northwest quad), CR-CNS-2010-01658 (door jams), CR-CNS-2010-01634 (RHR room) and CR-CNS-2010-01596 (failure to initiate condition reports in a timely manner). The inspectors reviewed the licensee's evaluation of each condition and determined that none of these conditions resulted in the inoperability of safety-related equipment. Additionally, the inspectors verified that immediate corrective action was taken to remove the red duct tape from the floor penetrations in the northwest quad.

The inspectors noted that a similar violation had been recently documented in 05000298/2008005-04, "Failure to Follow Procedure for Initiating Condition Reports." In that violation, inspectors had identified that operations department personnel were keeping a database on known errors in station emergency procedures as part of an extent of condition review. Individual condition reports were not being written for each incorrect procedure as they were identified, and as such station personnel were not aware of the individual or collective significance of the problem. In response to this previous violation, the licensee conducted an apparent cause evaluation under CR-CNS-2008-08780. As part of the evaluation, the licensee conducted a survey of different line organizations and received varying responses as to when condition reports were required. In fact, the reported position of the design engineers interviewed suggested that it was permissible in some circumstances to delay documenting a degraded or nonconforming condition until further review can be conducted to ensure that an adverse condition truly exists. The licensee came to the conclusion that "expectations for adherence to the CNS CAP program were not fully understood by personnel, and, the procedure for condition report initiation has wording that is open to interpretation."

The inspectors reviewed the corrective actions taken for violation 2008005-04, which included site-wide communications, tailgate training with all personnel, and a procedure revision to clarify expectations for condition report initiation. The inspectors determined that these actions were not adequate to correct the perception amongst station personnel that the identification of degraded or non-conforming conditions can be delayed when they are discovered as part of a larger effort.

Analysis. The performance deficiency associated with this finding involved the licensee's failure to initiate condition reports as required by Administrative Procedure 0.5. The inspectors determined that Manual Chapter 0612, Appendix E, "Examples of Minor Issues" provided no sufficiently similar examples, and that the finding is more than minor because it is associated with the design control attribute of the mitigating systems cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the inspectors determined that the finding has very low safety significance because all of the items in the Table 4a mitigating systems cornerstone checklist were answered in the negative. The finding has a crosscutting aspect in the area of problem identification and resolution because the licensee failed to take appropriate corrective actions to address previously identified examples of employees not initiating condition reports during extent of condition reviews [P.1(d)].

Enforcement. 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings" requires, in part, that activities affecting quality shall be accomplished in accordance with procedures of a type appropriate to the circumstances. Administrative Procedure 0.5CR, "Conduct of the Condition Reporting Process," Revision 65, requires that employees must initiate condition reports for adverse conditions. Contrary to this requirement, from September 16, 2009 until meeting with the inspectors on March 3, 2010, licensee personnel were aware of multiple adverse conditions but did not initiate condition reports as required by procedure. Because the finding is of very low safety significance and has been entered into the licensee's corrective action program as CR-CNS-2010-01596, this violation is being treated as a noncited violation consistent with Section VI.A of the Enforcement Policy: NCV 05000298/2010002-01, "Repeat Failure to Follow Procedure for Initiating Condition Reports."

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On February 12, 2010, the inspectors observed a crew of licensed operators in the plant's simulator 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
- Crew's ability to take timely actions in the conservative direction
- Crew's prioritization, interpretation, and verification of annunciator alarms
- Crew's correct use and implementation of abnormal and emergency procedures
- Control board manipulations
- Oversight and direction from supervisors
- Crew's ability to identify and implement appropriate technical specification actions and emergency plan actions and notifications

The inspectors compared the crew's performance in these areas to pre-established operator action expectations and successful critical task completion requirements. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one quarterly licensed-operator requalification program sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

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

- October 21, 2009, CS-MO-MO5B, core spray pump B minimum flow bypass valve failed to open during surveillance testing
- February 19, 2010, Review of 10 CFR 50.65(a)(3) evaluation

The inspectors reviewed events such as where ineffective equipment maintenance has 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)
- Characterizing system reliability issues for performance
- Charging unavailability for performance
- Trending key parameters for condition monitoring
- Ensuring proper classification in accordance with 10 CFR 50.65(a)(1) or -(a)(2)
- Verifying appropriate performance criteria for structures, systems, and components classified as having an adequate demonstration of performance through preventive maintenance, as described in 10 CFR 50.65(a)(2), or as requiring the establishment of appropriate and adequate goals and corrective actions for systems classified as not having adequate performance, as described in 10 CFR 50.65(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 corrective action program with the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of two quarterly maintenance effectiveness samples as defined in Inspection Procedure 71111.12-05.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed licensee personnel'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:

- January 7, 2010, Orange risk window for replacement of SW-V-21
- February 25, 2010, Reactor core isolation cooling maintenance window
- March 3, 2010, Risk assessment for diesel generator receiver pressure switch maintenance
- March 17, 2010, Missed Surveillance Risk Assessment

The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that licensee personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When licensee personnel performed emergent work, the inspectors verified that the licensee personnel promptly assessed and managed plant risk. 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 the technical specification requirements and inspected 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.

These activities constitute completion of four maintenance risk assessments and emergent work control inspection samples as defined in Inspection Procedure 71111.13-05.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following issues:

- January 4, 2010, Review of Z sump vent line frozen
- January 6, 2010, Water contamination of diesel generator 2 day tank
- February 12, 2010, Diesel generator 2 lubricating oil pressure gauge vibrations
- February 18, 2010, Main steam isolation valve terminal strip corrosion

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 technical specification 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 technical specifications and Updated Final Safety Analysis Report to the licensee personnel'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 also reviewed a sampling of corrective action

documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of four operability evaluations inspection samples as defined in Inspection Procedure 71111.15-04

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

.1 Temporary Modifications

a. Inspection Scope

To verify that the safety functions of important safety systems were not degraded, the inspectors reviewed the temporary modification identified as, Temporary Configuration Change 4742749, "Install gag on SW-V-152."

The inspectors reviewed the temporary modification and the associated safety-evaluation screening against the system design bases documentation, including the Updated Final Safety Analysis Report and the technical specifications, and verified that the modification did not adversely affect the system operability/availability. The inspectors also verified that the installation and restoration were consistent with the modification documents and that configuration control was adequate. Additionally, the inspectors verified that the temporary modification was identified on control room drawings, appropriate tags were placed on the affected equipment, and licensee personnel evaluated the combined effects on mitigating systems and the integrity of radiological barriers.

These activities constitute completion of one sample for temporary plant modifications as defined in Inspection Procedure 71111.18-05.

b. Findings

No findings of significance were identified.

.2 Permanent Modifications

The inspectors reviewed key parameters associated with energy needs, materials, replacement components, timing, heat removal, control signals, equipment protection from hazards, operations, flow paths, pressure boundary, ventilation boundary, structural, process medium properties, licensing basis, and failure modes for the permanent modification identified as, Change Evaluation Document 6027780, "Installation of On-Line NobleChem (OLNC) Injection Taps."

The inspectors verified that modification preparation, staging, and implementation did not impair emergency/abnormal operating procedure actions, key safety functions, or operator response to loss of key safety functions; postmodification testing will maintain the plant in a safe configuration during testing by verifying that unintended system interactions will not occur; systems, structures and components' performance characteristics still meet the design basis; the modification design assumptions were appropriate; the modification test acceptance criteria will be met; and licensee personnel identified and implemented appropriate corrective actions associated with permanent plant modifications. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one sample for permanent plant modifications as defined in Inspection Procedure 71111.18-05.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

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

- February 12, 2010, Diesel generator 2 lubricating oil pressure gauge vibrations
- February 25, 2010, RCIC-AOV-PC-23 controller adjustments
- March 17, 2010, Postmaintenance testing of diesel generator 2 day tank float valve following float examination
- March 23, 2010, High pressure coolant injection post maintenance test

The inspectors selected these activities based upon the structure, system, or component's ability to affect 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

The inspectors evaluated the activities against the technical specifications, the Updated Final Safety Analysis Report, 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 postmaintenance tests to determine whether the licensee was identifying problems and entering them in the corrective action program and that the problems were being corrected commensurate with their importance to safety. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of four postmaintenance testing inspection samples as defined in Inspection Procedure 71111.19-05.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, procedure requirements, and technical specifications to ensure that the surveillance activities listed below demonstrated that the systems, structures, and/or components tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the significant surveillance test attributes were adequate to address the following:

- Preconditioning
- Evaluation of testing impact on the plant
- Acceptance criteria
- Test equipment
- Procedures
- Jumper/lifted lead controls
- Test data
- Testing frequency and method demonstrated technical specification operability
- Test equipment removal
- Restoration of plant systems
- Fulfillment of ASME Code requirements

- Updating of performance indicator data
- Engineering evaluations, root causes, and bases for returning tested systems, structures, and components not meeting the test acceptance criteria were correct
- Reference setting data
- Annunciators and alarms setpoints

The inspectors also verified that licensee personnel identified and implemented any needed corrective actions associated with the surveillance testing.

- February 10, 2010, Service water surveillance operation (Div 2)
- February 17, 2010, Diesel generator 2, monthly operational test
- February 25, 2010, Reactor core isolation cooling surveillance test
- March 9, 2010, Core spray pump B

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of four surveillance testing inspection samples as defined in Inspection Procedure 71111.22-05.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspector performed an in office review of the Cooper Nuclear Station Emergency Plan, Revision 57, submitted January 27, 2010. This revision removed the requirement for annual Quality Assurance audits of the site emergency preparedness program, added the On-Site Cell Phone System to Table 7.1-1, "ERF Communications Systems," updated the list of Letters of Agreement with offsite response organizations, updated station titles, and made minor editorial corrections.

This revision was compared to its previous revision, to the criteria of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, and to the standards in 10 CFR 50.47(b) to determine if the revision adequately implemented the requirements of 10 CFR 50.54(q). This review was not documented in a safety evaluation report and

did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection.

These activities constitute completion of one sample as defined in Inspection Procedure 71114.04-05.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational and Public Radiation Safety

2RS01 Radiological Hazard Assessment and Exposure Controls (71124.01)

a. Inspection Scope

This area was inspected to: (1) review and assess licensee's performance in assessing the radiological hazards in the workplace associated with licensed activities and the implementation of appropriate radiation monitoring and exposure control measures for both individual and collective exposures, (2) verify the licensee is properly identifying and reporting Occupational Radiation Safety Cornerstone performance indicators, and (3) identify those performance deficiencies that were reportable as a PI and which may have represented a substantial potential for overexposure of the worker.

The inspectors used the requirements in 10 CFR Part 20, the technical specifications, and the licensee's procedures required by technical specifications as criteria for determining compliance. During the inspection, the inspectors interviewed the radiation protection manager, radiation protection supervisors, and radiation workers. The inspectors performed walkdowns of various portions of the plant, performed independent radiation dose rate measurements and reviewed the following items:

- Performance indicator events and associated documentation reported by the licensee in the Occupational Radiation Safety Cornerstone
- The hazard assessment program, including a review of the licensee's evaluations of changes in plant operations and radiological surveys to detect dose rates, airborne radioactivity, and surface contamination levels
- Instructions and notices to workers, including labeling or marking containers of radioactive material, radiation work permits, actions for electronic dosimeter alarms, and changes to radiological conditions
- Programs and processes for control of sealed sources and release of potentially contaminated material from the radiologically controlled area, including survey performance, instrument sensitivity, release criteria, procedural guidance, and sealed source accountability

- Radiological hazards control and work coverage, including the adequacy of surveys, radiation protection job coverage, and contamination controls; the use of electronic dosimeters in high noise areas; dosimetry placement; airborne radioactivity monitoring; controls for highly activated or contaminated materials (non-fuel) stored within spent fuel and other storage pools; and posting and physical controls for high radiation areas and very high radiation areas
- Radiation worker and radiation protection technician performance with respect to radiation protection work requirements
- Audits, self-assessments, and corrective action documents related to radiological hazard assessment and exposure controls since the last inspection

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of the one required sample as defined in Inspection Procedure 71124.01-05.

b. Findings

No findings of significance were identified.

2RS02 Occupational ALARA Planning and Controls (71124.02)

a. Inspection Scope

This area was inspected to assess performance with respect to maintaining occupational individual and collective radiation exposures ALARA. The inspectors used the requirements in 10 CFR Part 20, the technical specifications, and the licensee's procedures required by technical specifications as criteria for determining compliance. During the inspection, the inspectors interviewed licensee personnel and reviewed the following items:

- Site-specific ALARA procedures and collective exposure history, including the current 3-year rolling average, site-specific trends in collective exposures, and source-term measurements
- ALARA work activity evaluations/postjob reviews, exposure estimates, and exposure mitigation requirements
- The methodology for estimating work activity exposures, the intended dose outcome, the accuracy of dose rate and man-hour estimates, and intended versus actual work activity doses and the reasons for any inconsistencies

- Records detailing the historical trends and current status of tracked plant source terms and contingency plans for expected changes in the source term due to changes in plant fuel performance issues or changes in plant primary chemistry
- Radiation worker and radiation protection technician performance during work activities in radiation areas, airborne radioactivity areas, or high radiation areas
- Audits, self-assessments, and corrective action documents related to ALARA planning and controls since the last inspection

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of the one required sample as defined in Inspection Procedure 71124.02-05.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

40A1 Performance Indicator Verification (71151)

.1 Unplanned Scrams per 7000 Critical Hours (IE01)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams per 7000 critical hours performance indicator for the period from the first quarter 2009 through the fourth quarter 2009. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. 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 2009 through December 2009 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 performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one unplanned scrams per 7000 critical hours sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

.2 Unplanned Power Changes per 7000 Critical Hours (IE03)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned power changes per 7000 critical hours performance indicator for the period from the first quarter 2009 through the fourth quarter 2009. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. 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 2009 through December 2009 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 performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one unplanned transients per 7000 critical hours sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

.3 Occupational Exposure Control Effectiveness

a. Inspection Scope

Cornerstone: Occupational Radiation Safety

The inspectors reviewed performance indicator data for the third quarter 2009 through the fourth quarter 2009. The objective of the inspection was to determine the accuracy and completeness of the performance indicator data reported during these periods. The inspectors used the definitions and clarifying notes contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, as criteria for determining whether the licensee was in compliance.

The inspectors reviewed corrective action program records associated with high radiation area (greater than 1 R/hr) and very high radiation area non-conformances. The inspectors reviewed radiological, controlled area exit transactions greater than 100 millirems. The inspectors also conducted walkdowns of high radiation areas (greater than 1 R/hr) and very high radiation area entrances to determine the adequacy of the controls of these areas.

These activities constitute completion of the occupational exposure control effectiveness sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

.4 Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual
Radiological Effluent Occurrences

a. Inspection Scope

Cornerstone: Public Radiation Safety

The inspectors reviewed performance indicator data for the third quarter 2009 through the fourth quarter 2009. The objective of the inspection was to determine the accuracy and completeness of the performance indicator data reported during these periods. The inspectors used the definitions and clarifying notes contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, as criteria for determining whether the licensee was in compliance.

The inspectors reviewed the licensee's corrective action program records and selected individual annual or special reports to identify potential occurrences such as unmonitored, uncontrolled, or improperly calculated effluent releases that may have impacted offsite dose.

These activities constitute completion of the radiological effluent technical specifications/offsite dose calculation manual radiological effluent occurrences sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

40A2 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 Identification and Resolution of Problems

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 that they were being entered into the licensee's corrective action program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. The inspectors reviewed attributes that included the complete and accurate

identification of the problem; the timely correction, commensurate with the safety significance; the evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews; and the classification, prioritization, focus, and timeliness of corrective actions. Minor issues entered into the licensee's corrective action program because of the inspectors' observations are included in the attached list of documents reviewed.

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

Introduction. The inspectors identified a Green noncited violation of 10 CFR, Part 50, Appendix B, Criterion III, "Design Control," for the licensee's use of an incorrect post-accident service water flow rate in the design basis calculation of record. Calculation NEDC 91-232 determined the minimum service water pump room temperature following a loss of offsite power. The minimum service water flow during accident conditions is used to derive the heat input into the room by the service water pump motors. The calculation incorrectly assumed a value for the post-accident service water flow rate that was less conservative than the value defined in the Updated Final Safety Analysis Report.

Description. The inspectors reviewed calculation NEDC 91-232, "Service Water Pump Room Loss of Heat," Revision 3, dated March 5, 1993. The calculation determined the minimum service water pump room temperature after a loss of the non-essential heating system. The licensee used the calculation to establish whether the steady state temperature of the service water pump room, assuming single pump operation, would remain above the minimum allowable temperature of 32°F.

One of the key assumptions of Calculation NEDC 91-232 was that the only heat input into the room is the heat generated by the single operating service water pump motor. The heat generated by the pump motor is calculated using the horsepower needed to pump the required minimum post-accident service water flow. The result of this calculation was that the minimum steady state room temperature would be 33.8°F.

The minimum post-accident service water flow requirement used in the calculation was 6243 gpm. The inspectors identified that this value was inconsistent with the service water minimum flow requirement defined by the Cooper Nuclear Station Updated Safety Analysis Report, section X-8, dated March 24, 2003. The minimum service water flow rate following a postulated LOOP/LOCA event as specified in the Updated Final Safety Analysis Report was 5846 gpm. The incorrectly assumed higher post-accident service water flow rate resulted in a higher heat load from the pump motor and thus a higher steady state room temperature. This error yielded a non-conservative result for the calculated service water pump room temperature following a design basis accident.

In response to the inspectors' concerns, the licensee initiated Condition Report CR-CNS-2009-10389 and revised the affected calculation. This finding was more than minor because a revision to the design calculation was necessary to demonstrate that the service water steady pump room state temperature would remain above the design basis 32°F equipment qualification limit. The licensee recalculated the steady state room temperature based upon the Updated Final Safety Analysis Report service water flow requirement and the updated pump curves. The revised calculation reduced the available temperature margin to 1.4°F from 1.8°F. The licensee was able to demonstrate that the equipment would operate as required following a design basis accident.

The inspectors determined that this performance deficiency was sufficiently similar to the not-minor-if description of Example 3.a, 3.l, 3.j and 3.k of Manual Chapter 0612, Appendix E, "Examples of Minor Issues" due to the fact the effected calculation had to be re-performed to demonstrate the operability of the service water system. The inspectors determined that this performance deficiency was dissimilar from any other examples in Manual Chapter 0612, Appendix E.

The licensee demonstrated that the calculation error was introduced during a revision to calculation NEDC 91-239 on August 28, 1991. This calculation was revised to remove unnecessary margin from the evaluation of the required post-LOCA diesel cooling water flow. The result of the calculation was to revise downward the required post-LOCA service water flow from 6244 gpm to 5846 gpm. The calculation identified the need to update the Updated Final Safety Analysis Report description and a number of other affected documents, but did not identify NEDC 91-232 as an affected document. The inspectors did not identify any recent opportunities to discover this error.

Analysis. The failure to implement appropriate design controls for safety-related service water pump room temperature calculations is a performance deficiency. The inspectors determined that this performance deficiency affected the mitigating systems cornerstone and was more than minor because it is sufficiently similar to the not-minor-if description of Example 3.a, 3.l, 3.j and 3.k of Manual Chapter 0612, Appendix E, "Examples of Minor Issues" due to the fact the effected calculation had to be re-performed to demonstrate the operability of the service water system. As such, the inspectors determined that the finding was more than minor because it was associated with the design control attribute of the mitigating systems cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to mitigating events to prevent undesirable consequences. The inspectors determined that this performance deficiency was dissimilar from any other examples in Manual Chapter 0612, Appendix E. Using the Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the issue screened as having very low safety significance because it was a design deficiency confirmed not to result in loss of operability in accordance with NRC Manual Chapter Part 9900, Technical Guidance, "Operability Determination Process for Operability and Functional Assessment." The inspectors determined that no cross cutting aspect was applicable to

this performance deficiency because the calculation error is not reflective of current performance.

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Contrary to this requirement, from August 28, 1991, until the inspection on December 7, 2009, the licensee failed to assure that the minimum service water flow rate following a design basis event was correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee had failed to verify that the inputs to design basis calculation NEDC 91-232, Revision 3 were consistent with the licensee's Updated Final Safety Analysis Report. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program as CR-CNS-2009-10389, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000298/2010002-02, "Inadequate Service Water Pump Room Loss of Heat Calculation."

.2 Selected Issue Follow-up Inspection

a. Inspection Scope

During a review of items entered in the licensee's corrective action program, the inspectors selected CR-CNS-2010-00245 documenting the "B" condensate booster pump impeller failure for a more in-depth review. The inspectors considered the following during the review of the licensee's actions: (1) complete and accurate identification of the problem in a timely manner; (2) evaluation and disposition of operability/reportability issues; (3) consideration of extent of condition, generic implications, common cause, and previous occurrences; (4) classification and prioritization of the resolution of the problem; (5) identification of root and contributing causes of the problem; (6) identification of corrective actions; and (7) completion of corrective actions in a timely manner.

Documents reviewed by the inspectors included:

CR-CNS-2009-09560, "C Condensate Booster Pump Failure"

These activities constitute completion of one in-depth problem identification and resolution sample as defined in Inspection Procedure 71152-05.

b. Findings

No findings of significance were identified

.3 In-depth Review of Operator Workarounds

a. Inspection Scope

The inspectors performed a review of control room deficiencies to ensure that the licensee is identifying operator workaround problems at an appropriate threshold and entering them in the corrective action program, and has proposed or implemented appropriate corrective actions.

These activities constitute completion of one in-depth review of operator workarounds sample as defined in Inspection Procedure 71152-05.

b. Findings

No findings of significance were identified.

40A5 Other Activities

1. (Closed) Temporary Instruction (TI) 2515/179, "Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in the National Source Tracking System Pursuant to title 10, Code of Federal Regulations, Part 20.2207 (10 CFR 20.2207)"

a. Inspection Scope

An NRC inspection was performed to confirm that the licensee has reported their initial inventories of sealed sources pursuant to 10 CFR 20.2207 and to verify that the National Source Tracking System database correctly reflects the category 1 and 2 sealed sources in custody of the licensee. Inspectors interviewed personnel and performed the following;

- Reviewed the licensee's source inventory
- Verified the presence of any category 1 or 2 sources
- Reviewed procedures for and evaluated the effectiveness of storage and handling of sources
- Reviewed documents involving transactions of sources
- Reviewed adequacy of licensee maintenance, posting, and labeling of nationally tracked sources

b. Findings

No findings of significance were identified.

40A6 Meetings

Exit Meeting Summary

On February 11, 2010, a regional inspector conducted a telephonic exit meeting to present the results of the in office inspection of changes to the licensee's emergency plan and emergency action levels to Mr. J. Austin, Manager, Emergency Preparedness. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On March 19, 2010, a regional inspector presented the results of the radiation safety inspection to Mr. D. Willis, General Manager of Plant Operations, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On April 1, 2010, the resident inspectors presented the inspection results to Mr. Brian O'Grady, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

SUPPLEMENTAL INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel

D. Anderson, Supervisor, ALARA
J. Austin, Manager, Emergency Preparedness
D. Boes, Welding Engineer
D. Buman, Director of Engineering
B. Chapin, Manager, Outage
S. Charbonnet, NPPD ESD Lead
R. Estrada, Manager, Design Engineering
J. Flaherty, Licensing
S. Freborg, ESD Mechanical Programs Supervisor
G. Gardner, NSSS Supervisor, System Engineering Department
T. Hough, Maintenance Rule Coordinator
N. Joergensen, Design Engineer
L. Keiser, SW and RHR System Engineer
D. Kirkpatrick, Technician, Radiation Protection
P. Leininger, Erosion/Corrosion Program Engineer
D. McMahon, REC System Engineer
M. Metzger, System Engineer
D. Madsen, Licensing
T. McClure, ISI Engineer
D. Parker, Manager, Maintenance
J. Paulman, Design Engineer
R. Penfield, Manager, Operations
D. Oshlo, Manager, Radiation Protection
A. Sarver, BOP/Elect/I&C Supervisor, System Engineering Department
J. Smith, Maintenance Welding Coordinator
K. Tanner, Supervisor, Radiation Protection
J. Teten, Chemistry Supervisor
D. VanDerKamp, Licensing Manager
R. Wulf, SED Manager
A. Zarembo, Director Nuclear Safety Assurance

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000298-2010002-01	NCV	Repeat Failure to Follow Procedure for Initiating Condition Reports
05000298-2010002-02	NCV	Inadequate Service Water Pump Room Loss of Heat Calculation

05000258-2009004-02 NCV Incorrect Assumptions and Loss of Configuration Control

05000294-2008005-04 NCV Failure to Initiate Condition Reports in a Timely Manner

LIST OF DOCUMENTS REVIEWED

Section 1RO4: Equipment Alignment

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
6.2DG.101	Diesel Generator 31 Day Operability Test (IST)(Div 2)	63
6.2DG.201	Diesel Generator Fuel Oil Transfer Pump IST Flow Test (Div 2)	22
6029200	Change Evaluation Document	

WORK ORDER

4721722

Section 1RO5: Fire Protection

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	CNS Fire Hazards Analysis Matrix	
10	Fire Brigade Scenario	3/3/10
91-2	Engineering Evaluation	
91-3	Engineering Evaluation	
93-13	Engineering Evaluation	
800000003838	Maintenance Plan	

Section 1RO6: Flood Protection Measures

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
91-069	NEDC "Moderate-Energy Line Break Flooding & Door Gap Calculation	7
0.5	Conduct of the Condition Reporting Process	65

Section 1R06: Flood Protection Measures

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
0.5.OPS	Operations Review of Condition Reports/Operability Determination	29
0.5.CR	Condition Report Initiation, Review, and Classification	15

CONDITION REPORT

CR-CNS-2009-05792 CR-CNS-2009-09563 CR-CNS-2010-01575 CR-CNS-2010-01595
CR-CNS-2010-01596 CR-CNS-2010-01634 CR-CNS-2010-01658

Section 1R11: Licensed Operator Requalification Program

LESSON

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
SKL052-52-101	Operations Reactor Recirculation Pump Binding, Stability Exclusion Region, Fuel Damage, Leak in Turbine Bldg, Emergency Depressurization	6

Section 1R12: Maintenance Effectiveness

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	CNS Maintenance Rule Periodic Assessment	3/1/2007-8/31/2008
10696542	Notification, Functional Failure Evaluation of Function CS-PF01B – provides cooling water to the above core area during accident conditions to cool the core and limit fuel cladding temperature. – Train B, following failure of CS-MO-MO5B, CSP B minimum flow bypass valve failed to open during surveillance testing	

CONDITION REPORT

CR-CNS-2009-08563

Section 1R13: Maintenance Risk Assessment and Emergent Work Controls

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
0.49	Administrative Procedure	
7.1.8	Maintenance Procedure, "Rigging and Lifting at Cooper Nuclear Station"	21

CONDITION REPORT

CR-CNS-2010-00130	CR-CNS-2010-01742 CA-1	CR-CNS-2010-00173	CR-CNS-2010-01534
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WORK ORDER

458567	4624534	4663573	4741809
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Section 1R15: Operability Evaluations

CONDITION REPORT

CR-CNS-2009-09171	CR-CNS-2009-01742	CR-CNS-2010-00129	CR-CNS-2010-00146
CR-CNS-2010-00479	CR-CNS-2010-01210	CR-CNS-2010-01525	

Section 1R18: Plant Modifications

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
4742749	Temporary Configuration Change	
6027780 CCN2	Change Evaluation Document, "Installation of On-Line NobleChem (OLNC) Injection Taps Contract Change Notice #2- Provide Evaluation of Noble Metal solution injected into RF system	
8.OLNC	Constuction Procedure, On-Line Noble Metal Application	
GEH-OLNC-0000-0099-8007-03R1	On-Line NobleChem Application Procedure for Cooper Nuclear Station	2/2010

Section 1R19: Postmaintenance Testing

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
6.HPCI.103	HPCI IST and 92 Day Test Mode Surveillance Operation	36
6.RCIC.102	"RCIC IST and 92 Day Test	24
6.2DG.201	Diesel Generator Fuel Oil Transfer Pump IST Flow Test (Div 2)	22

CONDITION REPORT

CR-CNS-2009-10611 CR-CNS-2009-10647 CR-CNS-2010-01415

WORK ORDER

4624534 4721722 4736483

Section 1R22: Surveillance Testing

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
6.2DG.101	Diesel Generator 31 Day Operability Test (IST)(Div 2)	63
6.2SW.101	Diesel Generator 31 Day Operability Test (IST)(Div 2)	63
6.RCIC.102	RCIC IST and 92 Day Test	24

Section 1R22: Surveillance Testing

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
6.2CS.101	Surveillance Procedure, "Core Spray Test Mode Surveillance Operation (IST)(DIV 2), performed 2/9/10	19
6.2SW.101	Service Water Surveillance Operation (Div 2) (IST)	32

WORK ORDER

4626093 4704955 4705283

Section 40A1: Performance Indicator Verification

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
0-PI-01	Administrative Procedure data sheets for "Unplanned Scrams per 7000 Hours Critical" for January-December 2009	
0-PI-01	Administrative Procedure data sheets for "Unplanned Power Changes > 20 percent" for January-December 2009	
NEI 99-02	Nuclear Energy Institute, "Regulatory Assessment Performance Indicator Guideline	6

Section 40A2: Identification and Resolution of Problems

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
NEDC 91-739	Review of APA Jacket Water, Lube Oil & Intercooler Heat Exchanger Calculations	August 28, 1991
CED 6008700	Service Water Pump Performance Improvements	November 18, 2002
NEDC 91-232	Service Water Pump Room Loss of Heat	3

CONDITION REPORT

CR-CNS-2010-00245 CR-CNS-2009-10389

2RS01 Radiological Hazard Assessment and Exposure Controls

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
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2RS01 Radiological Hazard Assessment and Exposure Controls

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
9.RADOP.10	Radioactive Sources Control and Accountability	17
9.EN-RP-101	Access Control for Radiologically Controlled Areas	6
9.EN-RP-106-1	Radiation and Contamination Surveys	9
9.EN-RP-108	Radiation Protection Posting	4
7.42.32	Work Over, Near, or in the Reactor Vessel, Dryer/Separator Storage Pool, or Spent Fuel Storage Pool	3

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
CNSLO 2009-0158-CA-4	Focused Assessment, "Hot Spots/Catch Containments	December 15, 2009

CONDITION REPORTS

CR-CNS-2009-07718	CR-CNS-2009-07912	CR-CNS-2009-08041	CR-CNS-2009-08286
CR-CNS-2009-08763	CR-CNS-2009-08781	CR-CNS-2009-09186	CR-CNS-2009-09944
CR-CNS-2009-10158	CR-CNS-2010-00367		

RADIOLOGICAL SURVEYS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
CNS-0912-0011	Northeast Quad Reactor Building Elevation 881 & 859	December 8, 2009
CNS-1002-0019	Northwest Quad Reactor Building Elevation 859	February 9, 2010
CNS-1002-0020	Northwest Quad Reactor Building Elevation 881	February 9, 2010
CNS-1002-0033	Southeast Quad Reactor Building Elevation 881	February 21, 2010
CNS-1002-0034	Southeast Quad Reactor Building Elevation 859	February 21, 2010
CNS-1002-0037	Southwest Quad Reactor Building Elevation 881	February 22, 2010
Airborne Survey	Radwaste Building General Area Elevation 934	March 17, 2010
Airborne Survey	Reactor Building "B" RHR Heat Exchanger Room	January 12, 2010
Airborne Survey	Reactor Building "B" RHR Heat Exchanger Room Tap #3	January 12, 2010

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
CNS RP-17	Lost, Damaged, or Miss-Positioned DLR Report for Mr. Blum	March 8, 2010
CNS RP-17	Lost, Damaged, or Miss-Positioned DLR Report for Mr. Bulmer	March 8, 2010
CNS RP-18	DRD Evaluation Report for Badge Number 4280	October 24, 2009
CNS RP-18	DRD Evaluation Report for Badge Number 4260	October 24, 2009
CNS RP-18	DRD Evaluation Report for Badge Number 3944	October 10, 2009
CNS RP-18	DRD Evaluation Report for Badge Number 646	October 26, 2009

2RS02 Occupational ALARA Planning and Controls

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
9.ALARA.1	Personnel Dosimetry and Occupational Radiation Exposure Program	37
9.ALARA.4	Radiation Work Permits	12
9.ALARA.5	ALARA Planning and Controls	19
9.ALARA.6	ALARA Reports	3
9.RADOP.1	Radiation Protection at CNS	9

MISCELLANEOUS

TITLE

Cooper Nuclear Station RE 25 Post Outage Report
Cooper Nuclear Station Collective Radiation Exposure Reduction Plan 2010-2014

CONDITION REPORTS

CR-CNS-2009-08661 CR-CNS-2009-08855 CR-CNS-2010-00525 CR-CNS-2010-00592
CR-CNS-2010-01263

RADIATION WORK PACKAGES

<u>NUMBER</u>	<u>TITLE</u>
2009-4	Feedwater Heater Replacement
2009-5	RE 25 Refuel Floor Activities
2009-30	RE 25 Shielding
2009-14	RE 25 Scaffold Activities

Section 40A1: Performance Indicator Verification

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
0-PI-01	Performance Indicator Program	27

Section 40A5 Temporary Instruction 2515/179

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
9.RADOP.10	Radioactive Sources Control and Accountability	17

CONDITION REPORT

LO-CNSLO-2008-00169

MISCELLANEOUS DOCUMENTS

<u>TITLE</u>	<u>DATE</u>
NRC Form 748 National Source Tracking Transaction Report	January 26, 2010
National Source Tracking System Annual Inventory 2010	January 4, 2010