



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BLVD
ARLINGTON, TEXAS 76011-4511

May 9, 2013

EA-13-075

Oscar A. Limpias, Vice President Nuclear and
Chief Nuclear Officer
Nebraska Public Power District
Cooper Nuclear Station
72676 648A Avenue
Brownville, NE 68321

**SUBJECT: COOPER NUCLEAR STATION STATION – NRC PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000298/2013009 AND NOTICE
OF VIOLATION**

Dear Mr. Limpias:

On March 28, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution biennial inspection at your Cooper Nuclear Station facility. The enclosed inspection report documents the inspection results, which the inspection team discussed on March 28, 2013, with you and your staff.

This inspection was an examination of activities conducted under your license as they relate to problem identification and resolution and to compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

Based on the inspection sample, the inspection team concluded that the implementation of the corrective action program and the overall performance related to identifying, evaluating, and resolving problems at Cooper Nuclear Station was adequate to support nuclear safety. The team noted that you and your staff have made improvements to the station's corrective action programs, processes, and procedures since the NRC's previous biennial problem identification and resolution inspection in June 2011.

The team observed that your staff generally identified problems and entered them into the corrective action program at a low threshold. In most cases, your staff effectively prioritized and evaluated problems commensurate with their safety significance, resulting in the identification of appropriate corrective actions. However, the team noted weaknesses in some of the station's evaluation processes, particularly in your staff's evaluations of the operability of degraded structures, systems, and components important to safety, as described by the station's design-basis documents, and the subsequent determinations of whether these degraded conditions required reports to the NRC. The attached Notice of Violation and inspection report discuss specific examples of these weaknesses.

Your staff generally implemented corrective actions timely, commensurate with the safety significance of the problems they were designed to correct. Most corrective actions reviewed by the team adequately addressed the causes of identified problems. Your staff appropriately reviewed and applied lessons learned from industry operating experience. The station's audits and self-assessments effectively identified problems and appropriate corrective actions, though the team noted one instance where a problem common to several audits was not evaluated in the aggregate. Finally, the team determined that your station's management maintains a healthy safety-conscious work environment where employees feel free to raise nuclear safety concerns without fear of retaliation.

The team identified one finding of very low safety significance (Green) during this inspection. This finding involved a violation of NRC requirements. The violation was evaluated in accordance with the NRC Enforcement Policy; it did not meet the criteria to be treated as a non-cited violation. The current version of this Policy is available on the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. This violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is cited in the Notice in accordance with Section 2.3.2.a of the Enforcement Policy because after the violation was previously identified as a non-cited violation, you failed to restore compliance within a reasonable time.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC's review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

Also based on the results of this inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. This violation is being treated as a non-cited violation (NCV), consistent with section 2.3.2.a of the NRC's Enforcement Policy.

If you contest either of these 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 IV; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001, and the NRC Resident Inspector at South Texas Project.

If you disagree with the cross-cutting aspect assigned to the finding, 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.

O. Limpias

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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/

Ray L. Kellar, P.E., Chief
Technical Support Branch
Division of Reactor Safety

Docket No.: 50-298
License No.: DPR-46

Enclosure:

1. Notice of Violation
2. Inspection Report 05000298/2013009
w/ Attachments

cc w/ encl: Electronic Distribution

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SUNSI Rev Compl.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ADAMS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Reviewer Initials	EAR
Publicly Avail.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sensitive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sens. Type Initials	EAR
DRP/PBC	DRS/EB2	DRS/EB1	C:DRP/PBC	ORA/ACES	DRS/TSB
CHenderson	CSpeer	JBraisted	DProulx	RBrowder	EARuesch
via e-mail	via e-mail	via e-mail	RCH/for	/RA/	Via e-mail
5/6/13	5/2/13	5/6/13	5/9/13	5/9/13	5/9/13

NOTICE OF VIOLATION

Nebraska Public Power District
Cooper Nuclear Station

Docket No: 50-298
License No: DPR-46
EA-13-075

During an NRC Inspection conducted from March 11 through 28, 2013, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2 and as specified in the license application, for those structures, systems, and components to which the appendix applies, are correctly translated into specifications, drawings, procedures, and instructions.

Contrary to above, from May 10, 2012 through March 13, 2013, the licensee failed to establish measures to assure that applicable regulatory requirements and design basis, as defined in 10 CFR 50.2 and as specified in the license application, for components to which 10 CFR 50 Appendix B applies, were correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to assure that the applicable design basis requirements associated with the standby liquid control system test tank were correctly translated into plant procedures to ensure that the standby liquid control system would be available following design basis seismic event.

This violation is associated with a Green Significance Determination Process finding.

Pursuant to the provisions of 10 CFR 2.201, Nebraska Public Power District is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region IV (ATTN: Mr. Ray L. Kellar, P.E., Chief, Technical Support Branch, Division of Reactor Safety, and a copy to the NRC Resident Inspector at Cooper Nuclear Station within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to Notice of Violation EA 13-075," and should include: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time. If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC website at www.nrc.gov/reading-rm/pdr.html or www.nrc.gov/reading-rm/adams.html, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the basis for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

Dated this 9th day of May, 2013.

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 50-298

License: DPR-46

Report: 05000298/2013009

Licensee: Nebraska Public Power District

Facility: Cooper Nuclear Station

Location: 72676 648A Avenue
Brownville, Nebraska 68321

Dates: March 11-28, 2013

Team Leader: E. Ruesch, Senior Reactor Inspector

Inspectors: J. Braisted, Ph.D., Reactor Inspector
C. Henderson, Resident Inspector
C. Speer, Reactor Inspector

Approved By: R.L. Kellar, P.E., Chief
Technical Support Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000298/2013009; March 11-28, 2013; Cooper Nuclear Station, Biennial Baseline Inspection of the Identification and Resolution of Problems

The team inspection was performed by one senior reactor inspector, two reactor inspectors, and one resident inspector. One violation of Green safety significance and one non-cited violation of Severity Level IV were identified during this inspection. The significance of most findings is indicated by a color (Green, White, Yellow, 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.

Identification and Resolution of Problems

The team reviewed approximately 220 condition reports, including associated work orders, engineering evaluations, root and apparent cause evaluations, and other supporting documentation. The purpose of this review, focused on documentation of higher-significance issues, was to determine whether the licensee had properly identified, characterized, and entered these issues into the corrective action program for evaluation and resolution. The team reviewed a sample of system health reports, self-assessments, trending reports and metrics, and various other documents related to the corrective action program. The team concluded that the licensee maintained a corrective action program in which issues were generally identified at an appropriately low threshold. Issues entered into the corrective action program were appropriately evaluated and timely addressed, commensurate with their safety significance. Corrective actions were generally effective, addressing the causes and extents of condition of problems.

The team determined that the licensee appropriately evaluated industry operating experience for relevance to the facility and entered applicable items in the corrective action program. The licensee used industry operating experience when performing root cause and apparent cause evaluations. The licensee performed effective quality assurance audits and self-assessments, as demonstrated by its self-identification of some needed improvements in corrective action program performance and of ineffective corrective actions.

The licensee maintained a safety-conscious work environment in which personnel felt free to raise nuclear safety concerns without fear of retaliation. All individuals interviewed by the team were willing to raise these concerns by at least one of the several methods available.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The team identified a Green violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to assure that design basis requirements

associated with the standby liquid control (SLC) system test tank were correctly translated into procedures. As a result, the licensee failed to maintain the tank empty as required to meet seismic design requirements. The violation is cited because the licensee failed to restore compliance in a reasonable time following documentation of the issue as a non-cited violation in NRC Inspection Report 05000298/2012002, issued May 10, 2012 (ML12131A674). The licensee entered these issues into its corrective action program for resolution as Condition Report CR-CNS-2013-01962, CR-CNS-2013-02027, and CR-CNS-2013-02328.

The failure to maintain design control of the standby liquid control system was a performance deficiency. This performance deficiency was of more than minor safety significance because it was associated with the design control attribute of the mitigating systems cornerstone and it adversely affected cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee's failure to implement procedures to ensure the SLC test tank remained in a seismically qualified condition resulted in an inability to provide reasonable assurance of operability following a seismic event. Using Inspection Manual Chapter 0609, Appendix A, Exhibit 2, the team determined that the finding was of very low safety significance (Green) because it was a design deficiency that did not result in the loss of functionality.

This finding had a cross-cutting aspect in the area of human performance associated with the decision-making component because the licensee failed to adopt a requirement to demonstrate that a proposed action was safe in order to proceed rather than a requirement to demonstrate it was unsafe in order to disapprove the action (H.1(b)). (Section 4OA2.5.1)

Cornerstone: Miscellaneous

SL-IV. The team identified a Severity Level IV non-cited violation of 10 CFR 50.72, "Immediate Notification Requirements for Operating Nuclear Power Reactors," for the licensee's failure to make a required report to the NRC. After the licensee determined that the standby liquid control test tank could not meet Seismic Class I requirements unless empty, the team discovered that the tank was full. The licensee immediately drained the tank and implemented a compensatory action to maintain it empty. However, the licensee failed to recognize that because the compensatory measure was required to provide a reasonable assurance of operability, the as-found condition of the SLC system—with the test tank full—rendered both trains of the system inoperable. Because this could have prevented the fulfillment of the SLC system's safety function, the licensee was required to report the condition to the NRC within eight hours of discovery. After identification, the licensee entered this issue into its corrective action program and made a late report to the NRC, restoring compliance with the regulation.

The failure to make a required report to the NRC within the required time was a performance deficiency. The team determined that traditional enforcement applied to this violation because the violation impeded the regulatory process. Specifically, the NRC relies on the licensee to identify and report conditions or events meeting the criteria specified in regulations in order to perform its regulatory oversight function. Assessing the violation in accordance with Enforcement Policy, the team determined it to be of

Severity Level IV because it involved the licensee's failure to make a report required by 10 CFR 50.72 (Enforcement Policy example 6.9.d.9). Because this was a traditional enforcement violation with no associated finding, no cross-cutting aspect is assigned to this violation. (Section 4OA2.5.2)

B. Licensee-Identified Violations

None

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (71152)

The team based the following conclusions on a sample of corrective action documents that were open during the assessment period, which ranged from June 25, 2011, to the end of the on-site portion of this inspection on March 28, 2013.

.1 **Assessment of the Corrective Action Program Effectiveness**

a. Inspection Scope

The team reviewed approximately 220 condition reports (CRs), including associated root cause, apparent cause, and direct cause evaluations, from approximately 18,000 that had been initiated between June 25, 2011, and March 28, 2013. The condition reports selected for review focused on risk-significant issues. In performing its review, the team evaluated whether the licensee had properly identified, characterized, and entered issues into the corrective action program, and whether the licensee had appropriately evaluated and resolved the issues in accordance with the established programs, processes, and procedures. The team also reviewed these programs, processes, and procedures to determine if any issues existed that may impair their effectiveness.

The team reviewed a sample of system health reports, operability determinations, self-assessments, trending reports and metrics, and various other documents related to the corrective action program. The team evaluated the licensee's efforts in establishing the scope of problems by reviewing selected logs, work orders, self-assessment results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team reviewed daily CRs, and attended the licensee's Condition Review Group meetings to assess the reporting threshold, prioritization efforts, and significance determination process, and to observe the interfaces with the operability assessment and work control processes when applicable. The team's review included verification that the licensee considered the full extent of cause and extent of condition for problems, as well as a review of how the licensee assessed generic implications and previous occurrences. The team assessed the timeliness and effectiveness of corrective actions, completed or planned, and looked for additional examples of problems similar to those the licensee had previously addressed. The team conducted interviews with plant personnel to identify other processes that may exist where problems may be identified and addressed outside the corrective action program.

The team reviewed corrective action documents that addressed past NRC-identified violations to ensure that corrective actions addressed the issues described in the inspection reports. The team reviewed a sample of corrective actions closed to other corrective action documents to ensure that corrective actions remained appropriate and timely.

The team considered risk insights from both the NRC's and Cooper Nuclear Station's risk assessments to focus the sample selection and plant tours on risk-significant systems and components. The team focused a portion of its sample on the standby liquid control systems and the residual heat removal system, which the team selected for a five-year in-depth review. The samples reviewed by the team focused on but were not limited to these systems. The team conducted walk-downs of these systems to assess whether licensee personnel identified problems at a low threshold and entered them into the corrective action program.

b. Assessments

1. Effectiveness of Problem Identification

During the 21-month inspection period, licensee staff generated approximately 18,000 condition reports. The licensee's CR generation rate of approximately 11,000 per year had been relatively constant over the previous four years. The team determined that most conditions that required generation of a CR by procedure 0.5, "Conduct of the Condition Report Process," and its implementing procedures were appropriately entered into the corrective action program.

The team noted three exceptions in which the licensee had not identified and evaluated adverse trends through the corrective action program as required by procedure 0.5.CR, "Condition Report Initiation, Review, and Classification," revision 19. These failures to identify the trends represented minor performance deficiencies that were not subject to enforcement action in accordance with the NRC Enforcement Policy:

- In the ten quality assurance audits reviewed by the team, the licensee had self-identified seven failures to implement industry recommendations or to incorporate vendor guidance into station procedures. The licensee had evaluated each of these instances individually, but did not identify and evaluate the potential adverse trend as required by procedure 0.5.CR, "Condition Report Initiation, Review, and Classification," revision 19. The licensee documented the team's observation in CR-CNS-2013-02411.
- In several condition reports, the licensee documented failures to completely evaluate design bases in operability evaluations. The licensee reviewed each of these instances individually, but did not identify and evaluate the potential adverse trend. This trend of inadequate documentation of operability evaluations is also referenced in the discussion of weaknesses in the licensee's evaluation processes in section 4OA2.1.b.2 below. The licensee documented the team's observations in CR-CNS-2013-02413.
- The licensee identified cases where it did not incorporate appropriate vendor guidance into procedures. The licensee evaluated the implementation of vendor guidance for specific issues, but not for the incorporation of vendor guidance as a whole. This issue was also discussed in section 4OA2.1.b.1, above.

The team concluded that despite this performance deficiency, the licensee maintained a low threshold for the formal identification of problems and entry into the corrective action program for evaluation. All personnel interviewed by the team understood the requirement and expressed a willingness to enter identified issues into the corrective action program at a very low threshold.

2. Assessment - Effectiveness of Prioritization and Evaluation of Issues

The team concluded that once the licensee entered issues into its corrective action program, most issues were appropriately evaluated and prioritized. The licensee screened approximately 8,400 (46%) of the 18,000 CRs generated during the inspection period as adverse conditions and approximately 300 (2%) of the CRs as requiring root or apparent cause evaluations. The sample of CRs reviewed by the team was focused on these higher-tier issues. The team reviewed a number of condition reports that involved operability reviews to assess the quality, timeliness, and prioritization of operability assessments. In general, most immediate and prompt operability assessments reviewed were adequately completed, and the team noted improvements in these evaluations since the previous problem identification and resolution inspection in June 2011.

However, the team noted weaknesses in some of the station's evaluation processes. Particularly, the team noted weaknesses in the licensee's evaluations of the operability of degraded structures, systems, and components important to safety, as described by the station's design-basis documents, and the subsequent determinations of whether these degraded conditions required reports to the NRC. The licensee documented the team's observations in CR-CNS-2013-02413. These observations are also referenced in a discussion of the licensee's failure to identify adverse trends in section 4OA2.1.b.1 above. Additionally, section 4OA5.5 below includes a specific example of an inadequate operability and reportability evaluation and an associated discussion of the licensee's failure to apply updated design information.

The team also noted an example of the licensee's failure to perform a required 10 CFR 50.59 applicability screen for a procedural change that could have affected the method for controlling a design function. Specifically, the licensee hung a caution tag that restricted the allowable modes of operation of backup safety-related battery chargers. Prior to identification by the team, the licensee had failed to evaluate whether this restriction, which had been in place for approximately five months, constituted a change per 10 CFR 50.59. This was a minor performance deficiency that is not subject to enforcement action in accordance with the NRC Enforcement Policy. The licensee documented the team's observation in CR-CNS-2013-02022.

Overall, the team determined that the licensee had an adequate process for screening and prioritizing issues that had been entered into the corrective action program, though some weaknesses were noted. The team made the following observations:

- During the licensee’s Condition Review Group (CRG) screening process, the screening group discussed each CR of A, B, or C significance individually. However, D-significance CRs were only discussed when a CRG member took exception to the CR’s classification or description; the licensee did not do a 100 percent screen of these CRs. The team noted that prior to the end of this inspection, the licensee changed its process to perform an individual screen of all CRs, regardless of significance. Though the team had provided this observation to the licensee prior to the change being implemented, the licensee made the change independent of the team’s observation.
- Although CRG and Corrective Action Review Board (CARB) members must be qualified through a formal training program, no continuing qualification requirements to maintain proficiency are in place. Further, the licensee’s CRG pre-screen group, which provides the initial screening and significance classification for CRs, lacks a formal qualification program.
- The team observed several additional potential weaknesses in the licensee’s CARB process. While the team did not identify a specific adverse result from these potential weaknesses, it determined that the weaknesses could contribute to the licensee’s broader issues in the area of prioritization and evaluation of problems. The licensee documented the team’s observations in CR-CNS-2013-02414.
 - The licensee typically lacks documentation for the basis behind decisions made during CARB meetings, specifically regarding decisions on significance.
 - On March 26, 2013, the team observed a meeting of the licensee’s CARB. Per 0-EN-LI-102, “Corrective Action Process,” revision 20C0, the function of the CARB is review and approval of root cause evaluations and selected apparent cause evaluations. However, the team noted that the CARB seemed to function more as a step in the editing and revision process for the cause evaluation rather than a management review and approval step. The team noted one instance where CARB approved a cause evaluation after a 40-minute discussion of weaknesses in the evaluation.
 - Changes to CARB-approved plans do not require further review. The team noted one instance in which the licensee changed a corrective action for a CARB-approved cause evaluation—which included a statement that the “CARB Chairman needs to concur with changes prior to closure”—but the change did not receive CARB review or approval (CR-CNS-2011-09071 CA 7). The licensee stated that this was acceptable per procedure.
 - By process, the CARB provides only a front-end review of significant corrective actions. CARB is required to review and approve the corrective action plan and effectiveness review plan for root causes, but CARB does not review corrective actions to prevent recurrence—designed to correct the root causes of significant conditions—or effectiveness reviews once they are complete.

During the 2011 problem identification and resolution inspection, the inspection team had identified weaknesses in the licensee's operability evaluations. During this inspection period, the licensee continued to have weaknesses in the area of operability evaluations and in subsequent evaluations of whether identified conditions require reports to the NRC. The licensee has identified and generally addressed the lack of adequate documentation in operability evaluations. However, as noted above, opportunities remain for further improvement—specifically in the incorporation of design basis information into operability evaluations.

Additionally, the 2011 problem identification and resolution inspection team noted a general weakness in the thoroughness of the licensee's evaluations. During the current inspection, the team noted that the licensee's performance in this area had improved. All evaluations reviewed appeared to be thorough enough to fully address and correct the identified problems.

Overall, the team determined that the licensee's process for screening and prioritizing issues that had been entered into the corrective action program was adequate to support nuclear safety. However, as discussed in the NRC's annual assessment letter dated March 4, 2013 (ML13063A76), the licensee has an open substantive cross-cutting issue in the area of problem identification and resolution, associated with a theme in the thoroughness of problem evaluation. This substantive cross-cutting issue, open since March 5, 2012, further indicates weaknesses in the licensee's effectiveness of prioritization and evaluation of problems.

3. Assessment – Effectiveness of Corrective Actions

Overall, the team concluded that the licensee implemented effective corrective actions for the problems identified and evaluated in the corrective action program. The team reviewed eleven corrective action effectiveness reviews for significant conditions adverse to quality and determined that the licensee had implemented effective corrective actions for the conditions.

With the exception of the standby liquid control test tank issue discussed in section 4OA2.5, the team noted that corrective actions to address the sample of NRC non-cited violations and findings since the last problem identification and resolution inspection had been timely and effective. Overall, the team concluded that the licensee generally developed appropriate corrective actions to address identified problems. The licensee generally implemented these corrective actions in a timely manner, commensurate with their safety significance, and reviewed the effectiveness of the corrective actions appropriately.

The team reviewed several corrective actions that the licensee had evaluated as having been less than fully effective. However, all these ineffective corrective actions had been self-identified by the licensee as part of its corrective action review process. The team determined that the licensee had improved the effectiveness of its corrective actions since the June 2011 problem identification and resolution inspection.

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

The team examined the licensee's program for reviewing industry operating experience, including reviewing the governing procedure and self-assessments. The team reviewed a sample of industry operating experience communications to assess whether the licensee had appropriately evaluated the communications for relevance to the facility. The team also reviewed assigned actions to determine whether they were appropriate. The team reviewed a sample of root and apparent cause evaluations to ensure that the licensee had appropriately included industry operating experience.

b. Assessment

Overall, the team determined that the licensee appropriately evaluated industry operating experience for its relevance to the facility. Of the operating experience items reviewed by the team, the licensee had entered all applicable items into the corrective action program and had evaluated these items in accordance with station procedures. The team further determined that the licensee appropriately evaluated industry operating experience when performing root cause investigations and apparent cause evaluations. The licensee appropriately incorporated both internal and external operating experience into lessons-learned for training and pre-job briefs.

In addition, the team reviewed twelve NRC bulletins, regulatory issue summaries, and information notices issued during the inspection period and found that in all cases, the licensee wrote a condition report and evaluated the applicability of the bulletin, regulatory issue summaries, or information notice to their facility. The team found the assessments were clearly documented and were appropriate for the circumstances.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The team reviewed a sample size of twenty-four licensee audits and self-assessments to assess whether the licensee was regularly identifying performance trends and effectively addressing them. The team reviewed audit reports to assess the effectiveness of assessments in specific areas. The team evaluated the use of self-assessments and the role of the quality assurance department. The specific audit and self-assessment documents reviewed are listed in the Attachment.

b. Assessment

The team concluded that the licensee generally had an adequate audit and self-assessment process. Audits and self-assessments were performed using station procedures and were documented thoroughly. Performance elements and standards were appropriate for the programs and processes evaluated. Attention was given to assigning team members with the requisite skills and experience, including individuals from outside organizations, to perform effective audits and self-assessments. Audits were self-critical, thorough, and identified new findings, performance deficiencies, and

other concerns in addition to evaluating known performance deficiencies across key functional areas. The licensee generated condition reports to document these findings, performance deficiencies, and other concerns. However, the team identified a missed opportunity to identify whether adverse performance trends existed across internal programs or processes in that CNS did not perform a collective review of audits and self-assessments. From their review, the team identified collective weaknesses in procedure adherence and adequate procedures. Specifically, the audits and self-assessments identified instances of missing torque values, untimely updates of controlled copies of documents, and failure to include vendor recommendations or industry guidance among others across programs and processes. The team notes that the licensee does have a corrective action to perform a common cause analysis of NRC identified findings.

Overall, the team determined that the licensee had generally developed appropriate corrective actions to address findings from audits and self-assessments, though these were not always effectively implemented. For example, the team notes that over the past several years the licensee had performed and documented multiple audits and self-assessments that identified longstanding programmatic issues with the Quality Control Program. However, the licensee has developed an Improvement Plan for the Quality Control Program that would likely remedy these programmatic issues when fully implemented.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The team interviewed thirty-nine individuals in six focus groups. The purpose of these interviews was (1) to evaluate the willingness of licensee staff to raise nuclear safety issues, either by initiating a condition report or by another method, (2) to evaluate the perceived effectiveness of the corrective action program at resolving identified problems, and (3) to evaluate the licensee's safety-conscious work environment (SCWE). The focus group participants were from Security, Radiation Protection, Chemistry, Engineering, Operations, and Maintenance. The individuals were selected blindly from these work groups, based partially on availability. To supplement these focus group discussions, the team interviewed the Employee Concerns Program (ECP) manager to assess her perception of the site employees' willingness to raise nuclear safety concerns. Finally, the team reviewed the licensee's most recent self-assessment of its safety-conscious work environment.

b. Assessment

1. Willingness to Raise Nuclear Safety Issues

All individuals interviewed indicated that they had no hesitation raising nuclear safety and other concerns. All felt that their management is receptive to nuclear safety concerns and is willing to address them promptly. All of the interviewees further stated that if they were not satisfied with the response from their immediate supervisor, they would feel free to escalate the concern. Most expressed positive experiences after raising issues to their supervisors or documenting issues in condition reports.

2. Employee Concerns Program

All interviewees were aware of the Employee Concerns Program. Most explained that they had heard about the program through various means, such as posters, training, presentations, and discussion by supervisors or management at meetings. Most did not have any personal experience with the ECP because, as noted above, they felt free to raise safety concerns to their supervisors; they did not need to use the ECP in these cases. However, all interviewees stated that they would use the program if they felt it was necessary. None of the interviewed personnel had heard of any issues dealing with breaches of confidentiality by the ECP staff, though several noted that the location of the ECP office in a high-traffic area near management offices did not lend itself to confidential meetings.

3. Preventing or Mitigating Perceptions of Retaliation

When asked if there have been any instances where individuals experienced retaliation or other negative reaction for raising issues, all individuals interviewed stated that they had neither experienced nor heard of an instance of retaliation, harassment, intimidation or discrimination at the site. The team determined that licensee management was successfully implementing processes it had in place to mitigate such issues.

.5 Findings

1. Failure to maintain seismic qualification of standby liquid control

Introduction. The team identified a Green violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to assure that design basis requirements associated with the standby liquid control (SLC) system test tank were correctly translated into procedures. As a result, the licensee failed to maintain the tank empty as required to meet seismic design requirements. This violation did not meet the criteria to be treated as a non-cited violation because after it had been previously documented by the NRC, the licensee failed to restore compliance in a reasonable period of time.

Description. On May 10, 2012, the NRC documented a non-cited violation for the licensee's failure to properly translate the seismic design basis of the SLC system into specifications, drawings, procedures, and instructions (NCV 05000298/2012002-04; see ML12131A674). The licensee generated calculation NEDC 12-015 as its prompt operability evaluation following identification of the 2012 violation. The licensee determined that NEDC 12-015 provided a reasonable assurance of SLC system operability while developing a design basis calculation to fully qualify the SLC system to the licensee's seismic requirements. The licensee initiated calculation NEDC13-010, "Cooper Nuclear Station Standby Liquid Control Storage, Test, and Mix Tanks Seismic Qualification," to evaluate the full seismic qualification of the SLC tanks and to establish the seismic design basis for these tanks.

On February 28, 2013, the licensee approved NEDC 13-010, revision 0, and engineering evaluation 13-009, "Standby Liquid Control System/Reactor Equipment Cooling," revision 0. This calculation and evaluation concluded that the standby liquid control test tank met Seismic Class I design requirements—as required for safety-related systems—only when empty; the tank did not meet these requirements when full. After approval of this calculation and engineering evaluation, the licensee closed the CRs related to NCV 2012002-04, documenting that all corrective actions were complete.

On March 13, 2013, after reviewing the licensee's completed corrective actions for the 2012 NCV, including the new design basis information documented in NEDC 13-010, the team walked down the SLC system to verify corrective actions. During this walk-down, the team identified that the SLC test tank was full, causing the SLC system to be in a condition that did not meet the licensee's design basis. Following the team's observation, the licensee immediately drained the tank. The licensee implemented Standing Order 2013-006 to maintain the test tank drained and to declare the SLC system inoperable when the tank is filled for testing.

The team determined that after adoption of the new design basis calculation, the licensee had failed to implement procedure changes or compensatory actions to ensure the test tank was empty. Instead, the licensee inappropriately relied on a previous, superseded calculation to justify operability. The licensee had thus failed to maintain seismic qualification of the SLC system. This failure did not result in an actual loss of system function. The licensee documented the condition and the team's associated observations in condition reports CR-CNS-2013-01962, CR-CNS-2013-2027, and CR CNS-2013-02328.

Analysis. The failure to maintain design control of the standby liquid control system was a performance deficiency. This performance deficiency was of more than minor safety significance because it was associated with the design control attribute of the mitigating systems cornerstone and it adversely affected cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee's failure to implement procedures to ensure the SLC test tank remained in a seismically qualified condition resulted in an inability to provide reasonable assurance of operability following a seismic event. Using Inspection Manual Chapter 0609, Appendix A, Exhibit 2, the team determined that the finding was of very low safety significance (Green) because the finding did not result in the loss of the system or its function. Using Inspection Manual Chapter 0609, Appendix A, Exhibit 2, the team determined that the finding was of very low safety significance (Green) because it was a design deficiency that did not result in the loss of functionality.

Because licensee personnel improperly decided to use a superseded calculation to justify operability rather than reevaluating operability using current, more conservative design information, this finding had a cross-cutting aspect in the area of human performance associated with the decision-making component. The licensee failed to use conservative assumptions in decision making and to adopt a requirement to demonstrate that a proposed action was safe in order to proceed (H.1(b)).

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” requires in part that measures shall be established to assure that applicable regulatory requirements and the design basis for those structures, systems, and components to which the appendix applies are correctly translated into specifications, drawings, procedures, and instructions. Contrary to this requirement, from May 10, 2012 until March 13, 2013, the licensee failed to establish measures to assure that applicable regulatory requirements and the design basis for a component to which the appendix applied were correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to assure that the design basis for the standby liquid control system test tank, a component to which 10 CFR 50 Appendix B applies, was translated into plant procedures to ensure that the standby liquid control system would be available following a design-basis seismic event.

Following identification of this violation by the team, the licensee documented the problem in its corrective action program, drained the standby liquid control test tank, and established a standing order to maintain the test tank drained and to declare system inoperable when the tank is filled for testing. In accordance with Section 2.3.2.a of the NRC Enforcement Policy, this finding is being cited because the licensee failed to restore compliance within a reasonable amount of time after the violation was initially identified in NRC Inspection Report 05000298/2012002. It therefore did not meet the criteria to be treated as a non-cited violation: VIO 05000298/2012009-01, “Failure to Maintain Seismic Qualification of Standby Liquid Control System.”

2. Failure to make a required report

Introduction. The team identified a Severity Level IV non-cited violation of 10 CFR 50.72, “Immediate Notification Requirements for Operating Nuclear Power Reactors,” for the licensee’s failure to make a required report to the NRC. Specifically, the licensee failed to report a condition that could have prevented fulfillment of a system’s safety function.

Description. On February 28, 2013, the licensee approved calculation NEDC13-010, “Cooper Nuclear Station Standby Liquid Control Storage, Test, and Mix Tanks Seismic Qualification,” revision 0, and engineering evaluation 13-009, “Standby Liquid Control System/Reactor Equipment Cooling,” revision 0. This calculation and evaluation concluded that the standby liquid control test tank met Seismic Class I design requirements—as required for safety-related systems—only when empty; the tank did not meet these requirements when full. The team noted that the failure of the SLC test tank would result in the loss of functionality of both trains of SLC, a technical-specification-required system.

On March 13, 2013, during a walk-down of the system, the team identified that the SLC test tank was full. After the team informed the control room of the condition, the licensee immediately drained the tank. The licensee initiated standing order 2013-006 to maintain the standby liquid control system test tank empty and to declare the system inoperable when the test tank is filled. The licensee credited this standing order as a compensatory measure to ensure operability of the SLC system and declared the system operable with this compensatory measure in place. However, the licensee failed to recognize that because the compensatory measure was required to provide a

reasonable assurance of operability, the as-found condition of the SLC system—with the test tank full—rendered both trains of the system inoperable. Because this could have prevented the fulfillment of the SLC system’s safety function, the licensee was required to report the condition to the NRC within eight hours of discovery.

On March 28, 2013, the licensee entered this issue into its corrective action program as condition report CR-CNS-2013-02410. Also on March 28, 2013, the licensee made Event Notification 48865 to the NRC Operations Center.

Analysis. The failure to make a required report to the NRC within the required time was a performance deficiency. The team determined that traditional enforcement applied to this violation because the violation impeded the regulatory process. Specifically, the NRC relies on the licensee to identify and report conditions or events meeting the criteria specified in regulations in order to perform its regulatory oversight function. Assessing the violation in accordance with Enforcement Policy, the team determined it to be of Severity Level IV because it involved the licensee’s failure to make a report required by 10 CFR 50.72 (Enforcement Policy example 6.9.d.9).

Because this was a traditional enforcement violation with no associated finding, no cross-cutting aspect is assigned to this violation.

Enforcement. Title 10 CFR 50.72(b)(3)(v) requires in part that licensee report within eight hours of discovery any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to shutdown the reactor and maintain it in a safe shutdown condition. Contrary to this requirement, on March 13, 2013, the licensee failed to report within eight hours of discovery an event or condition that could have prevented the fulfillment of the safety function of a system needed to shut down the reactor and maintain it in a safe shutdown condition. Specifically, the standby liquid control test tank was discovered to be full, a condition in which functionality of the standby liquid control system could not be reasonably assured following a seismic event. The licensee failed to report this condition to the NRC within eight hours of discovery.

Following discovery of the condition, the licensee immediately restored the system to a qualified condition. After acknowledging that the required report had not been made, the licensee entered the issue into its corrective action program on March 28, 2013, and made Event Notification 48865. This event notification, though late, restored compliance with applicable regulations.

Because this violation resulted in no or relatively inappreciable potential safety consequences (SL-IV) and was entered into the corrective action program as Condition Report CR-CNS-2013-02410, this violation is being treated as a non-cited violation, consistent with Section 2.3.2.a of the NRC Enforcement Policy: NCV 05000298/2013009-02, “Failure to Notify the NRC within Eight Hours of a Nonemergency Event.”

4OA3 Event Follow-up (71153)

(Closed) 05000298/2012006-00, "Missing Vent Plug Results in Technical Specification Prohibited Condition"

On November 7, 2012, the licensee discovered that a plug was missing from the top of Z sump vent connection, resulting in a breach of secondary containment integrity. Upon discovery, the control room and maintenance personnel were notified and the plug was reinstalled. The licensee later determined that the plug had been removed to obtain an air sample per procedure. However, the change in configuration had not been documented. The licensee determined that a procedural inadequacy was the root cause of this event.

To prevent recurrence of this event, the licensee implemented a corrective action to revise the procedure and preventive maintenance work items associated with the Z sump. These revisions will add explicit requirements to replace the plug to reestablish secondary containment integrity upon completion of work activities. The team reviewed these planned revisions and determined that when implemented, they would likely correct the condition.

No findings were identified. LER 05000298/2012006-00 is closed.

4OA6 Meetings

Exit Meeting Summary

On March 28, 2013, the team presented the inspection results to Mr. Oscar Limpas, Vice President–Nuclear and Chief Nuclear Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information that the team reviewed had been returned or destroyed.

ATTACHMENTS:

1. Supplemental Information
2. Information Request
3. Supplemental Information Request

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

D. Kirkpatrick, Quality Control Program Coordinator
G. Smith, Engineer, Nuclear Steam Supply System
J. Ehlers, Engineering Supervisor, Electrical Systems/I&C
J. Flaherty, Engineer, Licensing
D. Cunningham, Instrument & Control Supervisor, Maintenance
R. Estrada, Design Engineering Manager
R. Penfield, Operations Manager
A. Schroeder, Non-Licensed Nuclear Plant Operator
L. Dewhirst, Corrective Action & Assessments Manager
E. Montgomery, Engineer, Electrical Systems/I&C

NRC personnel

J. Josey, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

05000298/2013009-01	VIO	Failure to Maintain Seismic Qualification of Standby Liquid Control System (Section 40A2.5)
05000298/2013009-02	NCV	Failure to Notify the NRC within Eight Hours of a Nonemergency Event (Section 40A2.5)

Closed

05000298/2012006-00	LER	Missing Vent Plug Results in Technical Specification Prohibited Condition (Section 40A3)
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LIST OF DOCUMENTS REVIEWED

Condition Reports (CRs)

CR-CNS-2008-01352	CR-CNS-2011-08139	CR-CNS-2012-00376
CR-CNS-2008-03338	CR-CNS-2011-08226	CR-CNS-2012-00451
CR-CNS-2008-05767	CR-CNS-2011-08284	CR-CNS-2012-00722
CR-CNS-2008-07340	CR-CNS-2011-08610	CR-CNS-2012-00875
CR-CNS-2009-00613	CR-CNS-2011-08636	CR-CNS-2012-01083
CR-CNS-2009-04042	CR-CNS-2011-08640	CR-CNS-2012-01145
CR-CNS-2009-04819	CR-CNS-2011-08703	CR-CNS-2012-01214
CR-CNS-2009-07191	CR-CNS-2011-09071	CR-CNS-2012-01218
CR-CNS-2009-07519	CR-CNS-2011-09120	CR-CNS-2012-01224
CR-CNS-2009-07775	CR-CNS-2011-09217	CR-CNS-2012-01232
CR-CNS-2009-09023	CR-CNS-2011-09227	CR-CNS-2012-01522
CR-CNS-2009-09486	CR-CNS-2011-09551	CR-CNS-2012-01530
CR-CNS-2009-09548	CR-CNS-2011-09654	CR-CNS-2012-01611
CR-CNS-2009-10691	CR-CNS-2011-09892	CR-CNS-2012-01651
CR-CNS-2010-00314	CR-CNS-2011-09933	CR-CNS-2012-01918
CR-CNS-2010-00361	CR-CNS-2011-09946	CR-CNS-2012-01929
CR-CNS-2010-00656	CR-CNS-2011-10023	CR-CNS-2012-01962
CR-CNS-2010-02709	CR-CNS-2011-10026	CR-CNS-2012-01999
CR-CNS-2010-03195	CR-CNS-2011-10249	CR-CNS-2012-02532
CR-CNS-2010-05924	CR-CNS-2011-10391	CR-CNS-2012-02566
CR-CNS-2010-08242	CR-CNS-2011-10473	CR-CNS-2012-02620
CR-CNS-2010-08409	CR-CNS-2011-10546	CR-CNS-2012-02716
CR-CNS-2010-08960	CR-CNS-2011-10601	CR-CNS-2012-02742
CR-CNS-2011-00461	CR-CNS-2011-10618	CR-CNS-2012-02767
CR-CNS-2011-00684	CR-CNS-2011-10654	CR-CNS-2012-02814
CR-CNS-2011-01333	CR-CNS-2011-11307	CR-CNS-2012-02914
CR-CNS-2011-02021	CR-CNS-2011-11385	CR-CNS-2012-03052
CR-CNS-2011-02084	CR-CNS-2011-11564	CR-CNS-2012-03061
CR-CNS-2011-03106	CR-CNS-2011-11566	CR-CNS-2012-03137
CR-CNS-2011-03890	CR-CNS-2011-11581	CR-CNS-2012-03523
CR-CNS-2011-04065	CR-CNS-2011-11593	CR-CNS-2012-03527
CR-CNS-2011-04575	CR-CNS-2011-11725	CR-CNS-2012-03528
CR-CNS-2011-04643	CR-CNS-2011-11740	CR-CNS-2012-03543
CR-CNS-2011-04780	CR-CNS-2011-11777	CR-CNS-2012-03549
CR-CNS-2011-04891	CR-CNS-2011-11796	CR-CNS-2012-03576
CR-CNS-2011-05201	CR-CNS-2011-11861	CR-CNS-2012-03580
CR-CNS-2011-05251	CR-CNS-2011-12071	CR-CNS-2012-03612
CR-CNS-2011-06136	CR-CNS-2011-12189	CR-CNS-2012-03620
CR-CNS-2011-06686	CR-CNS-2011-12266	CR-CNS-2012-03764
CR-CNS-2011-06771	CR-CNS-2011-12319	CR-CNS-2012-03814
CR-CNS-2011-07175	CR-CNS-2011-12325	CR-CNS-2012-03817
CR-CNS-2011-07339	CR-CNS-2011-12437	CR-CNS-2012-03861
CR-CNS-2011-07475	CR-CNS-2012-00189	CR-CNS-2012-03894
CR-CNS-2011-07712	CR-CNS-2012-00210	CR-CNS-2012-03920
CR-CNS-2011-07898	CR-CNS-2012-00375	CR-CNS-2012-03946

CR-CNS-2012-04456
CR-CNS-2012-04628
CR-CNS-2012-04875
CR-CNS-2012-04891
CR-CNS-2012-04903
CR-CNS-2012-05076
CR-CNS-2012-05224
CR-CNS-2012-05225
CR-CNS-2012-05292
CR-CNS-2012-05293
CR-CNS-2012-05294
CR-CNS-2012-05305
CR-CNS-2012-05848
CR-CNS-2012-05849
CR-CNS-2012-05990
CR-CNS-2012-06034
CR-CNS-2012-06723
CR-CNS-2012-06829
CR-CNS-2012-07174
CR-CNS-2012-07333
CR-CNS-2012-07334
CR-CNS-2012-07365
CR-CNS-2012-07378
CR-CNS-2012-07534
CR-CNS-2012-07881
CR-CNS-2012-07887
CR-CNS-2012-07939
CR-CNS-2012-08139
CR-CNS-2012-08148
CR-CNS-2012-08169
CR-CNS-2012-08292
CR-CNS-2012-08368

CR-CNS-2012-08377
CR-CNS-2012-08433
CR-CNS-2012-08460
CR-CNS-2012-08472
CR-CNS-2012-08547
CR-CNS-2012-08551
CR-CNS-2012-08671
CR-CNS-2012-08957
CR-CNS-2012-09161
CR-CNS-2012-09317
CR-CNS-2012-09352
CR-CNS-2012-09475
CR-CNS-2012-10256
CR-CNS-2012-10473
CR-CNS-2012-10488
CR-CNS-2012-10514
CR-CNS-2012-10543
CR-CNS-2012-10636
CR-CNS-2013-00112
CR-CNS-2013-00123
CR-CNS-2013-00230
CR-CNS-2013-00268
CR-CNS-2013-00452
CR-CNS-2013-00480
CR-CNS-2013-00571
CR-CNS-2013-00734
CR-CNS-2013-00755
CR-CNS-2013-00782
CR-CNS-2013-00936
CR-CNS-2013-01195
CR-CNS-2013-01297
CR-CNS-2013-01318

CR-CNS-2013-01365
CR-CNS-2013-01457
CR-CNS-2013-01628
CR-CNS-2013-01734
CR-CNS-2013-01804
CR-CNS-2013-01820
CR-CNS-2013-01824
CR-CNS-2013-01837
CR-CNS-2013-01876
CR-CNS-2013-01893
CR-CNS-2013-01901
CR-CNS-2013-01920
CR-CNS-2013-01962
CR-CNS-2013-02003
CR-CNS-2013-02027
CR-CNS-2013-02149
CR-CNS-2013-02328
LO-CNSLO-2011-00090
LO-CNSLO-2011-00112
LO-CNSLO-2011-00114
LO-CNSLO-2011-00116
LO-CNSLO-2011-00123
LO-CNSLO-2011-00129
LO-CNSLO-2012-00011
LO-CNSLO-2012-00060
LO-CNSLO-2012-00061
LO-CNSLO-2012-00068
LO-CNSLO-2012-00069
LO-CNSLO-2012-00076
LO-CNSLO-2012-00079

Work Orders

WO4917843
WO4868494
WO4885920
WO4917853
WO4813254
WO4813256

WO4705009
WO4908111
WO4908120
WO4863752
WO4848307
WO4848588

WO4923630
WO4857089
WO4534594
WO4938028

Procedures

Number	Title	Revision/Date
0.10	Operating Experience Program	30
0.12	Working Hour Limitations and Personnel Fatigue Management	29
0.4	Procedure Change Process	57
0.40	Work Control Program	85
0.4.IDOCS	Requesting Procedure Change in IDOCS	4
0.5	Conduct of the Condition Report Process	70
0.5.CR	Condition Report Initiation, Review, and Classification	19
0.5.EVAL	Preparation of Condition Reports	24
0.5.NAIT	Corrective Action Implementation and Nuclear Action Item Tracking	45
0.5.OPS	Operations Review of Condition Reports/Operability Determination	39
0.5.ROOT-CAUSE	Root Cause Analysis Procedure	15
0.5.TRND	Corrective Action Program (CAP) Trending	14
0.5.OPS	Operation Review of Condition Reports/Operability Determination	40
0.9	Tagout	79
0-Barrier	Barrier Control Process	0
0-Barrier-Control	Control Building	0
0-Barrier-Misc	Miscellaneous Building	0
0-Barrier-Reactor	Reactor Building	0
0-CNS-WM-105	Planning	4
0-EN-DC-205	Maintenance Rule Monitoring	3
0-EN-FAP-LI-003	Corrective Action Review Board (CARB) Process	8C1
0-EN-LI-102	Corrective Action Process	20C0
0-EN-LI-118	Root Cause Evaluation Process	18C0
0-EN-LI-119	Apparent Cause Evaluation (ACE) Process	16C0

0-EN-OE-100	Operating Experience Program	16C0
0-QA-01	CNS Quality Assurance Program	16
0-QA-02	Conduct of Internal Audits	9
0-QA-05	QA Audit Requirements, Frequencies, and Scheduling	11
0-QA-08	Quality Assurance Training Program	9
13.17.2	Thermal Performance Test Procedure for Residual Heat Removal Heat Exchangers	June 28, 2012
2.0.11	Entering and Exit Technical Specification/TRM/ODAM LCO Condition(s)	36
2.0.12	Operator Challenges	9
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2.0.4	Relief Personnel and Shift Turnover	45
2.1.1	Startup Procedure	167
2.1.1.1	Plant Startup Review and Authorization	22
2.1.1.2	Technical Specification Pre-Startup Checks	35
2.2.24.2	250 VDC Electrical System (Div 2)	14
2.2.25.2	125 VDC Electrical System (Div 2)	21
2.2.74A	Standby Liquid Control System Component Checklist	10
2.2.A.REC.DIV3	Reactor Equipment Cooling System Common Divisional Component Checklist	2
6.1HV.303	Division 1 Essential Control Building Ventilation Temperature Switch Change Out and Functional Test	14
6.2HV.303	Division 2 Essential Control Building Ventilation Temperature Switch Change Out and Function Test	17
6.Log.601	Daily Surveillance Log – Modes 1, 2, and 3	111
7.0.5	Post Maintenance Testing	44
7.2.42.2	RHR Heat Exchanger Maintenance	January 7, 2009
7.3.31.6	Safety-Related 125V/250V Battery Cell Replacement (Off-Line)	4
7.3.5	EQ Terminal Box Examination and Maintenance	22
EN-DC-345	Equipment Reliability Clock	0C0
Security Procedure 2.5	Personnel Access Control	43

Audits

Number	Area	Date
11-03	Procurement	July 7, 2011
11-04	Maintenance	October 28, 2011
11-05	Radiological Effluents and Environmental Monitoring Program and Chemistry	November 9, 2011
11-06	Quality Assurance	September 16, 2011
11-08	Training	January 11, 2011
12-01	Engineering	April 4, 2012
12-02	Corrective Action Program	May 9, 2012
12-03	Radiological Controls	July 30, 2012
12-04	Operations and Technical Specifications	September 19, 2012
12-05	Document Control and Records	November 6, 2012
12-06	Quality Control Re-Audit	September 28, 2012
12-07	Emergency Plan	January 31, 2013
S12-01	Nuclear Safety Culture	May 1, 2012

Other

Number	Title	Revision/Date
	RHR Surveillance Performance History (01/01/2008 – 02/14/2013)	
	RHR Corrective Maintenance Orders (02/02/2008 – 11/22/2012)	
	RHR System Health Report	January 2013
	OE RHRSWBP Performance: Administrative Compensatory Actions to address degraded RHRSWBP operation	0
	QC Program Improvement Plan	March 26, 2013
	SW System Health Report	January 2013
	System Engineer Desktop Guide: Section V – System Trending	7
	4" Dia. T-8B1 Seal per Drawing CF-SP-34126-1	September 2, 1992

Number	Title	Revision/Date
	RHR System Trend Plan	
	RHR System Engineering Walkdown	February 2013
	RHR System Engineering Walkdown	January 2013
CED 6032263	Gear Ratio Change for RHR-MO39A and B	A
COR002-23-02	OPS Residual Heat Removal System	27
NEDC 95-003	Determination of Allowable Operating Parameters for CNS MOV Program MOVs	27C4
NEDC09-102	Internal Flooding – HELB, MELB, and Feedwater Line Break	0
BLDG-F12	Performance Basis Criteria Document	1
BLDG-F13	Performance Basis Criteria Document	3
BLDG-F16	Performance Basis Criteria Document	3
BLDG-F19	Performance Basis Criteria Document	3
HPCI-F01	Performance Basis Criteria Document	
NEDC12-012	Turbine Generator Building Siding Blowout Pressure, other than EQ purposes	0
NEDC03-005	Turbine Generator Building Siding Blowout Pressure	4
NEDC11-135	Qualification of Doors R208, R209, and N104	0
NEDC13-010	CNS SLC Storage, Test, and Mix Tanks Seismic Qualification	0
Engineering Evaluation 13-009	Standby Liquid Control System/Reactor Equipment Cooling	0
TCC 4920141	Jumper OMAS on DG1 for Automatic Operation	0
TCC 4895999	Gag Open RHR HX A Inlet Valve SW-V-145	0
Burns and Roe Drawing 2036 Sheet 1	Flow Diagram Reactor Building Service Water System	N99
TCC4917859	Temporary Repair on Service Water Booster Pump D	
TCC4742749	Install Gag on SW-V-145	
Burns and Roe 2031 Sheet 2	Flow Diagram Reactor Building – Closed Cooling Water System Cooper Nuclear Station	N65
CNS System Health	HPCI	December 2012

Number	Title	Revision/Date
CNS System Health	Service Water	January 2013
CED 6028000	REC and TEC Oxygen Injection	CCN 2
CNS System Health	EE-DC	January 2013
Burns and Roe 2045 Sheet 2	Flow Diagram Standby Liquid Control System	N21
NEDC10-060	DG2 Mechanical Overspeed Governor Assembly Stud Evaluation	1
CNS System Health	Reactor Equipment Cooling	January 2013
LER 05000298/2012006	Missing Vent Plug Results in Technical Specification Prohibited Condition	0
CNSLO-2012-0060	50.59 Program Implementation Focused Self Assessment	March 12-23, 2012
	2011 Fatigue Management Program Annual Effectiveness Review Summary	01/24/2012
	2012 Fatigue Management Program Annual Effectiveness Review Summary	01/29/2013
NEDC 09-102	Internal Flooding- HELB, MELB, and Feedwater Line Break	0
FAS 2013-003	Fatigue Assessment Summary	03/07/2013
FAS 2013-001	Fatigue Assessment Summary	01/10/2013
	Nuclear Safety Culture Assessment	December 2010
	Snapshot Assessment/Benchmark on: Effectiveness Review of Actions Taken to Resolve Issues Identified During the Nuclear Safety Culture Assessment Performed in December 2010	December 28, 2011
	Safety Conscience [sic] Work Environment: 2011 Survey Results	

**Information Request
Biennial Problem Identification and Resolution Inspection
Cooper Nuclear Station
January 17, 2013**

Inspection Report: 50-298/2013-009
On-site Inspection Dates: March 11-15 & 25-28, 2013

This inspection will cover the period from June 25, 2011 through March 28, 2013. All requested information should be limited to this period or to the date of this request unless otherwise specified. To the extent possible, the requested information should be provided electronically in Adobe PDF (preferred) or Microsoft Office format. Any sensitive information should be provided in hard copy during the team's first week on site.

Lists of documents should be provided in Microsoft Excel or a similar sortable format. Please be prepared to provide any significant updates to this information during the team's first week of on-site inspection. "Corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to Cooper Nuclear Station.

Please provide the following information no later than February 22, 2013:

1. Document Lists

Note: For these summary lists, please include the document/reference number, the document title, initiation date, current status, and long-text description of the issue.

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period
- c. Summary lists of all corrective action documents which were upgraded or downgraded in priority/significance during the period (these may be limited to those downgraded from, or upgraded to, apparent-cause level or higher)
- d. Summary list of all corrective action documents initiated during the period that "roll up" multiple similar or related issues, or that identify a trend
- e. Summary lists of operator workarounds, operator burdens, temporary modifications, and control room deficiencies currently open, or that were evaluated or closed during the period
- f. Summary list of safety system deficiencies that required prompt operability determinations (or other engineering evaluations) to provide reasonable assurance of operability

- g. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent) (sensitive information can be made available during the team's first week on site)
- h. Summary list of all Apparent Cause Evaluations completed during the period
- i. Summary list of all Root Cause Evaluations planned or in progress but not complete at the end of the period, with planned completion or due date

2. Full Documents with Attachments

- a. Root Cause Evaluations completed during the period
- b. Quality Assurance audits performed during the period
- c. All audits/surveillances, performed during the period, of the Corrective Action Program, of individual corrective actions, and of cause evaluations
- d. Functional area self-assessments and non-NRC third-party assessments (i.e., peer assessments performed as part of routine or focused station self- and independent assessment activities; do not include INPO assessments) that were performed or completed during the period; include a list of those that are currently in progress
- e. Corrective action documents generated during the period associated with the following:
 - i. NRC findings and/or violations issued to Cooper Nuclear Station
 - ii. Licensee Event Reports issued by Cooper Nuclear Station
- f. Corrective action documents generated for the following, if they were determined to be applicable to Cooper Nuclear Station (for those that were evaluated but determined not to be applicable, provide a summary list):
 - i. NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period
 - ii. Part 21 reports issued or evaluated during the period
 - iii. Vendor safety information letters (or equivalent) issued or evaluated during the period
 - iv. Other external events and/or Operating Experience evaluated for applicability during the period

- g. Corrective action documents generated for the following:
 - i. Emergency planning drills and tabletop exercises performed during the period
 - ii. Maintenance preventable functional failures which occurred or were evaluated during the period
 - iii. Adverse trends in equipment, processes, procedures, or programs that were evaluated during the period
 - iv. Action items generated or addressed by offsite review committees during the period

3. Logs and Reports

- a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization (if this information is fully included in item 3.c, it need not be provided separately)
- b. Corrective action effectiveness review reports generated during the period
- c. Current system health reports, Management Review Meeting package, or similar information; provide past reports as necessary to include ≥ 12 months of metric/trending data
- d. Radiation protection event logs during the period
- e. Security event logs and security incidents during the period (sensitive information can be made available during the team's first week on site)
- f. Employee Concern Program (or equivalent) logs (sensitive information can be made available during the team's first week on site)
- g. List of training deficiencies, requests for training improvements, and simulator deficiencies for the period

Note: For items 3.d–3.g, if there is no log or report maintained separate from the corrective action program, please provide a summary list of corrective action program items for the category described.

4. Procedures

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures that implement the corrective action program at Cooper Nuclear Station

- b. Quality Assurance program procedures (specific audit procedures are not necessary)
- c. Employee Concerns Program (or equivalent) procedures
- d. Procedures which implement/maintain a Safety Conscious Work Environment

5. Other

- a. List of risk-significant components and systems, ranked by risk worth
- b. Organization charts for plant staff and long-term/permanent contractors
- c. For each week the team is on site,
 - i. Planned work/maintenance schedule for the station
 - ii. Schedule of management or corrective action review meetings (e.g. operations focus meetings, CR screening meetings, CARBs, MRMs, challenge meetings for cause evaluations, etc.)
 - iii. Agendas for these meetings

Note: The items listed in 5.c may be provided on a weekly or daily basis after the team arrives on site.

- d. Electronic copies of the FSAR, technical specifications, and technical specification bases, if available

All requested documents should be provided electronically where possible. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. One copy of the CD or DVD should be provided to the resident inspector at Cooper Nuclear Station; three additional copies should be sent to the team lead, to arrive no later than February 22, 2013:

Eric A. Ruesch
U.S. NRC Region IV
1600 East Lamar Blvd.
Arlington, TX 76011-4511

PAPERWORK REDUCTION ACT STATEMENT

This request does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011.

**Supplemental Information Request
Biennial Problem Identification and Resolution Inspection
Cooper Nuclear Station
March 7, 2013**

Inspection Report: 50-298/2013-009
On-site Inspection Dates: March 11-15 & 25-28, 2013

This request supplements the original information request. Where possible, the information should be available to the inspection team immediately following the entrance meeting. The meeting agendas requested in item 1 should be provided when developed. This inspection will cover the period from June 25, 2011 through March 28, 2013. All requested information should be limited to this period or to the date of this request unless otherwise specified.

Please provide the following:

1. For each week the team is on site,
 - Planned work/maintenance schedule for the station
 - Schedule of management or corrective action review meetings (e.g. CRB, MRM, CAR screening meetings, etc.)
 - Agendas for these meetings

2. As part of the inspection, the team will do a five-year in-depth review of issues and corrective actions related to the residual heat removal (RHR) system. The following documents are to support this review (electronic format preferred):
 - Copies of upper and lower tier cause evaluations performed on the RHR system within the last 5 years, including root cause evaluations not already provided
 - List of all surveillances run on the RHR system within the last five years, sortable by component and including acceptance criteria
 - List of all corrective maintenance work orders performed on the RHR system within the last 5 years
 - List of maintenance rule functional failure assessments—regardless of the result—performed on the RHR system within the last 5 years
 - System training manual(s) for the RHR system
 - Engineering forms/logs containing notes from the last two engineering walk-downs of the RHR system

3. The team will also review the station's implementation of the fatigue rule. These documents support this review:
 - List of all fatigue assessments performed during the inspection period separated by department
 - List of all work hour rule waivers and violations during the inspection period separated by department
 - Fatigue rule implementing procedures

4. Specific documents:

- Documentation of modifications and temporary modifications (include associated condition reports):
 - TCC4896041 Gag Open RHR A Inlet Valve SW-V-145
 - TCC4920141 Jumper OMAS on DG1 for Automatic Operation
 - TCC4917859 Temporary Repair of Leak on SWBP D
 - TCC4908683 Service Water Discharge Pipe Repair
 - CED6028000
- Procedures
 - 2.2.65
 - 6.LOG.601
 - 10.5
 - 10.8
- Condition reports:
 - CR-CNS-2009-00613
 - CR-CNS-2009-07191
 - CR-CNS-2009-10222
 - CR-CNS-2009-10691
 - CR-CNS-2010-05023
 - CR-CNS-2010-05924
 - CR-CNS-2010-05972
 - CR-CNS-2010-08193
 - CR-CNS-2011-00461
 - CR-CNS-2011-00684
 - CR-CNS-2011-04643
 - CR-CNS-2011-08226
 - CR-CNS-2011-08284
 - CR-CNS-2011-08636
 - CR-CNS-2011-08640
 - CR-CNS-2011-09120
 - CR-CNS-2011-09551
 - CR-CNS-2011-12071
 - CR-CNS-2012-00210
 - CR-CNS-2012-00649
 - CR-CNS-2012-01522
 - CR-CNS-2012-01530
 - CR-CNS-2012-01611
 - CR-CNS-2012-01929
 - CR-CNS-2012-01999
 - CR-CNS-2012-02343
 - CR-CNS-2012-02532
 - CR-CNS-2012-03704
 - CR-CNS-2012-05224
 - CR-CNS-2012-07372
 - CR-CNS-2012-08368
 - CR-CNS-2012-09691

PAPERWORK REDUCTION ACT STATEMENT

This request does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011.