UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-8064

January 9, 2002

David L. Wilson, Vice President of
Nuclear Energy
Nebraska Public Power District
P.O. Box 98
Brownville, Nebraska 68321

SUBJECT: COOPER NUCLEAR STATION - NRC INSPECTION REPORT 50-298/01-10

Dear Mr. Wilson:

On September 21, 2001, the NRC completed an inspection at your Cooper Nuclear Station. The enclosed report documents the inspection findings, which were discussed on December 18, 2001, with you and other members of your staff.

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

The team found that your process for the identification, prioritization, evaluation, and correction of problems was acceptable. However, the team identified a number of implementation problems such as issues being improperly characterized and classified, management meetings associated with the corrective action process that were observed by the team to be less than fully effective, poor documentation of planned and completed corrective actions, weak engineering justification for changes to the facility, the development of unrealistic issue resolution dates, ineffective corrective actions associated with conducting operability determinations and evaluations, and ineffective corrective actions associated with the implementation of your scaffolding program. Your quality assurance audits and assessments were found to be critical of the problem identification and resolution program. However, the issues identified by these audits were not being corrected effectively, as evidenced by repeat findings in similar areas.

A repetitive cross-cutting finding in the area of identification and resolution of problems was identified by the team and is discussed in Section 4OA4 of the report. This finding reflected that a general lack of understanding and ownership of the programs and procedures for identifying and resolving issues at your facility and that your efforts at correcting these issues over the past year were not effective. The underlying causes associated with the crosscutting finding are consistent with other recent NRC inspections and reviews. For example, NRC Inspection Reports 50-298/00-16 and 50-298/01-04 documented a failure to identify and failure to correct the inability to assess degraded core conditions during an emergency preparedness exercise and drill. The findings associated with these two reports were characterized as low to

moderate risk significant issues (White) in the cornerstone of emergency preparedness. These issues are currently the subject of an NRC supplemental inspection, and will be documented in NRC Inspection Report 50-298/01-11.

Based on the results of this inspection, the NRC has identified issues that were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that violations are associated with these issues.

These violations were evaluated in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. These violations are not being cited because of their very low risk significance (Green). These violations are being treated as noncited violations, consistent with Section VI.A of the Enforcement Policy. The noncited violations are described in the subject inspection report. If you contest the violations or 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, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Cooper Nuclear Station facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) 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/

Anthony T. Gody, Chief
Operations Branch
Division of Reactor Safety

Docket: 50-298
License: DPR-46

Enclosure:
NRC Inspection Report
50-298/01-10

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ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket:	50-298
License:	DPR-46
Report No.:	50-298/01-10
Licensee:	Nebraska Public Power District
Facility:	Cooper Nuclear Station
Location:	P.O. Box 98 Brownville, Nebraska
Dates:	September 10-21, 2001
Team Leader:	T. A. Easlick, Senior Resident Inspector, Region II
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Approved By:	Anthony T. Gody, Chief Operations Branch Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000298-01-010; on 9/10-21/2001; Nebraska Public Power District: Cooper Nuclear Station: Identification and Resolution of Problems; Initiating Events, Mitigating Systems, Barrier Integrity.

The inspection was conducted by two senior resident inspectors, a resident inspector, and a senior project engineer. The inspection identified five issues that were evaluated as having very low safety significance (Green), all of which are being treated as noncited violations. The significance of issues was indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process in NRC Inspection Manual Chapter 0609.

A. Inspection Findings

Identification and Resolution of Problems

The team identified that the licensee had an acceptable process to identify, prioritize, evaluate, and correct problems. Station personnel identified problems and placed them into the problem identification and resolution program, with some exceptions noted. The team, however, identified a number of implementation problems. Numerous examples were identified where the licensee had improperly characterized and classified issues, which resulted in them being effectively removed from the problem identification and resolution program, two of these examples were found to be more than minor. Management meetings were conducted to review issues and determine the process to follow for resolution; however, these meetings were observed by the team to be less than fully effective. A number of other implementation problems involving documentation, engineering justification for changes to the facility, and the development of issue resolution dates were identified. Corrective actions from previously identified problems, such as conducting operability determinations/evaluations and the scaffolding program were not effective as evidenced by continuing problems in these two areas. Quality assurance audits and assessments were found to be critical of the problem identification and resolution program. However, the issues identified by these audits were not being corrected effectively, as evidenced by repeat findings in similar areas. Most station personnel interviewed stated they had no reservations raising safety issues to management. However, a review of the licensee's employee concerns program and a small number of interviews revealed some isolated instances where personnel were reluctant to raise issues.

Cornerstone: Mitigating Systems

Green. Two examples of a failure to follow procedure were identified, which involved failure to perform operability evaluations, as required by Procedure 0.5.OPS, "Operations Review of Problem Identification Reports/Operability Determinations/ Evaluations," Revision 7. Failure to follow Procedure 0.5 OPS was a violation of Technical Specification 5.4.1.a. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy (Section 4OA2.a). Two examples included:

- On August 28, 2001, operators placed the electrical distribution system in a configuration that rendered both offsite power circuits inoperable, but did not declare them inoperable or enter a limiting condition for operation, as required by their technical specifications. The team determined that this configuration would not allow both offsite circuits to auto-transfer to both critical buses, as described in the Updated Safety Analysis Report. The licensee failed to evaluate operability for a degraded condition that affected the function of an offsite power circuit. This issue was documented as Notification 10109209.

  This issue was considered to have an actual impact on safety, in that, part of the safety functions of both offsite power sources was impacted. The issue was evaluated using the significance determination process by the team and a senior reactor analyst, to be of very low safety significance (Green). The abnormal electrical distribution configuration lasted less than 12 hours, and the critical buses remained energized without the need for emergency power.

- On September 7, 2001, the licensee lost both offsite power sources because of lightning strikes. On September 13, 2001, line crews conducting tests in the 345 kV switchyard found a failed relay, which improperly allowed the T2 auto-transformer to isolate. The licensee failed to recognize that the switchyard did not operate as designed and, therefore, failed to evaluate the failed relay's impact on operability. The licensee documented this deficiency in Notification 10109324.

  This issue was considered to have an actual impact on safety, in that, a defective relay caused the fault on a non-qualified offsite power source to trip a qualified source. The team and a senior reactor analyst reviewed the loss-of-offsite power initiators and accidents. The issue was evaluated using the significance determination process by the team and a senior reactor analyst, to be of very low safety significance (Green), since this issue did not significantly increase the likelihood of a loss-of-offsite power/loss-of-coolant accident scenario.

Cornerstone: Mitigating Systems/Barrier Integrity

Green. Issues had not been classified properly in accordance with Licensee Procedure 0.5.CLSS, "Classification of Problem Identification Reports (PIRs)." Some of these issues were inappropriately removed from the problem identification and resolution program when they should have remained. The improper classification contributed to a lack of prompt corrective actions. These examples were contrary to 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." This issue was placed in the licensee's problem identification and resolution program as Notification 10113236. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy (Section 4OA2.b). Two examples included:

- Reactor building equipment cooling flow control valves located downstream of the drywell fan coil units were changed from a throttled to fully open position in December 1995. In October 2000, the licensee identified that the procedure change for the valve positions had an inadequate engineering review and that estimated actual flow through the cooling coils was significantly greater than rated flow for the coolers. The issue was downgraded and removed from the corrective action program in November 2000, and reclassified as an "OTHER NAIT" work item with approval from the licensee's condition review group. According to Procedure 0.5.CLSS, Revision 1, a classification of "OTHER" applied to any condition that requires correction by a process outside of the corrective action program that does not represent an actual or potential condition or significant condition adverse to quality (significant condition report or resolve condition report level of classification). After questions were raised by the team, the licensee subsequently estimated the flow rates and determined analytically that the high flow condition was acceptable. The licensee documented this issue in their corrective action process as Notification 10114113.

  This issue of conducting changes to the facility without adequate engineering documentation was more than minor because it involved a credible impact on safety, in that, the procedure change permitted plant operation with flow in excess of rated capacity without an evaluation of the impact the increased erosion would have on primary containment integrity. This issue was evaluated using the significance determination process and was determined to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment.

- On August 21, 2001, emergency transformer secondary voltage exceeded 4600 volts (4615 volts). Emergency transformer secondary voltage is normally maintained between 4435 and 4575 volts to ensure that under full load conditions, emergency bus voltage can be maintained near it's nominal voltage of 4160 volts. Operators referred to Station Operating Procedure 2.2.17, "Emergency Station Service Transformer (ESST)," but they failed to recognize that secondary voltage exceeded the operability limit of 4600 volts listed in the procedure and subsequently failed to declare the emergency station service transformer inoperable. Notification 10105501 was written, but was subsequently removed from the corrective action program by being classified as a "Department Disposition" item. The team concluded that the licensee should have placed this deficiency in the corrective action program as a "Resolve Condition Report - Apparent Cause" in accordance with Procedure 0.5.CLSS, Revision 5. The licensee documented this issue in their corrective action process as Notification 10112753.

  Had the transformer been loaded during this overvoltage condition, it could have affected the function of a safety-related power supply; therefore, this issue was

more than minor because it involved a credible impact on safety. This condition could have a credible impact on the availability and reliability of the onsite electrical power system. The condition was determined to be of very low safety significance (Green) since operators never placed the emergency station service transformer in service.

Cornerstone: Initiating Events

Green. On September 7, 2001, a lightning storm caused the loss of one of the two offsite power circuits, as well as, intermittent degraded voltage on the other. No emergency or abnormal procedure was available to address degraded voltage or partial loss-of-offsite power conditions. The failure to have a procedure for combating emergencies and other significant events, specifically the loss or degradation of offsite power sources, was a violation of Technical Specification 5.4.1, which requires that procedures for combating emergencies be established in accordance with Regulatory Guide 1.33, Appendix A, Section 6.0. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy. The licensee documented this issue in their corrective action process as Notification 10111895.

This issue was more than minor because it involved a credible impact on safety, in that, no procedure had been established for operators to combat the partial loss or degradation of one or both offsite power sources. The lack of a procedure for the operators could cause or increase the likelihood of an initiating event due to a loss-of-offsite power. The issue was evaluated by the team using the significance determination process and determined to be of very low safety significance (Green), since the reactor did not scram, and the critical busses remained energized without the need for emergency power.

Cornerstone: Mitigating Systems

Green. The licensee failed to correct a previously identified problem in the construction and control of scaffolding in accordance with Procedure 7.0.7, "Scaffolding Construction and Control." During a plant walkdown with operators, the team identified numerous examples where scaffolding was constructed in close proximity or attached to operable safety-related equipment, which did not satisfy requirements contained in Procedure 7.0.7. Many of these nonconformances identified by the team had not been evaluated by engineering, as required by Procedure 7.0.7. The licensee subsequently performed additional walkdowns and a total of 47 scaffolding configuration nonconformances were identified. Each nonconformance was evaluated by engineering and, although no operability issues were identified, 11 nonconformances had to be corrected. This 10 CFR Part 50, Appendix B, Criterion XVI, corrective action violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy. The issue was placed in the licensee's problem identification and resolution program as Notification 10111303.

The issue of inadequate implementation of the scaffolding construction and control program was more than minor because it involved a credible impact on safety, in that,

numerous scaffolding configuration discrepancies were identified with construction of scaffolding on and in close proximity to operable safety-related systems, structures, or components. The team concluded that this issue was of very low safety significance (Green) using the significance determination process because an actual impact on safety systems did not occur.

Cornerstone: Mitigating Systems

Green. The licensee failed to correct a previously identified problem associated with conducting adequate operability determinations/evaluations. The NRC problem identification and resolution inspection (50-298/00-10), conducted August 2000, identified multiple examples of a failure to perform operability determinations and evaluations, as required by Administrative Procedure 0.5 OPS, "Operations Review of Problem Identification Reports/Operability Determinations/Evaluations." Subsequently, a substantive cross-cutting finding of inadequate human performance was identified in NRC Inspection Report 50-298/00-13, associated with failure to implement the problem identification program in the area of operability determinations/evaluations. Numerous additional noncited violations associated with inadequate operability determinations/ evaluations were identified in NRC Inspection Reports 50-298/00-14 and 50-298/01-02. These repeat findings from past inspections combined with two additional examples associated with reactor building equipment cooling flow and an unrecognized overvoltage condition on the emergency station service transformer collectively reflect inadequate corrective actions and a continued programmatic problem. This 10 CFR Part 50, Appendix B, Criterion XVI, corrective action violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy. The licensee wrote Notification 10112315 to address this violation.

This issue was more than minor because it involved a credible impact on safety, in that, failing to recognize when degraded structures, systems, or components require an operability determination or evaluation could result in continued operation of the facility when plant technical specifications would require a shutdown. This issue was determined to have very low risk significance (Green) because the systems remained operable in the examples identified or each specific example had been previously addressed by the NRC's significant determination process at this level.

Cross-cutting Issues: Identification and Resolution of Problems

No Color. Numerous examples of inadequate corrective actions and improper implementation of the corrective action program demonstrated continued inadequate problem identification and resolution. This was primarily due to a general lack of understanding and ownership of site-wide programs and procedures associated with the identification and resolution of problems. Each of the program areas discussed below include violations of NRC requirements that were determined to be more than minor but of very low safety significance (Green) using the significance determination process. The licensee documented this issue in their corrective action process as Notification 10112315, which is being addressed in Significant Condition Report 2001-0938, "Continued Difficulty in Implementing the Corrective Action Program." For example:

- The team identified that during the implementation of the corrective action program issues were improperly characterized and classified resulting in those issues being inappropriately removed from the corrective action program. This resulted in ineffective and untimely corrective actions since the items were either closed or awaiting resolution. This issue is described in this report and involves both the mitigating systems and barrier integrity cornerstones of reactor safety.

- Numerous concerns with scaffolds constructed near operable safety-related equipment were identified. The licensee had not constructed scaffolding in accordance with plant procedures and the required scaffolding engineering evaluations for nonconforming items had not been performed. Previous similar findings associated with improper scaffolding had been identified in NRC Inspection Report 50-298/00-04. Despite corrective actions involving new procedures and training, similar problems continued.

- The licensee had not effectively corrected problems with personnel recognizing when and how to perform adequate operability determinations and evaluations. A noncited violation was identified, which involved examples from both the mitigating system and barrier integrity cornerstones. This cross-cutting issue was documented in the previous NRC problem identification and resolution inspection and other similar findings associated with this cross-cutting issue are noted in NRC Inspection Reports 50-298/00-10, 50-298/00-13, 50-298/00-14, and 50-298/01-02.

B. Licensee Identified Violations

A violation of very low safety significance (Green), which was identified by the Cooper Nuclear Station, has been reviewed by the inspectors. Corrective actions taken or planned by Cooper Nuclear Station appear reasonable. This violation is listed in Section 4OA7 of this report.

Report Details

4OA2 Identification and Resolution of Problems

a. Effectiveness of Problem Identification

(1) Inspection Scope

The team reviewed items selected across the seven cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. Specifically, the team's review included a selection of approximately 160 notifications or problem identification reports related to issues of regulatory noncompliance since August of 2000. The team also reviewed a sample of licensee audits and assessments, trending reports, system health reports, and various other reports and documents related to the problem identification and resolution program. The team compared the audit and assessment results, with self-revealing and NRC-identified issues, to determine the effectiveness of the audits and assessments.

The team interviewed station personnel and evaluated corrective action documentation to determine the licensee's threshold for identifying problems and entering them into the corrective action program. Also, the licensee's efforts in establishing the scope of problems were evaluated by reviewing pertinent work orders, engineering requests, self-assessment results, and program plans.

In addition, the team reviewed the licensee's evaluation of selected industry experience information, including operating event reports and NRC and vendor generic notices, to assess if issues applicable to the Cooper Nuclear Station were appropriately addressed.

On September 15, 2001, a team member accompanied an auxiliary operator during plant rounds in the reactor building. The team member observed the operator’s activities and plant equipment with a focus on potential conditions adverse to quality that would have been appropriately addressed with a notification document.

(2) Issues and Findings

The team determined that problems are typically adequately identified at the station. During interviews, plant personnel indicated that they believed that a low threshold for entering problems into the corrective action program had been established. There were some notable exceptions identified during the team’s inspection and documented in previous NRC inspection reports over the past year, which are described below.

Identification of Equipment Qualification Issues

Equipment qualification issues identified by inspectors in past NRC inspection reports reflected weaknesses in the identification and extent of condition of potentially risk significant issues placed in the licensee’s program for the identification and resolution of problems.

For example, in April and May 2000, the inspectors identified multiple programmatic deficiencies involving the design, implementation, and documentation of environmental qualification applications. The programmatic deficiencies resulted in the existence of approximately 2000 deficient applications affecting approximately 600 components important to safety. These deficiencies were addressed, and the plant was returned to operation in May 2000. However, the licensee continued to identify additional problems or discrepancies in the environmental qualifications program. The continued identification of similar problems indicated weaknesses in the licensee's extent of condition review, particularly, in the licensee's ability to identify an unqualified application. A number of examples are described in detail in Section 4OA7, "Licensee Identified Violations."

Identification of Emergency Preparedness Issues

Previously documented issues in the area of emergency preparedness reflected weakness in the understanding of the threshold for documenting emergency preparedness issues in the licensee's program for the identification and resolution of problems.

For example, the licensee declared an alert on June 25, 2001. During response to this event, inspectors identified three emergency planning issues potentially having low-to-moderate safety significance (White). These issues are described in NRC Inspection Report 50-298/01-09. The inspectors were concerned that several programmatic deficiencies were easily recognizable and identified by the inspectors, but were not understood until specifically described to licensee emergency preparedness personnel and plant management. The inspectors also noted that several of these deficiencies had been previously identified by the licensee's quality assurance personnel, but not dealt with as a problem by other station personnel. These examples also provided evidence that the licensee was not effectively identifying emergency preparedness issues and placing them into their program for the identification and resolution of problems.

Identification of Issues Requiring a Notification

The team identified that the licensee's threshold for writing notifications was not consistently understood by all station personnel.

For example, while observing an auxiliary operator perform reactor building rounds on September 15, 2001, the team identified a number of issues that would require documentation as a notification. Subsequently, the team determined that only one of the four issues identified by the team had a notification written (Notification 10110663, "Scaffolding Issues Identified During Walkdown"). The team questioned a licensee representative and he indicated that the auxiliary operator had planned to write an additional notification on one of the other issues. After informing the licensee of the team's observations, the licensee documented each of the remaining three issues in the following notifications (Notifications: 10111471, "Floor Drains Plugged"; 10111511, "Light Fixture Tied to Conduit Pipe"; 10111556, "ALARA Cameras Will Not Stay Elevated"). The implementation threshold for documenting notifications was found to not be

consistent with those described in Administrative Procedure 0.5, "Identification of Problem Identification Reports." With the exception of the scaffolding issues described in further detail below, the three remaining issues were determined to be of minor significance and were listed only because of the programmatic insights provided.

As discussed above, the scaffolding issues identified during the walkdown were appropriately documented in Notification 10110663. The licensee took immediate actions to perform a walkdown of all scaffolding erected in the reactor building and control building. Three days after identification of the original issue, the team identified additional concerns with scaffolds erected in the service water pump room, which were not documented on the licensee's list of identified concerns. During a discussion regarding the licensee's walkdown and results, the licensee acknowledged that they had not included the entire population of scaffolds in their original inspection and wrote Notification 10111367 to address this issue. The licensee indicated, however, that they had already completed their inspection of the service water pump room and that some of the additional issues identified by the team had not been identified and assessed. The licensee wrote Notification 10111368 to address this problem.

Identification of Issues Requiring an Operability Determination

Continuing problems associated with the identification of when an operability determination or evaluation is required were identified both during the team's inspection and in previous NRC inspection reports. This reflected ineffective corrective actions for NRC violations and an NRC identified cross-cutting issue associated with both human performance and the problem identification and resolution program, which were documented in previous NRC inspection reports.

Procedure 0.5.OPS, "Operations Review of Problem Identification Reports/Operability Determinations/Evaluations," required that an operability determination be performed if a condition existed, which could directly or indirectly affect the operability of a structure, system, or component. Procedure 0.5.OPS, Section 2.9, stated that when reasonable expectation of operability does not exist or mounting evidence suggests that the final analysis will conclude that the equipment cannot perform its specified safety function(s), the equipment will be immediately declared inoperable. The NRC team identified two examples, where the required operability determinations were not performed or issues were not considered for their impact on the plant, as required by the licensee's procedures. The two examples included:

- On August 28, 2001, operators placed the electrical distribution system in a configuration that rendered both offsite power circuits inoperable, but did not declare them inoperable or enter a limiting condition for operation, as required by their technical specifications. The team noted that Breakers 1FA and 1AF had been disassembled for maintenance. Additionally, operators had placed Breaker 1GS in pull-to-lock to support the maintenance. In this configuration, the startup station service transformer supplied power to only 4160 volt Buses 1B and 1G(critical). The emergency station service transformer supplied power to only the 4160 volt Bus 1F (critical). Section VIII of the Updated Safety Analysis

Report for the Cooper Nuclear Station states, in part, "If the normal Station Service Transformer is lost, the Startup Transformer will automatically energize the 4160 volt Buses 1A and 1B, including the critical buses (1F and 1G). If the Startup Transformer fails to energize the critical buses, the Emergency Station Service Transformer will automatically energize both critical buses (1F and 1G)." The team determined that the plant configuration on August 28, 2001, would not have allowed both offsite circuits to auto-transfer to the critical buses during a loss-of-offsite power event as described in the Updated Safety Analysis Report. The team noted that operations and engineering personnel failed to recognize the degraded condition they had placed the electrical distribution system in and evaluate if it affected operability. The licensee documented this issue in their corrective action process as Notification 10109209.

This issue was considered to have a credible impact on safety because a part of each safety function of both offsite power sources was impacted by the plant configuration. The issue was evaluated using the significance determination process and was determined to be of very low safety significance (Green), because of the likelihood of a loss-of-offsite power event remained low and that emergency diesel generators were still available to provide emergency power.

- On September 7, 2001, the licensee lost both offsite power sources because of lightning strikes. Based upon loss of the T2 auto-transformer and spiking of the 69 kV source, operators appropriately declared both the startup station service transformer and the emergency station service transformer inoperable. Immediately after the loss of the T2 auto-transformer, the line was reenergized by the 161 kV Auburn line, which was not a qualified source of offsite power. The team noted that the operators appropriately considered the line insufficient to supply emergency power. The emergency station service transformer regained stable voltage within minutes after the initial strike and provided one source of qualified offsite power. The next morning, after testing of the T2 auto-transformer, operators reenergized the startup station service transformer and declared both offsite sources operable. The licensee documented this deficiency in Notification 10109324.

  On September 11, 2001, the licensee informed the team that the actual fault had occurred on the 161 kV Auburn line. The team expressed a concern that this fault should not have tripped the T2 auto-transformer. The team noted that a previous engineering evaluation, USQU-1998-0073, stated that, "Failures of the added 161 kV substation or Auburn line would not effect the incoming 345 kV line or failure of T2." The team was concerned that a hidden or sympathetic trip may have existed in the circuit to cause the T2 auto-transformer to trip from a 161 kV Auburn line fault. This concern was discussed with the licensee and on September 13, 2001, line crews conducting tests in the 345 kV switchyard found a failed relay, which caused the T2 auto-transformer to isolate contrary to it's design. The licensee failed to recognize that the switchyard did not operate as designed during the transient on September 7, 2001, and, as a result, did not evaluate operability of the offsite power sources. The licensee documented this deficiency in Notification 10109324.

This issue was considered to have an actual impact on safety, in that, a defective relay allowed a fault on a non-qualified offsite power source to result in a trip of a qualified source. The team and a senior reactor analyst reviewed the loss-of-offsite power initiators and accidents. The issue was evaluated using the significance determination process by the team and a senior reactor analyst, to be of very low safety significance (Green), since this issue did not significantly increase the likelihood of a loss-of-offsite power/loss-of-coolant accident scenario.

Failure to follow Procedure 0.5.OPS is a violation of Technical Specification 5.4.1.a. Technical Specification 5.4.1.a requires that licensees establish, implement, and maintain written procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Appendix A recommends procedures for authorities and responsibilities for safe operation. Administrative Procedure 0.5.OPS, "Operations Review of Problem Identification Reports/Operability Determinations/Evaluations," Revision 1, Section 3.1.12.3 states, "An operability determination is required for degraded conditions of safety systems and components where functionality is called into question." This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy (NCV 50-298/0110-01). These two examples of failure to perform an operability evaluation are indicative of a continuing programmatic problem. Each example led to degraded safety-related equipment where the licensee failed to recognize and evaluate operability. The individual items listed were all of very low safety significance (Green) for the reasons stated above. An ineffective corrective action issue associated with the failure to perform an operability determination is discussed in Section 4OA2.c of this report.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The team reviewed numerous action requests and supporting documentation to ascertain whether the licensee's evaluation of the problems identified considered the full extent of conditions, generic implications, common causes, and previous occurrences.

The team attended corrective action program meetings to assess the threshold of discussion or concern for licensee identified problems. The team observed four condition review group meetings, three pre-screening meetings, and one corrective action review board meeting during the inspection.

The team selected a sample of 11 items identified from a list of over 200 engineering issues provided by the licensee. The list included many action items that were not in the Corrective Action Program. Licensee representatives from the engineering department were interviewed to discuss each of the selected items and the current status of the items.

The team reviewed the database of corrective action program items and selected a sample of items characterized as "ADMIN" to determine if the threshold for item characterization and classification was appropriate. Numerous sorts and filters were used to select an informed sample. Specifically, the team selected mitigating system

cornerstone examples of "ADMIN" characterized items applicable to the service water system, high pressure coolant injection system, residual heat removal system, and diesel generators.

The team verified that selected licensee event reports were classified properly in accordance with the appropriate revision of the licensee's Administrative Procedure 0.5.CLSS, "Classification of Problem Identification Reports (PIRs)." The team also reviewed a list provided by the licensee that sorted all significant condition reports/resolve condition reports (RCR) that had root cause items. A sample was selected by the team and the individual responsible for conducting the root cause analysis was identified from corrective action program documentation. The root cause investigator's qualifications were verified through review of licensee qualification reports.

The team reviewed the safety evaluations or screening documents associated with recent changes to the licensee's electrical distribution system procedures. These reviews were conducted to assess how procedure changes contributed to identified configuration control problems with the electrical power distribution system.

The team reviewed licensee documents, evaluations, and corrective actions associated with the loss or degradation of offsite power sources to the facility. The team evaluated the effectiveness of the licensee's problem characterization, processing in the corrective action system, and completed corrective actions.

(2) Issues and Findings

Corrective Action Program Implementation

The team identified a number of implementation problems in the area of effective prioritization and evaluation of issues. The team observed a lack of documentation of the bases for re-classification (downgrading to a lower priority) or administratively closing issues. During interviews with the plant staff, observations involving a lack of effective prioritization, which made issues equally important, became apparent to the team. This resulted in the inability to effectively correct issues commensurate with their true significance.

The team observed a lack of ownership and knowledge of the corrective action program during pre-screening, condition review, and management focus meetings to implement the corrective action program. Often, issues were not classified properly. Notable program implementation issues became apparent to the team while observing meetings and reviewing documentation. These issues arose during the classification process between condition review group and the pre-screening group and the resolution of corrective actions with the corrective action review board. The team observed that committees were not always well prepared for the assigned task. The following examples were observed by the team during meetings on September 13, 17, 18, and 19, 2001.

- During the September 17, 2001, pre-screening meeting, the licensee was observed to repetitively use "hear-say" or third party information to make conclusions about the notifications being reviewed. Members would often rely on memory for previously identified issues and were not always clearly informed about the specific issues being reviewed. Despite this lack of knowledge, the team noted that the licensee still processed (evaluated and prioritized) the issues. An example of this observation occurred during the September 18, 2001, pre-screening meeting. The licensee was considering Notification 10109313 concerning the emergency transformer voltage alarm relay, which had a recommendation to merge it with the ongoing review being conducted under Significant Condition Report 2001-849, "T-2 Auto Transformer Failure," dated September 9, 2001. One of the members commented that they did not have a copy of Significant Condition Report 2001-849, nor had any of the members reviewed it prior to the meeting. Although the members did not know the specific subject of Significant Condition Report 2001-849, the notification was closed to it. The team later concluded that although the decision to close the notification to the significant condition report was appropriate, it was done with limited information.

- Another example occurred during the September 19, 2001, pre-screening meeting, when the licensee was re-evaluating Notification 10110431, dated September 13, 2001, associated with rework on a failed service water booster pump that had initially been evaluated and presented to the condition review group as a "Work Item" by the pre-screening group. The condition review group determined that it was more appropriate to upgrade the issue from a "Work Item" to a "RCR - Apparent Cause" corrective action item because rework could indicate inadequate maintenance and, accordingly, the notification was sent back to the pre-screening group for re-evaluation. The pre-screening meeting considered the condition review group re-direction, but then concluded that this issue should not be upgraded and sent it back to condition review group as a "Work Item." The team reviewed the notification and independently determined the correct classification should have been a "RCR - Apparent Cause," because determining the root cause of the issue could prevent further failures. The licensee agreed with the team's conclusion and also documented several other notable issues associated with the conduct of the September 19, 2001, pre-screening meeting in Notification 10111629. The following is an excerpt from Notification 10111629:

  > *"A management observation of the CAP [Corrective Action Process] pre-screening meeting.... revealed that basic CAP fundamentals are not being observed. Most attendees had the basic mindset of "what is the easiest thing to do and don't give it to me." ... It was apparent that a concerted effort to avoid being assigned a CAP item was the routine paradigm..... Rather than readily accepting an item and pursuing the right thing to do, some members actually worked to find ways to not call an item a CAP item...."*

- Another example included the conduct of the September 13, 2001, condition review group meeting, which was rushed to a conclusion due to time pressure

from a separate mandatory supervisor meeting. The management team had recognized that time was short at the beginning of the condition review group meeting, but determined that they would proceed regardless because they believed the condition review group meeting was a priority. However, the team observed that the actions of some individuals involved in the condition review group meeting, who left in the middle of the meeting, did not demonstrate that the meeting was a priority. When informed of the team's observations, the licensee appropriately conducted another review of the condition review group meeting data at the next scheduled condition review group meeting. The licensee documented the weak conduct of this meeting in Notification 10110850. During the September 18, 2001, condition review group meeting, the team noted that personnel knowledgeable of the issues and capable of providing answers to the group's questions were not in attendance. The team noted that although numerous questions and comments came up regarding classification of issues, none of the meeting participants had a copy of the Classification Procedure 0.5.CLSS.

- The team attended the September 19, 2001, corrective action review board meeting. Following approximately 1 ½ hours of deliberation, the recommended corrective actions for Significant Condition Report 2001-0733, "Drywell Temperature," were rejected. The corrective action review board noted that several root causes were identified (such as inadequate training), but were not addressed by corrective actions in the Significant Condition Report.

- A team member attended a management focus meeting on September 18, 2001. During the meeting, the management team reviewed a list of significant condition reports and RCRs provided by the licensee. The team noted that station management placed a significant amount of emphasis on the review of the numbers of items and status, but little on the significance of the specific issue or effectiveness of corrective actions.

Classification of Conditions Adverse to Quality

The team requested disposition documentation for Notifications 10082630, "PCM Training Not Documented," May 3, 2001, and 10082634, "ALARA Committee Needs Improvement," May 3, 2001, to evaluate the disposition of corrective action documents originated as a result of quality assurance audits. These notifications were found to be classified as "Department Dispositions," but had not been processed by the department as of the date of the inspection. The team noted that over 500 notifications were awaiting resolution that had been classified out of the corrective action program. The licensee initiated Notification 10110092, "Non CAP/CM Notifications Not Processed," to document that greater than 500 notifications classified as "Department Dispositions" were awaiting resolution that had not been processed and assigned responsibility for resolution by the department. The team requested a printout of approximately 500 notifications by title so that a sample could be selected to determine whether the corrective action program had appropriately classified the items.

The team reviewed a total of 49 notifications that had been classified out of the corrective action process (generally classified as "NAIT Other" or "Department Disposition") and found two issues that were not classified properly and were considered more than minor. Other additional examples screened in accordance with NRC Manual Chapter 0610*, Appendix B, "Thresholds for Documentation," were identified, but are not included in this report because they were minor. The team selected 38 notifications as a sample of the 500 items discussed above for a more detailed review. With respect to the issues considered more than minor, the team identified that 1 of the 38 notifications reviewed had been incorrectly classified as a "Department Disposition" rather than a corrective action program item, and is discussed below. Additionally, 1 of the 11 items classified outside the corrective action program selected from a list of engineering issues provided by the licensee was not classified properly, was considered more than minor, and is discussed below.

The two more than minor items were not classified properly in accordance with Procedure 0.5.CLSS, "Classification of Problem Identification Reports (PIRs)." The misclassified Notifications were inappropriately removed from the problem identification and resolution program when they should have remained. The two examples included:

- The first example was identified from a list of engineering issues provided by the licensee. It involved the reactor building equipment cooling flow control valves located downstream of the drywell fan coil units, which were changed from a throttled to fully open position in December 1995. In October 2000, the licensee identified that the procedure change for the valve positions had an inadequate engineering review and that estimated actual flow through the cooling coils was significantly greater than rated flow for the coolers and was documented in Problem Identification Report 4-12312. Notwithstanding the failure to maintain adequate design control standards at the facility, the problem identification report was subsequently downgraded out of the corrective action program in November 2000, and reclassified as an "OTHER NAIT" work item with approval from the licensee's condition review group. Procedure 0.5.CLSS, described the "OTHER" classification for any condition that requires correction by a process outside of the corrective action program that does not represent an actual or potential condition or significant condition adverse to quality (significant condition report or RCR level of classification). Since this issue represented an actual nonconforming condition, a downgrade was inappropriate. Since the licensee downgraded the notification, an operability evaluation was not performed as required by the corrective action program procedure. The licensee documented the inappropriate downgrade of this item in Notification 10110550. A formal technical basis for operability was documented in Notification 10110550; however, the team found it was not adequate. Further discussion was necessary with the licensee to verify that the high flow erosion effects on piping between the isolation valves and the coolers was not a safety concern for maintaining containment integrity. The licensee documented this issue in their corrective action process as Notification 10114113.

This issue involving the improper classification of a problem identification report was more than minor because it involved a credible impact on safety, in that, the procedure change permitted plant operation with flow in excess of rated capacity without an adequate engineering evaluation of the impact the increased erosion would have on primary containment integrity. This issue was evaluated using the significance determination process and was determined to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment.

- Notification 10105501 dated August 21, 2001, documented that the emergency transformer secondary voltage exceeded 4600 volts (4615 volts). Emergency transformer voltage is normally maintained between 4435 and 4575 volts to ensure that under full load conditions, emergency bus voltage can be maintained close to it's nominal voltage of 4160 volts. Operations referred to Station Operating Procedure 2.2.17, "Emergency Station Service Transformer (ESST)," Section 8, and confirmed that since the actual primary voltage that was reached was 74 kV and had not exceeded 74.1 kV, the transformer remained operable. The licensee classified the notification as a "Department Disposition," but the team found it had not been processed by the department, as of the date of this inspection. Following discussions with the inspector, the licensee re-evaluated their classification and revisited this issue. Procedure 2.2.17, Section 8, did not indicate that operability is assured at less than 74.1 kV primary voltage, but did indicate that at greater than 4600 V secondary voltage, operability may not be assured. The licensee initiated Notification 10112753 because personnel did not take the appropriate actions required by Procedure 2.2.17, which was to evaluate the condition for operability. An evaluation of the overvoltage condition on the emergency station service transformer and other components potentially affected should have been performed. The licensee determined that the transformer remained operable because the condition existed on an unloaded transformer for a very short time and very few components were subjected to the high voltage condition. The team concluded that the licensee should have placed this deficiency in the corrective action program as an "RCR - Apparent Cause" in accordance with Procedure 0.5.CLSS. The licensee documented this issue in their corrective action process as Notification 10112753. The inspectors noted that issues associated with offsite sources of power at the Cooper Nuclear Station were raised in NRC Inspection Report 50-298/00-15 dated April 26, 2001, as an Unresolved Item (URI 50-298/0015-01). Use and reliability of the capacitor banks and the 69 kV transmission line will be evaluated during that NRC review.

  The team concluded that had the transformer been used to energize the emergency busses during this overvoltage condition, it could have affected the function of a safety-related power supply; therefore, this issue was more than minor because it involved a credible impact on safety. The team evaluated this condition using the significance determination process and was determined to be of very low safety significance (Green) since it did not involve an actual loss-of-safety function of a mitigating system.

Criterion XVI of 10 CFR Part 50, Appendix B, "Corrective Action," specifies, in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. The improper classification of these two issues contributed to inadequate corrective actions being taken, since the items were either removed from the corrective action program or had not been processed and assigned responsibility for resolution by the responsible department. This is contrary to Appendix B, Criterion XVI, and is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy (NCV 50-298/0110-02). The licensee re-classified these items and returned them to the corrective action program. This issue was placed in the licensee's problem identification and resolution program as Notification 10113236.

As described above, Notification 10110092 documented that greater than 500 notifications classified as "Department Dispositions" were awaiting resolution that had not been processed and assigned responsibility for resolution by the department. The team noted that the screening group and condition review group classified Notification 10110092 as a "Department Disposition." The team concluded that the screening group took a narrow view by believing that all the items had been screened and classified correctly and concluded this notification was inappropriately classified. Notification 10110092 should have been classified as an "RCR FIX" corrective action program item in accordance with Procedure 0.5.CLSS, to ensure that plant management understood the scope of the problem and that no loopholes existed in the corrective action process. The team concluded that these were not minor administrative items, as demonstrated by the determination that some of the items sampled were found to be misclassified.

Inadequate Procedures

A Technical Specification 5.4.1(a), noncited violation was identified by the team for a failure to have a procedure for combating emergencies and other significant events, specifically, the loss or degradation of offsite power sources. On September 7, 2001, a lightning storm caused the loss of one of the two offsite power circuits, as well as intermittent degraded voltage on the other. The team reviewed the event and discussed response actions with a number of operations personnel. Operators stated that they took several actions in response to the event that were not in specific procedures and that procedures for this emergency were not complete or adequate. The team requested the emergency procedure that covered degraded voltage or loss of the offsite circuits. Operations personnel directed the team to Emergency Procedure 5.3EMPWR, "Emergency Power." However, the entry conditions for this procedure were not met for the event of September 7 with the loss or degradation of one or both offsite power sources. The entry conditions are only met when all essential and non-essential busses are lost, and emergency power is used to restore power to the essential busses. The team also found that no other emergency or abnormal procedure covered degraded voltage or partial loss of the offsite circuits. Emergency Procedure 5.2.5, "Loss of Normal AC Power - Use of Emergency AC Power," had been deleted as part of an effort to enhance operations procedures and several of the actions from this procedure were

disseminated into various station operating procedures, which were not sufficient to cover all the required configurations of the electrical distribution system described in the Final Safety Analysis Report. As a result, the licensee did not have a procedure for the partial loss or degradation of offsite power sources. This was a violation of Technical Specification 5.4.1(a), which requires that licensees establish, implement, and maintain written procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Section 6 of Appendix A lists, "Procedures for Combating Emergencies and Other Significant Events." This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy (NCV 50-298/0110-03). The licensee documented this issue in their corrective action process as Notification 10111895.

This issue was more than minor because it involved a credible impact on safety, in that, no procedure had been established for operators to combat the partial loss or degradation of one or both offsite power sources. The lack of a procedure for the operators could cause or increase the likelihood of an initiating event due to a loss-of-offsite power. Although the issue was determined to increase the likelihood of a reactor trip, it did not affect the likelihood of mitigating systems being unavailable, therefore, the issue was evaluated by the team using the significance determination process and determined to be of very low safety significance (Green).

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The team reviewed the action requests, audits, assessments, and trending reports described in Section 4OA2.a.(1) above to verify that corrective actions related to the issues were identified and implemented in a timely manner commensurate with safety, including corrective actions to address common cause or generic concerns. The team also conducted plant walkdowns and interviewed plant personnel to independently verify and assess the effectiveness of corrective actions implemented by the licensee. A listing of specific documents reviewed during the inspection is included in the attachment to this report.

The team reviewed 9 quality assurance audits and 38 quality assurance surveillences. Based upon the initial team evaluation, the team selected 28 corrective action documents as an inspection sample. The team performed a detailed review of 25 corrective action documents out of the inspection sample. The team reviewed the corrective action documents and audits to determine whether quality assurance personnel conducted thorough, detailed, critical evaluations of program areas. In addition, the team assessed whether the line organizations responded appropriately to the corrective action program findings identified by quality assurance personnel.

The team evaluated the licensee’s effectiveness in effectively resolving issues placed into their problem identification and resolution program. The team assessed whether the program could be implemented as written. The team assessed the impact of human performance and knowledge/skills of personnel. Since the supervisory role in the

licensee's program for resolving issues was important, the team closely reviewed the supervisory recommendations for Notifications.

The team evaluated the timeliness and adequacy of operability determinations and evaluations since this had been an area of significant concern during the previous problem identification and resolution inspection (refer to NRC Inspection Report 50-298/00-10). The team reviewed corrective actions planned and implemented by the licensee and sampled specific technical issues to determine whether adequate decisions related to structure, system, and component operability were made.

(2) Issues and Findings

Licensee quality assurance audit insights

Licensee quality assurance audits were found to be self-critical and thorough. However, quality assurance audits continued to find issues associated with the timeliness and effectiveness of corrective actions similar to those identified during the previous NRC corrective action program inspection (NRC Inspection Report 50-298/00-10). The most recent continuous improvement program audit report dated June 28, 2001, indicated that corrective action program problems, such as ineffective corrective actions and poor timeliness, had not shown significant improvement during the last three continuous improvement program audits.

Cooper Nuclear Station Quality Assurance Surveillance Report S408-0101, "QA Review of CNS Corrective Actions," dated February 6, 2001, identified that the quality standards being implemented for RCR evaluation and closure were extremely low for most organizations. Two major symptoms of the low standards were: (1) lack of alignment between the corrective action, apparent causes, and identified problems or conditions; and (2) a failure to take corrective actions for each issue identified in the RCR without providing adequate basis or justification. From the 57 closed corrective actions reviewed by quality assurance, 31 were identified as having various degrees of problems. For example, Surveillance Report S408-0101 documented that several RCR's that had been closed without all actions being completed or without actions being taken to address all aspects of the root cause. The team reviewed a sample of the RCR's to determine what actions the line organization completed. The team found that the licensee had appropriately reopened each of the identified RCR's, implemented appropriate actions, and closed the RCR's. The team also noted that the site-wide self-assessment conducted in June 2001 criticized the quality assurance organization for failing to initiate a corrective action document as a result of the findings in Surveillance Report S408-0101.

Cooper Nuclear Station Quality Assurance Audit Report 00-12, "Continuous Improvement Program," January 4, 2001, concluded that three of four "Significant Condition Reports"assessed were untimely because they did not meet the 30-day expectation per procedure. Significant condition report and RCR corrective actions lacked proactive steps to help the staff recognize situations during which errors were likely to occur and, as such, plan error prevention measures. Cooper Nuclear Station Quality Assurance

Audit Report 01-06, "Continuous Improvement Program," June 28, 2001, concluded overall that the quality of RCR evaluations and closures need improvement for most functional organizations.

Training insights

The team found that training conducted in Nemaha, Nebraska, during the inspection, satisfactorily addressed the requirements of the corrective action program and the mechanics needed to implement the program. However, the team found the training lacking in describing conditions adverse to quality and significant conditions adverse to quality. The team found that the licensee provided training on the corrective action program during initial general employee training; however, the licensee did not provide refresher training or emphasis on management expectations. One management seminar did emphasize the status of the corrective program implementation (e.g., outstanding items and timeliness). The team noted that the third and fourth quarter 2001 continuing training appropriately provided examples to engineering personnel on what was a high quality versus a poor corrective action document package.

Safety Review and Audit Board

The team reviewed the Year 2000 report and the July 2001 trip report from the safety review and audit board (SRAB). The team noted that the SRAB was critical of the problem identification and resolution program. The Year 2000 report indicated that the "SRAB has not been effective in challenging plant staff to be more proactive in identifying and correcting problems. Even if we had, the corrective action program has not been effective at resolving issues in a timely manner." In the July 2001 trip report, the SRAB had similar observations to those of the team, in that, corrective actions were primarily focused on procedures.

Program Implementation Problems

The team noted that the licensee did not properly administratively process several notifications as discussed below. This was indicative of a lack of attentional-to-detail or knowledge of how to use the computer based process for corrective actions.

- Notification 10089347, “Evaluation and Corrective Actions Associated with RCR-2001-0079 are Inadequate,” was initiated on June 7, 2001, as a result of the licensee’s June 2001 continuous improvement program audit but was found to be closed with no corrective actions completed. The evaluation of five problem identification reports associated with inaccurate statements in the emergency plan were to be evaluated under RCR-2001-0079 dated January 7, 2001. The team noted that each of the emergency pan discrepancies were administrative in nature. The licensee identified that Notification 10089347 had not been processed in accordance with the corrective action program when the team had

requested copies of the disposition documents. The licensee found that the initiator had inadvertently closed the notification while creating it. As a result, the notification did not receive the required supervisor review and no decision had been made regarding whether this was a corrective action program item. The licensee initiated Notification 10110335 to document this failure. The licensee considered Notification 10110335 a corrective action document and closed it based on the actions taken and initiated the required reviews for Notification 10089347. The team concluded that the licensee took appropriate immediate actions when the failure to properly process Notification 10089347 was identified.

- Resolve Condition Report 2000-1005 documented the failure to update the grid stability calculation as specified in the Updated Safety Analysis Report. The licensee determined prior to providing this item to the team that one of the corrective actions had not been implemented, as specified in Notification 10077220 (this notification requested that a preventive maintenance task be developed to require updating the engineering calculation for the offsite load study). The licensee initiated Notification 10110493 to implement the corrective action and to document that a required corrective action had not been implemented. The team subsequently requested Notification 10110493 to evaluate how the licensee dispositioned this item in their corrective action program. The licensee found that this notification had not been processed, as required; consequently, the licensee initiated Notification 10111732 for failing to properly process Notification 10110493 by inserting the required task reviews during the supervisor review. The licensee classified Notification 10111732 as RCR 2001-0924. The team determined from discussions with design engineering and document review that a load study had been performed at least annually, as required by the Final Safety Analysis Report. The team concluded that this was a second failure to properly process a notification and that additional emphasis on the mechanics of the corrective action program may be needed.

- The team reviewed Notification 10100609, which documented that a security zone alarmed too frequently and was classified as a "Department Disposition," to assess its resolution. The team noted that there were no details documented to justify the classification of the item nor were there any tasks assigned to resolve the issue. The licensee determined that the supervisor, processing the notification, made an error during the supervisor review and failed to add the required reviews and dispositions. Consequently, this notification had not been screened and did not receive the required reviews in a timely manner. The licensee initiated Notification 10111475 for failure to insert the review tasks into Notification 10100609.

Ineffective scaffolding program corrective actions

As described in the effectiveness of problem identification section of this report, the team identified numerous concerns with scaffolds constructed near operable safety-related equipment. The team found that the licensee had not constructed many of the scaffolds in accordance with the guidance in Maintenance Procedure 7.0.7, "Scaffolding Construction and Control," Revision 7, nor had they conducted the required scaffolding engineering evaluation for those nonconforming items. The licensee subsequently performed additional walkdowns and documented a total of 47 nonconforming scaffolding configurations. The licensee evaluated each nonconforming scaffolding configuration and concluded that 11 had to be modified and 36 were acceptable for use. No operability issues were identified as a result of these evaluations. Examples of scaffolding configurations assessed by the licensee requiring modification included a brace connected to residual heat removal system supports, a scaffolding member in contact with fire protection pipe contrary to the equipment separation requirements, a scaffold member in contact with a reactor building equipment cooling flow switch to the reactor building south east quadrant fan cooling unit, a scaffold ladder in contact with 16-inch service water pipe, a scaffold planking touching 3/4-inch instrument line, a scaffold member in contact with fan cooling unit duct, and a scaffold brace member touching 4-inch core spray pipe.

In February 2000, the licensee identified that a scaffold prevented a secondary containment isolation valve from fully closing. The licensee determined that this rendered the containment isolation valve inoperable. The licensee documented this deficiency in RCR 2000-0151 and Licensee Event Report 50-298/2000-005-00. NRC documented this as a noncited violation in NRC Inspection Report 50-298/00-04. The noncited violation addressed the failure to implement Maintenance Procedure 7.0.7.

The team found that the licensee had not effectively trained maintenance personnel on the construction of scaffolding. Nearly all the scaffolding nonconformances identified by the team should have been identified by maintenance personnel and an engineering review conducted to ascertain if the nonconformances were acceptable to be used as-is or modified.

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," states, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Measures taken by the licensee to correct the failure to properly implement Maintenance Procedure 7.0.7 did not correct the condition adverse to quality, as required by Appendix B, Criterion XVI. This is evidenced by the team's identification of continued problems with the implementation of the scaffolding construction and control program. This violation of Criterion XVI for ineffective corrective actions related to implementation of Maintenance Procedure 7.0.7 is being treated as a noncited violation (NCV 50-298/0110-04) in accordance with Section VI.A of the NRC Enforcement Policy. The issue was placed in the licensee's problem identification and resolution program as Notification 10111303.

The issue of inadequate implementation of the scaffolding construction and control program is more than minor because it involved a credible impact on safety, in that, numerous discrepancies were identified with construction of scaffolding in close proximity to or touching operable safety-related equipment. This issue affects the mitigating system cornerstone and was reviewed using the reactor safety significance determination process. It was determined to be of very low safety significance (Green) because an actual impact on safety systems did not occur and the likelihood of a seismic event resulting in damage to the affected systems, structures, or components was low.

Inadequate corrective actions related to operability determinations/evaluations

The team noted that the previous problem identification and resolution program inspection report and the previous routine resident inspection reports identified issues associated with performing operability determinations and evaluations. The licensee implemented actions to ensure that most notifications related to degraded or nonconforming equipment were assessed by operations personnel for equipment operability. The team found that the licensee was not consistent in the implementation of this part of their problem identification and resolution program. A number of degraded conditions were found to not have been subjected to operability determinations when criteria were met to do so. The team noted that the licensee continued to have difficulty recognizing when an operability evaluation was required. The team determined from interviews, self assessments, and third-party evaluations that some station personnel did not feel responsible for conducting operability determinations. The team also noted that site personnel did not have the requisite knowledge and availability of NRC Generic Letter 91-18, "Degraded and Non-conforming Conditions," and design basis information considered necessary to make informed decisions on operability.

A licensee quality assurance audit finding documented in Notification 10085373 indicated that 30 percent of notifications sampled (48 out of 156) between January 9 through February 22, 2001, had not been properly designated by the line organization supervisors as requiring a review for operability. However, since licensee management had directed operations to review 100 percent of notifications in both the corrective action and work item programs for operability concerns independent of the supervisory review, none of the operability reviews had actually been missed. The licensee concluded that the quality assurance audit results indicated a continued weakness in the supervisory review of notifications during which operability review recommendations are developed. Additionally, the licensee documented in Quality Assurance Audit Report 01-06, that Significant Condition Report 2000-0937, “NRC Identified Trend with Human Performance in Determining Operability of Safety Related Equipment,” dated November 29, 2000, failed to adequately address an NRC identified concern identified in NRC Inspection Report 50-298/00-10, associated with the cross-cutting issue of human performance. One of the corrective actions in Significant Condition Report 2000-0937 directed that a needs analysis be performed to determine whether operations, engineering, and management personnel responsible for reviewing notifications for operability concerns required additional training on specific aspects of the process. Although the licensee revised Administrative Procedure 0.5.CLSS, "Classification of Problem Identification

Reports," a needs analysis had not been performed and the procedure change did not address the knowledge weakness identified in Significant Condition Report 2000-0937.

NRC Inspection Report 50-298/00-10, identified numerous examples in which required operability determinations were not performed or issues were not considered for their impact on the plant, as required by procedures. Additional failures to perform adequate operability determinations were identified in resident inspection reports during the subsequent year. For example:

- In NRC Inspection Report 50-298/00-13, a "No Color" finding of substantive human performance associated with this area was identified. The inspectors identified a negative trend with human performance, in determining operability of safety-related equipment, being the common element. This negative trend was evidenced by the following:

  - The licensee failed to perform an operability determination for a reactor recirculation valve degraded condition (NCV 50-298/0004-02).

  - Three examples of failures to perform operability determinations were identified (NCV 50-298/0013-01).

  The causal relationship of these errors was that operations personnel lacked a questioning attitude toward degraded or nonconforming conditions. Each of these individual findings could directly impact safety, based upon failures to recognize the potential loss of safety functions for safety-related equipment. The inspectors considered this negative performance trend to be a substantive cross-cutting issue.

- In NRC Inspection Report 50-298/00-14, the inspectors determined that operations personnel did not perform an operability assessment for a safety-related service water pump, or declare the pump inoperable, when the functionality of the pump was questioned.

- In NRC Inspection Report 50-298/01-02, the inspectors identified that the licensee failed to declare equipment inoperable following multiple failures of primary Containment Isolation Valves RW-AOV-AO82, -83, -94, and -95 to pass surveillance testing requirements.

Additional examples in which required operability determinations were not performed or issues were not adequately considered for their impact on the plant, as required by procedures are discussed in this report. For example:

- As discussed above in Section b. above, in October 2000, the licensee identified in Problem Identification Report 4-12312 that when the reactor building equipment cooling flow control valves located downstream of the drywell fan coil units were changed from a throttled to fully-open position in December 1995, the licensee failed to verify adequacy of the new design. Specifically, the licensee failed to adequately document an assessment of the impact of operating the plant with an

estimated flow through the cooling coils significantly greater than rated flow for the coolers. On September 14, 2001, Notification 10110550 was written to document that the issue was inappropriately downgraded to a "Department Disposition." The team also found that the technical basis for operability documented in Notification 10110550 was not adequate because it did not document an adequate evaluation of the high flow erosion effects on piping between the isolation valves and the coolers and did not conclude that the increased erosion was not a safety concern for maintaining containment integrity. The team concluded that the licensee failed to document an adequate operability determination as part of Notification 10110550. The licensee documented this issue in their corrective action process as Notification 10114113.

- As discussed above in Section b. above, Notification 10105501 dated August 21, 2001, documented that the emergency transformer secondary voltage exceeded 4600 volts (4615 volts). Emergency transformer voltage is normally maintained between 4435 and 4575 volts. Operations referred to Station Operating Procedure 2.2.17, "Emergency Station Service Transformer (ESST)," Section 8, and confirmed that since actual primary voltage that was reached was 74 kV and had not exceeded 74.1 kV, the transformer remained operable. Procedure 2.2.17, Section 8, indicated that when secondary voltage exceeded 4600 Volts, operability may not be assured. The licensee determined that the transformer remained operable because the condition existed on an unloaded transformer for a very short time and very few components were subjected to the high voltage condition. The team concluded that operators failed to recognize an operability determination was required. The licensee documented this issue in their corrective action process as Notification 10112753.

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. Contrary to the above, as of September 21, 2001, the licensee did not establish measures to assure that conditions adverse to quality were promptly identified and corrected, in that, the licensee has failed to determine the cause and take adequate corrective actions to resolve continuing problems associated with performing operability determinations when required. Additionally, the licensee failed to effectively implement corrective actions to prevent recurrence of previously identified noncited violations in NRC Inspection Reports 50-298/00-10; 00-13; 00-14; and 01-02, associated with multiple examples of inadequate operability determinations.

The failure to identify the cause and correct continuing problems associated with operability determinations and the failure to effectively implement corrective actions to prevent recurrence of previously identified violations is a violation of 10 CFR 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation (NCV 50-298/0110-05) consistent with Section VI.A of the NRC Enforcement Policy. Numerous additional noncited violations associated with inadequate operability determinations and evaluations were identified in previous NRC inspection reports. These repeat findings from past inspections collectively reflect inadequate corrective

actions and a programmatic problem that continued as of the completion date of this inspection. The issue was placed in the licensee's problem identification and resolution program as Notification 10112315.

This programmatic issue was more than minor because it involved a credible impact on safety, in that, failing to recognize when an operability determination and evaluation is needed or conducting inadequate operability determinations or evaluations could result in continued operation of the facility when technical specifications would require a plant shutdown. This issue was determined to have very low risk significance (Green), because the affected systems remained operable in the examples identified or the specific example had been previously addressed by the significance determination process at this level.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors conducted interviews with twelve licensee personnel, which represented a cross-section of functional organizations and supervisory and non-supervisory personnel, to develop a general view of the safety culture at Cooper Nuclear Station. These interviews assessed whether conditions existed that would challenge the establishment of a safety-conscious work environment. The inspectors also reviewed the licensee's employee concerns program, which provides an alternate method to the corrective action program for employees to raise safety concerns with the option of remaining anonymous. The inspectors reviewed six employee concerns program resolution reports to determine if concerns were being properly reviewed and resolved.

(2) Issues and Findings

The team concluded that most station personnel interviewed stated they had no reservations raising safety issues to management. However, a review of the licensee's employee concerns program and a small number of interviews revealed some isolated instances where personnel were reluctant to raise issues.

4OA4 Significant Cross-Cutting Issue in the Area of Problem Identification and Resolution

(1) Inspection Scope

The inspectors conducted a review of the inspection observations, findings, and interviews documented within this report, and reviewed the previous NRC Inspection Reports for a period of 12 months prior to this inspection. The inspectors re-reviewed each finding to verify it had greater than minor significance and whether the underlying cause of each issue was causally linked in any manner to each other to ascertain if those issues constituted a significant cross-cutting finding.

In addition, the team evaluated the potential safety impact of the combined affect within the cross-cutting area of problem identification and resolution.

(2) Issues and Findings

The team found that, over the 12 months prior to the inspection, numerous examples of inadequate corrective actions and improper implementation of the corrective action program demonstrated continued inadequate problem identification and resolution. The team found that the causal relationship of all these issues was primarily a general lack of understanding and ownership of site-wide programs and procedures associated with the identification and resolution of problems. This lack of ownership and understanding was demonstrated by the ineffective manner in which meetings were conducted; an insufficient knowledge level of how to use the computer based program; ineffective supervisory recommendations on how to disposition issues; a lack of knowledge of when and how to conduct operability evaluations; the improper classification of notifications; and a lack of clarity and completeness of corrective action documentation. Licensee efforts to correct issues often resulted in changes to processes and procedures but typically did not focus on ownership, knowledge, and tools to implement the changes. Each of the program areas discussed below include violations of NRC requirements that were determined to be more than minor but of very low safety significance using the significance determination process. The licensee documented this issue in their corrective action process as Notification 10112315, which is being addressed in Significant Condition Report 2001-0938, "Continued Difficulty in Implementing the Corrective Action Program." For example:

- The team identified that during the implementation of the corrective action program, issues were improperly characterized and classified resulting in those issues being inappropriately removed from the corrective action program. This resulted in ineffective and untimely corrective actions since the items were either closed or awaiting resolution. These noncited violations are described in this report and involve both the mitigating systems and barrier integrity cornerstones of reactor safety. As discussed above, the team determined that this issue stemmed from a general lack of ownership of the corrective action program. The team found that licensee personnel responsible for determining the classification of Notifications occasionally misclassified them.

- Numerous problems with scaffolds constructed near operable safety-related equipment were identified. The licensee had not constructed scaffolding in accordance with plant procedures and the required scaffolding engineering evaluations for nonconforming items had not been performed. Previous similar findings associated with improper scaffolding had been identified in NRC Inspection Report 50-298/00-04. Despite corrective actions involving new procedures and training, similar problems continued. The cause of this appeared to be primarily due to a lack of ownership by the licensee's staff responsible for the both the construction and inspection of scaffolding.

- The licensee had not effectively corrected problems associated with personnel not recognizing when and how to perform adequate operability determinations and evaluations. A noncited violation was identified which involved examples from both the mitigating system and barrier integrity cornerstones. This cross-cutting issue was documented in the previous NRC Problem Identification and

Resolution inspection and other similar findings associated with this cross-cutting issue are noted in NRC Inspection Reports 50-298/00-10, 50-298/00-13, 50-298/00-14, and 50-298/01-02. The team found the corrective action procedures adequate; however, despite the improved procedures and additional training, these problems continued. In NRC Inspection Report 50-298/00-13, the documented causal relationship of the findings was that personnel lacked a questioning attitude toward degraded or nonconforming conditions. The cause of the repeat findings in this area are similar in that they were caused by a lack of ownership by the licensee's staff responsible for recommending that operability determinations and evaluations be conducted.

The potential safety impact of the combined effect within the cross-cutting area of problem identification and resolution was that significant issues may exist, which are not corrected. This could result in the facility being operated in a manner not consistent with the Technical Specifications or design basis. If left uncorrected, this programmatic issue could result in a more significant safety concern. This continued performance trend is considered a substantive cross-cutting issue and is a finding (FIN 50-298/0110-06) characterized as "no-color."

4OA6 Exit Meeting

The team discussed these findings with Mr. David Wilson, Vice President of Nuclear Energy and other members of the licensee's staff on October 30, 2001, via teleconference. An additional exit meeting to discuss the changes in characterization of the teams findings following the NRC management review was conducted on December 18, 2001. Licensee management provided no further comment on the findings.

Licensee management did not identify any materials examined during the inspection as proprietary.

4OA7 Licensee Identified Violations

The following findings of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements and meet the criteria of Section VI.A of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a noncited violation.

If you deny any of the noncited violations, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, 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 the Cooper facility.

NCV Tracking Number	Requirement Licensee Failed to Meet
50-298/0110-07	Technical Specification 5.4.1(a) requires that licensees establish, implement, and maintain written procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Appendix A recommends procedures for authorities and responsibilities for safe operation. Administrative Procedure 0.5.OPS, "Operations Review of Problem Identification Reports/Operability Determinations/Evaluations," Revision 7, implements this requirement. Administrative Procedure 0.5.OPS states that if operability of technical specification equipment could be impacted by the identified condition, you are to immediately notify the shift supervisor and ensure additional information is assembled to support an operability decision. Contrary to this, the licensee identified five examples where Administrative Procedure 0.5.OPS was not implemented as follows: (1) On July 23, 2001, the licensee identified that crimps were improperly installed on lugs for essential electrical components. However, the condition was not entered into the corrective action program and not evaluated for operability. The licensee entered the issue into the corrective action program as Notification 10099320. (2) On August 7, 2001, the licensee identified numerous environmental qualification program deficiencies that were not entered into the corrective action program. These deficiencies included potential nonconformances, inadequate documentation, and inappropriate analyses. However, the conditions were not evaluated for operability. The licensee entered the issue into the corrective action program as Notification 10102738. (3) On August 9, 2001, the licensee identified several examples where operability determinations were not performed. Affected equipment and conditions included nonconservative emergency core cooling system calculations, inadequate fire door seals, inadequate electrical load center calculations, and main steam flow-limiter sizing. However, these conditions were not entered into the corrective action program and were not evaluated for operability. The licensee entered the issue into the corrective action program as Notification 10103310. (4) On August 7, 2001, the licensee identified that primary containment isolation switches (MS-PS-300A through

300H) did not meet Regulatory Guide 1.97 operability requirements for post design basis events. However, the condition was not entered in the corrective action program or evaluated for operability. The licensee entered the issue into the corrective action program as Notification 10102713.

(5) On August 23, 2001, the licensee identified that main steam isolation valve limit switches (MS-LMS-A080A-D and MS-LMS-A8086A-D) did not have qualification packages to account for actual ambient temperature. However, the condition was not entered in the corrective action program or evaluated for operability. The licensee entered the issue into the corrective action program as Notification 10106455.

ATTACHMENT

KEY POINTS OF CONTACT

Licensee

M. Boyce, Sr. Manager Technical Services
R. Deatz, Response Team, Corrective Action Program Representative
J. DeBartolo, Employee Concern Program Coordinator
R, Estrada, Performance Analysis Department, Acting Manager
W. Macesevic, Operations Manager
D. Madsen, Response Team, Licensing Representive
D. Meyers, Senior Manager Site Support
J. Montgomery, Chairman, Safety Review Assurance Board
J. Ranalli, Senior Manager Engineering
B. Rush, Response Team Leader
J. Swailes, Vice President, Nuclear Energy
N. Wetherell, Interim Plant Manager

NRC

Anthony T. Gody, Chief, Operations Branch

ITEMS OPENED AND CLOSED

Opened and Closed

50-298/01-10-01	NCV	Failure to follow required procedures were identified when operability determinations were not performed or issues were not considered for their impact on the plant (Section 4OA2.a)
50-298/01-10-02	NCV	Failure to properly classify issues in the licensee's Problem Identification and Resolution program that resulted in ineffective corrective actions (Section 4OA2.b)
50-298/01-10-03	NCV	Failure to develop a procedure for combating emergencies and other significant events required by Regulatory Guide 1.33, Appendix A, Section 6.0 (Section 4OA2.b)
50-298/01-10-04	NCV	Ineffective corrective actions related to the scaffold control program (Section 4OA2.c)
50-298/01-10-05	NCV	Ineffective corrective actions related to operability determinations/evaluations (Section 4OA2.c)

50-298/0110-06	FIN	Numerous examples of inadequate corrective actions and improper implementation of the corrective action program demonstrated a continued trend of inadequate problem identification and resolution. This was primarily due to a general lack of understanding and ownership of site-wide programs and procedures associated with the identification and resolution of problems. (Section 4OA4)
50-298/01-10-07	NCV	Five examples of failure to follow corrective action program procedures for performing operability determinations and evaluations (Section 4OA7)

DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

PLANT PROCEDURES

Document	Title	Revison
Procedure 0-NPG-4.12	CNS Work Prioritization	3
Procedure 0.5	Conduct of the Problem Identification and Resolution Process	25
Procedure 0.5.PIR	Initiation of Problem Identification Reports (PIRS)	2
Procedure 0.5.SUPV	Supervisory Review of Problem Identification Reports	1
Procedure 0.5.OPS	Operations Review of Notifications/Operability Determinations/Evaluations	6 & 7
Procedure 0.5.CLSS	Classification of Problem Identification Reports	1 & 5
Procedure 0.5.CRG	Condition Review Group	1
Procedure 0.5.RCR	Preparation of Resolve Condition Reports	2
Procedure 0.5.SCR	Preparation of Significant Condition Reports	3
Procedure 0.5.NAIT	Corrective Action Implementation and Nuclear Action Item Tracking	5
Procedure 0.5.CAER	Corrective Action Effectiveness Reviews	2
Procedure 0-CNS-25	Self Assessment	5
Procedure 0-PI-01	Performance Indicator Program	2

PLANT PROCEDURES

Document	Title	Revison
CAP Deskguide 1	PIR Processing	21
Procedure 0.8	10 CFR 50.59 Reviews	6
Procedure 0.26	Surveillance Program	38
Procedure 2.2.18	4160V Auxiliary Power Distribution System	56
Emergency Procedure 5.3EMPWR	Emergency Power	3
Administrative Procedure 0.5.TRND	Trending of Problem Identification Report Results	0
Maintenance Procedure 7.0.7	Scaffolding Construction and Control	11

OTHER DOCUMENTS

CAP Trend Reports for August 2000 through June 2001
CNS Quality Assurance Self-Assessment, "QA Followup," November 2000
Safety System Assessment Report - Residual Heat Removal (LPCI Mode), June 2001
Self-Assessment Program Self Assessment, June 2001
CNS Quality Assurance Self-Assessment, "QA Field Observation Program," July 2001
2001 CAP Self-Assessment Results, July 2001
Lesson Plan OTH025-01-01, "Corrective Action Program for Management"
Lesson Plan ESP001-00-04, "ESP Fourth Quarter Continuing Training"
Lesson Plan ESP001-00-03, "ESP Third Quarter Continuing Training"
Presentation in January 2001 by the Performance Analysis Division on Management CAP Trends
Quality Assurance Audit 00-06, "Technical Specification"
Quality Assurance Audit 00-08, "Operations"
Quality Assurance Audit 00-09, "Fitness for Duty and Access Authorization"
Quality Assurance Audit 00-10, "Engineering"
Quality Assurance Audit 00-11, "Maintenance"
Quality Assurance Audit 00-12, "Continuous Improvement"
Quality Assurance Audit 01-02, "Security, Fitness for Duty, and Access Authorization"
Quality Assurance Audit 01-03, "Radiological Controls and Chemistry"
Quality Assurance Audit 01-06, "Continuous Improvement"
Quality Assurance Surveillance S301-0001, "Engineering Audit 99-11 Follow-up"
Quality Assurance Surveillance S302-0006, "Special Programs"
Quality Assurance Surveillance S509-0001, "Switchyard Activities"
Quality Assurance Surveillance S302-0007, "Maintenance Rule"
Quality Assurance Surveillance S412-0001, "Radioactive Material Processing and Shipping"
Quality Assurance Surveillance S501-0003, "Forced Outage"

Quality Assurance Surveillance S302-0008, "Special Programs"
Quality Assurance Surveillance S108-0003, "Operability Determination/Evaluations"
Quality Assurance Surveillance S408-0101, "QA Review of CNS Corrective Actions"
Quality Assurance Surveillance S501-0101, "Mid Cycle Outage 01-01"
Quality Assurance Surveillance S410-0101, "Procurement"
Quality Assurance Surveillance S108-0101, "Technical Specifications"
Quality Assurance Surveillance S509-0101, "Switchyard Activities"
Quality Assurance Surveillance S301-0101, "Single Train System Failure"
Quality Assurance Surveillance S302-0101, "Special Programs"
Quality Assurance Field Observations FO-00-10, -00-11, -00-12, -00-13, -00-14, -00-15, -00-16, -00-17, -00-18, -00-19, -00-20, -01-01, -01-02, -01-03, -01-04, -01-05, -01-06, -01-07, -01-08, -01-09, -01-10, -01-11, -01-12,
Maintenance Rule Expert Panel Meeting Minutes for July 2001
Maintenance Rule Expert Panel Meeting Minutes for August 2001
Maintenance Rule Periodic Assessment for Period 12-17-98 to 12-16-00
Engineering Evaluation, USQE-1998-0073
Outage Scope Change Request RE20 Log #39 (REC Flow Balancing)
Problem Identification Reports Package dated September 12, 2001
Problem Identification Reports Package dated September 19, 2001

Problem Identification Reports (PIRs)

4-05378	4-11387	4-11829	4-12904	4-13859
4-08665	4-11388	4-11958	4-12963	4-13880
4-10107	4-11394	4-12015	4-12978	4-13911
4-10108	4-11465	4-12085	4-13107	4-13946
4-10338	4-11469	4-12312	4-13242	4-14081
4-10651	4-11489	4-12319	4-13324	4-14105
4-10711	4-11566	4-12428	4-13340	4-14129
4-10777	4-11569	4-12444	4-13425	4-14315
4-10870	4-11571	4-12455	4-13551	4-14332
4-10929	4-11609	4-12886	4-13674	4-14444
4-10975	4-11611	4-12897	4-13724	4-14476
4-11011	4-11657	4-12900	4-13766	4-14564
4-11081	4-11660	4-12901	4-13853	4-14613
4-11100	4-11681	4-12902	4-13855	4-14706
4-11103	4-11770	4-12903	4-13857	4-14831
4-11145				

Notifications (department dispositions awaiting resolution)

10075662	10083419	10086618	10093681	10098587
10076595	10083877	10087515	10094953	10099656
10078145	10085459	10088374	10095222	10100590
10079527	10085658	10089427	10095623	10100609
10080682	10085940	10091100	10096505	10101475
10083164	10086293	10093612	10098247	10103646

10103654	10104460	10105936	10106301	10107050
10104049	10105501	10105966	10106505	

Notifications

10076580	10090710	10098842	10103310	10110550
10082598	10090775	10099320	10103368	10111086
10082600	10092693	10099826	10106455	10111213
10082630	10092724	10100038	10109324	10111850
10082634	10093676	10100092	10109327	10111895
10084916	10095131	10102391	10110178	10112306
10085373	10096929	10102485	10110285	10112753
10086618	10097256	10102713	10110335	10114494
10089347	10098565	10102738	10110493	

Root Cause Evaluations Verified Completed by Trained Personnel

RCR 99-0927	RCR 2000-0994	SCR 2001-0577
RCR 2000-0882	RCR 2001-0056	RCR 2001-0727
RCR 2000-0947	RCR 2001-0289	

Significant Condition Reports

1999-0148

2000-0423, -0937, -1016, -1071, -1072, -1207

2001-0146,-0157, -0194, -0264, -0349, -0417, -0567, -0576, -0577, -0624, -0733;

Resolve Condition Reports

2000-0034,-0248, -0258, -0281, -0311, -0333, -0408, -0515, -0616, -0626, -0688, -0689, -0862, -0868, -0888, -0903, -0932, -0934, -0956, -0961, -0963, -0964, -0966, -0971, -0980, -0982, -0986, -0987, -0989, -0991, -1000, -1005, -1011, -1022, -1023, -1028, -1036, -1038, -1042,-1081, -1108, -1149,-1154, -1155, -1169, -1198, -1200;

2001-0024, -0141, -0151, -0152, -0155, -0160, -0288, -0537, -0586, -0638, -0686, -0688, and -0714

Operational Experience Reviews

Response to Information Notice 2000-01
Response to Information Notice 2000-13
Response to RIS 2000-24
Response to RIS 2001-15

Employee Concern Program Reports

00-08-03	01-04-12	01-06-09
01-01-02	01-04-21	01-07-01
01-04-02		

Engineering Summary List Selected Items

ENG P00-0006
ENG P00-0087
ENG P00-0215
ENG P00-0490 (4-14634)
ENG P01-0896
OTHER NAIT 2-26334
OTHER NAIT 4-05489
OTHER NAIT 4-05624
OTHER NAIT 4-12312
OTHER NAIT 4-12477
OTHER NAIT 4-14024

Information Request
Cooper Inspection (IP 71152)
This request was e-mailed to licensee on July 30, 2001

The inspection will cover the period of August 2000 to August 2001. All requested information should be limited to this period unless otherwise specified. The information may be provided in either electronic or paper media or a combination of these. Information provided in electronic media may be in the form of e-mail attachment(s), CDs, or 3½ floppy disks. The agency's text editing software is Corel WordPerfect 8, Presentations, and Quattro Pro; however, we have document viewing capability for MS Word, Excel, Power Point, and Adobe Acrobat (.pdf) text files.

Please provide the following information to Ted Easlick (team leader) in the Region IV Arlington Office by August 27, 2001

1. Summary list of all currently open/active items for the specified period:

   condition reports of significant conditions adverse to quality (PIR or Notifications)
   operator work-arounds (several tiers - including operator concerns)
   engineering review requests
   maintenance requests
   temporary modifications (including engineering changes; DCD's, CER's, etc)
   procedure change requests
   training needs request/evaluation
   control room and safety system deficiencies (including Red Arrows and Annunc. Troubles)

3. Summary list of all items completed/resolved/closed for the specified period:

   condition reports of significant conditions adverse to quality (PIR or Notifications)
   operator work-arounds (several tiers - including operator concerns)
   engineering review requests
   maintenance requests
   temporary modifications (including engineering changes; DCD's, CER's, etc)
   procedure change requests
   training needs request/evaluation
   control room and safety system deficiencies (including Red Arrows and Annunc. Troubles)

4. Summary list of all condition reports generated during the specified period and sorted by:

   chronology
   initiating organization

5. All quality assurance audits and surveillences of corrective action activities completed during the specified period.

6. All corrective action activity and functional area self-assessments and Non-NRC third party assessments completed during the specified period. (Current system health reports or similar system information)

7. Corrective action performance trending/tracking information broken down by functional organization.

8. Corrective action program department performance indicators including an index of criteria and an explanation of changes in reporting criteria for the period.

9. For each of the items applicable to the Cooper Station listed below please provide the following:

- Full text of the condition report (please indicate any findings that did not result in a condition report or corrective actions)
- Any "Roll-up" or "Aggregating" Conditions Reports related to the generic communication or condition report.
- Root Cause analysis report (if applicable)
- Risk significance assessments
- Probable Cause evaluation (if applicable)
- Approved corrective actions
- Basis for extending originally approved due dates
- Evidence of corrective action completion (work packages, design change documentation, temporary modifications, training lesson plans/material, training attendance records, procedure revisions, etc.)

a. Part 21 Reports:
   - GE Fuel - Stability Reload Licensing Calculations May Be Non-Conservative

b. NRC Information Notices:
   - 2000-010, "Recent Events Resulting in Extremity Exposure Exceeding Regulatory Limits"
   - 2000-012, "Potential Degradation Firefighter Primary Protective Garmets"
   - 2000-013, "Review of Refueling Outage Risk"
   - 2000-014, "Non-Vital Bus Fault Leads to Fire and Loss of Offsite Power"
   - 2000-015, "Recent Events Resulting in Whole Body Exposure Exceeding Regulatory Limits"
   - 2000-020, "Potential Loss of Redundant Safety-Related Equipment Because of the Lack of High-Energy Line Break Barriers"
   - 2000-021, "Detached Check Valve Disc Not Detected by Use of Acoustic and Magnetic Nonintrusive Test Techniques"
   - 2001-007: "Unescorted Access Granted On The Basis of Incomplete and/or Inaccurate Information"
   - 2001-012: "Hydrogen Fire at Nuclear Power Station"

c. LERs:
   - issued during the above specified period
   - revised during the above specified period

d. NCVs:
   - addressed during the above specified period

e. Other Events:
   a. Loss of Annunciators - NOUE
   b. S/U Transformer fire - ALERT

f. Miscellaneous:
   a. Magne-Blast Circuit breaker failures
   b. Fire Seal Deficiencies
   c. Annunciator failures
   d. Zulu-sump failures
   e. Operator workarounds in procedures (review project)

9. Copy of all on/offsite review committee meeting minutes covering the specified period.

10. Listing of plant safety issues generated through the employee concerns program for the specified period.

11. Current revisions of governing procedures/policies/guidelines for: (including a summary of changes during the period)

    Condition Reporting
    Corrective Action Program
    Corrective Action Review Board
    Operability Evaluations
    Root Cause Evaluation/Determination
    Operator Work-Arounds (including operator concerns)
    Work Requests
    Engineering Requests
    Temporary Modifications/Engineering Changes
    Procedure Change Requests
    Deficiency Reporting and Resolution
    Training Needs Request/Evaluation