UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

November 17, 2000

J. H. Swailes, Vice President of
Nuclear Energy
Nebraska Public Power District
P.O. Box 98
Brownville, Nebraska 68321

SUBJECT: NRC INSPECTION REPORT NO. 50-298/00-13

Dear Mr. Swailes:

This refers to the inspection conducted on September 24 through November 4, 2000, at the Cooper Nuclear Station facility. The enclosed report presents the results of this inspection. The results of this inspection were discussed during a meeting on November 2, 2000, with Mr. P. Caudill and other members of your staff.

The inspectors examined activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspectors examined a selection of procedures and representative records, observed activities, and conducted interviews with personnel.

Based on the results of this inspection, the NRC has determined that two violations of NRC requirements occurred. These violations are being treated as noncited violations, consistent with Section VI.A of the NRC Enforcement Policy. The noncited violations are described in the subject inspection report. If you contest these violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Cooper facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

Ken E. Brockman for

Charles S. Marschall, Chief
Project Branch C
Division of Reactor Projects

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

Enclosure:
NRC Inspection Report No.
50-298/00-13

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Only inspection reports to the following:
Tony McMurtray **(ACM2)**
NRR Event Tracking System **(IPAS)**
CNS Site Secretary **(SLN)**
Dale Thatcher **(DFT)**

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RIV:RI:DRP/C	SRI:DRP/C	SPE:DRP/C	C:DRS/EMB	C:DRP/C
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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-298
License No.:	DPR 46
Report No.:	50-298/00-13
Licensee:	Nebraska Public Power District
Facility:	Cooper Nuclear Station
Location:	P.O. Box 98 Brownville, Nebraska
Dates:	September 24 through November 4, 2000
Inspectors:	J. Clark, Senior Resident Inspector M. Hay, Resident Inspector J. E. Whittemore, Senior Reactor Inspector
Approved By:	C. Marschall, Chief, Project Branch C Division of Reactor Projects

ATTACHMENTS:
1. Supplemental Information
2. NRC's Revised Reactor Oversight Process

SUMMARY OF FINDINGS

IR 05000298-00-13; on 9/24-11/04/2000; Nebraska Public Power District; Cooper Nuclear Station, Integrated Resident & Regional Report. Maintenance Rule Effectiveness.

This inspection report covers a 6-week period of inspection by resident inspectors and a 1-week onsite inspection by a Region IV inspector during September 25-29, 2000.

The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process in Inspection Manual Chapter 0609. The body of the report is organized under the broad categories of Reactor Safety, Safeguards, and Other Activities as reflected in the summary below.

- Green. The inspectors determined that operations personnel did not declare that safety-related equipment was inoperable, under degraded or nonconforming conditions, on three separate occasions. The separate conditions were the loss of an off-site ac power circuit, a potentially generic problem with the closing mechanism of safety-related Magne-Blast circuit breakers, and the apparent excessive leakage from the reactor equipment cooling system. The failure to perform operability determinations was considered a violation of Technical Specification 5.4.1(a), for failure to follow Regulatory Guide 1.33, Appendix A, recommended procedures.

  This noncited violation was determined to have very low safety significance because the minimum required number of offsite circuits remained available for the first example, and subsequent evaluations determined there was not a loss of safety function for the other two examples (Section 1R15).

- Green. On August 24, 2000, engineering and maintenance personnel performed a temporary modification in the 345/161Kv switchyard. The licensee provided temporary power to auxiliary circuits for control power to off-site ac circuit breakers. The inspectors identified that the licensee had not established procedures for the operation and maintenance of off-site access circuits. The failure to establish, implement, and maintain Regulatory Guide 1.33, Appendix A, recommended procedures, was a violation of Technical Specification 5.4.1(a).

  This noncited violation was determined to have very low safety significance because the minimum required number of offsite circuits remained available at all times (Section 1R23).

- No color. The inspectors identified a trend with human performance, in determining operability of safety-related equipment, being the common element. This trend was evidenced by the following:

  - Ten months prior to this inspection, operations personnel failed to perform an operability determination for a reactor recirculation valve degraded condition (NCV 50-298/0004-02).

  - During the last 3 months, three additional 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 function(s) for safety-related equipment. The inspectors considered this performance trend to be a substantive cross-cutting issue, not captured in individual issues, indicating a performance trend.

The significance determination process does not address such human performance issues. Therefore, this finding is considered to have no color (Section 4OA4).

Report Details

At the beginning of the inspection period, the plant was operating at 100 percent power. On October 14, 2000, the plant automatically tripped from 100 percent power, when a differential current fault occurred on the main transformer. Licensed operators restarted the plant on October 18 and achieved full power on October 25, 2000. The plant operated at 100 percent power for the remainder of the period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R04 Equipment Alignments

a. Inspection Scope

The inspectors performed a partial walkdown inspection of the Division 2 diesel generator while emergent work was being performed on the Division 1 diesel generator output breaker. Plant procedures and drawings were used to verify that the diesel generator system was properly aligned.

b. Findings

There were no significant findings identified during this inspection.

1R05 Fire Protection

a. Inspection Scope

The inspectors performed routine plant tours to assess the material condition of fire protection equipment and proper control of transient combustibles. The specific risk-significant areas inspected included the reactor building southeast quadrant, the refueling floor, and the emergency diesel generator rooms.

b. Findings

There were no significant findings identified during this inspection.

1R12 Maintenance Rule Implementation

.1 Maintenance Effectiveness Reviews

a. Inspection Scope

The inspectors reviewed the licensee's maintenance rule implementation for the following structures, systems, or components that demonstrated performance problems:

- Division 2 diesel generator Overload Protection Relay DG-REL-DG2(51)C
- Safety-relief valve tailpiece pressure switches

The inspectors verified that engineering personnel were adequately tracking and trending failures and performance data for these components. The inspectors also reviewed selected problem identification reports associated with these systems to determine if licensee staff had properly captured potential maintenance rule issues.

b. Findings

There were no significant findings identified during this inspection.

.2 Periodic Evaluation Reviews

a. Inspection Scope

The inspector reviewed the licensee's reports documenting the performance of the last two Maintenance Rule periodic effectiveness assessments. These periodic evaluations are conducted to meet the requirements of 10 CFR 50.65(a)(3). The evaluations covered the periods of the program implementation from June 3, 1996, through March 29, 1997, and from May 20, 1997, through December 17, 1998.

The inspector determined that the licensee's program had identified and monitored risk-significant functions associated with structures, systems, and components using reliability and unavailability. Additionally, the performance of nonrisk-significant functions were monitored using plant level criteria. The inspector reviewed the conclusions reached by the licensee with regard to the balance of reliability and unavailability for specific Maintenance Rule functions. This review was conducted by examining the licensee's evaluation of all risk-significant functions that had exceeded performance criteria during the evaluation periods. The inspector also examined the licensee's evaluation of program activities associated with placement of Maintenance Rule program risk-significant functions in Categories (a)(1) and/or (a)(2). This review was conducted by the examination of periodic evaluation conclusions reached by the licensee for functions of the service water system, reactor control system, and the primary containment isolation system.

b. Findings

No findings were identified.

.3 Effectiveness of Maintenance Rule Program

a. Inspection Scope

The inspector reviewed the Maintenance Rule Expert Panel Meeting Minutes for those meetings listed in Attachment 1 with an emphasis on issues associated with functions of the service water, reactor control, and primary containment isolation systems. For the identified functions, the inspector followed up by obtaining the needed documentation and assessing the Maintenance Rule program performance related to:

- Program adjustments made in response to unbalanced reliability and availability
- Cause determination of degraded performance or failure to meet performance criteria
- Adequacy of corrective action and goal setting
- Monitoring of established goals for functions placed in Category (a)(1)
- Program revisions to scoping and risk-significance
- Creation of new risk-significant functions to improve performance monitoring
- Assessment of plant level performance

In order to validate that the licensee was identifying programmatic issues from outside of the Maintenance Rule program, the inspector also reviewed the reports for the quality assurance audit, quality assurance surveillance, and third-party assessment of the Maintenance Rule program that are referenced in Attachment 1.

b. Findings

No findings were identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspector evaluated the use of the corrective action system within the Maintenance Rule program. This review was accomplished by the examination of the problem identification reports listed in the attachment. The purpose of this review was to establish that the corrective action program was entered at the appropriate threshold for the purposes of:

- Starting the evaluation and determination of corrective action process when performance criteria was exceeded
- Correction of performance-related issues or conditions identified during the periodic evaluation
- Correction of generic issues or conditions identified during programmatic surveillances, audits, or assessments

The inspector verified that the identification and implementation of corrective action was acceptable.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed risk assessments performed for selected planned maintenance activities and emergent work. The risk assessments were reviewed to verify that the licensee effectively controlled risk significant configurations. The inspectors verified that work control and operations personnel were aware of risk categories and applicable contingency actions. The inspectors also verified that the licensee properly controlled troubleshooting and repairs associated with emergent work activities. Specifically, the following activities were reviewed:

- Inspection, troubleshooting, and repairs of selected 4160 volt circuit breakers following a generic concern affecting the breaker closing mechanisms
- Replacement of safety-relief valve tailpiece pressure switches
- Entry into shutdown cooling on September 15, 2000, to support forced outage activities

b. Findings

There were no significant findings identified during this inspection.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the technical adequacy of three operability evaluations to determine if continued operability was justified. The reviewed assessments included:

- failure of control power equipment for off-site ac circuits,
- generic concerns with Magne-Blast circuit breaker closing mechanisms, and
- apparent leakage of the reactor equipment cooling system.

b. Findings

The inspectors determined that operations personnel did not declare that equipment was inoperable, under degraded or nonconforming conditions, in three separate operability assessments. The inspectors were concerned that improperly evaluated degraded and/or nonconforming conditions could result in continued operation with a structure, system, or component that was not capable of performing its design function without appropriate operator action. The three assessments reviewed were:

.1 On August 24, 2000, the inspectors observed that the 161 and 345 kilovolt switchyards had lost both normal and alternate ac power for auxiliary equipment. The inspectors noted that breaker control power was being supplied by batteries, because the battery charger units had failed. The batteries have a service capacity of about 8 to 12 hours. The safety function of the auxiliary equipment is to supply control power for breaker control of the required number of offsite ac circuits.

The inspectors observed that maintenance activities were ongoing for the repair of the battery charging units. Operations personnel stated that they discussed the issues with engineering and offsite transmission maintenance personnel, however, they had not considered that any of the activities affected off-site power operability.

Engineering personnel subsequently stated that maintenance personnel inadvertently opened breakers from the batteries to the breaker control power for the 161 kilovolt breakers. This caused a loss of the safety function of the auxiliary equipment and effectively eliminated one offsite power source. Although an alarm was received in the control room, operations personnel did not take action, based upon an assumption that the annunciator alarm was expected for the work in progress.

Following this occurrence, an evaluation of the work in the switchyard was conducted, and the licensee concluded that a degraded condition should have been recognized and appropriate technical specification action statements entered. The inspectors determined that the operations personnel had a lack of questioning attitude during the maintenance activities and that maintenance personnel failed to inform operations personnel when system capabilities were impacted. As a result, the licensee failed to perform an operability determination and, without a basis for demonstrating reasonable assurance for operation, continued to consider the system to be operable.

.2 On September 30, 2000, the breaker for Service Water Pump D tripped open after operators attempted to start the pump. Maintenance and engineering performed troubleshooting on the breaker. Plant engineers informed the inspectors that the preliminary cause for the breaker failure was a loosening of the prop spring bracket in this General Electric Magne-Blast circuit breaker. Engineers stated that breakers of this design were used for several essential applications, including service water pump motors, diesel generator output breakers, residual heat removal system pump motors, and 480 volt essential bus feeder breakers. The inspectors noted that the safety function of each of these breakers was to close to supply power to the associated equipment.

Operations and engineering personnel stated that operability of the other breakers was not, at the present time, called into question. They stated that, while the bracket was found to be loose, they did not know if this was a cause or an affect of the problem with the breaker. They also stated that the failure could have been totally unrelated to the prop spring bracket. During the week of

November 2, 2000, plant operators replaced the service water pump breaker with a spare, and the suspect breaker was sent to the General Electric breaker maintenance facility for a root cause investigation.

On November 6, 2000, an engineering supervisor stated that General Electric personnel had determined that the loosening of the prop spring bracket caused the breaker failure. The engineers had also determined that the prop spring bracket was a previously installed General Electric modification. At the time of the original modification, a torque value was not specified for the bolts that held the bracket in place. However, General Electric subsequently specified a torque value, in modifications kits and for their own facility, for subsequent installations of such modifications.

The engineering supervisor and the operations manager stated that they still considered the other Magne-Blast circuit breakers to be operable. When asked what their reasonable assurance for operability was, the engineering supervisor stated that they needed to contact General Electric to develop this. He stated that some of the reasoning for an operability evaluation would be based on General Electric's answers to questions (such as cycle dependency for the failure or position dependency of the breaker). Based on the inspectors' questioning, the operations manager stated, that they did not have reasonable assurance that the other potentially affected breakers were operable. However, no Technical Specification action statements were entered based upon this discussion.

The licensee subsequently contacted General Electric and conducted a conference call regarding this issue. Approximately 2 hours later, the inspectors were informed that General Electric provided adequate information that demonstrated reasonable assurance of continued operation of the breakers. The inspectors concluded that the licensee failed to perform an operability determination and, without a basis for demonstrating reasonable assurance for operation, continued to consider the components to be operable.

.3 On October 10, 2000, operations personnel noted a decrease in reactor equipment cooling system surge tank level. They noted that surge tank level was 31.25 inches at 7:20 a.m. on October 9, 2000. The level was recorded as 29.75 inches at 8:05 a.m. on October 10, 2000. The operators noted that there was an operability limit, for system leakage, of 1 inch per day from the surge tank. This limit is based upon the safety function of a minimum 30-day system mission time following a loss of coolant accident. The operators took actions to determine the cause for the lower level. Operators reviewed logs and discussed system operation with engineering personnel.

At 12:23 p.m. on October 10, 2000, an operator took another reading of reactor equipment cooling surge tank level. The operator noted that level dropped an additional 3/4 inch from the morning reading. When the operator informed the control room, he was instructed to verify this reading. At 12:33 p.m., the

operator determined that level was 7/8 inch below the 8:05 a.m. reading. The inspectors noted that this corresponded to less than a 7-day supply for reactor equipment cooling system operation and appeared to present the loss of safety function of the system. The inspectors also noted that operations personnel did not declare the reactor equipment cooling system inoperable when they observed signs of apparent excessive leakage. Operations personnel continued to investigate potential causes for the leakage and did not take another reading of the tank until approximately 1:30 p.m..

Operations personnel subsequently determined that chemistry personnel had taken several samples of the reactor equipment cooling system on October 10, 2000. The operators determined that samples were taken before the 8:05 a.m. reading and shortly thereafter. The operators also learned that the chemistry technicians may have purged an excessive amount for these samples. The inspectors noted that, while these samples accounted for the surge tank level decreases, the operators were unaware of this when they continued to consider the reactor equipment cooling system operable. The inspectors concluded that the licensee failed to perform an operability determination and, without a basis for demonstrating reasonable assurance for operation, continued to consider the system to be operable.

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, implements this requirement. Section 3.1.10 of Procedure 0.5.OPS states that, to continue operation while an operability determination is being completed, there shall be a reasonable expectation that the system is operable and that the determination will support that expectation. Section 3.6.5 of Procedure 0.5.OPS also states, when a 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), to immediately declare the equipment inoperable. On three separate occasions, the licensee failed to follow Procedure 0.5.OPS and declare the systems or components inoperable. The failure to declare the systems or components inoperable during the off-site power issue, the Magne-Blast circuit breaker issue, and the reactor equipment cooling system issue were three separate examples of a violation of Technical Specification 5.4.1(a). This violation is being treated as a noncited violation (50-298/0013-01) consistent with Section VI.A of the NRC Enforcement Policy. The licensee documented the failure to properly perform operability determinations in their corrective action process as Problem Identification Report 4-12295.

The inspectors also considered this violation to be a cross-cutting issue, involving human performance. A further finding of cross-cutting human performance is described in Section 4OA4 of this report.

This noncited violation was characterized as having very low safety significance, through the use of the significance determination process. The loss of a single off-site power source occurred for approximately one-half hour, while the other source remained available at all times. For both the circuit breaker issue, and the reactor equipment cooling system issue, the licensee subsequently gathered additional information that substantiated equipment operability.

1R19 Postmaintenance Testing

a. Inspection Scope

The inspectors observed or evaluated postmaintenance testing performed on the following equipment to determine whether the tests adequately confirmed equipment operability:

- Tests performed on Service Water Pump D following a lift adjustment
- Tests performed on the Division 1 and Division 2 Diesel Generators following emergent work to inspect their associated output breaker closing mechanisms
- Tests performed on Core Spray Pump A following emergent work to inspect its associated output breaker closing mechanism

b. Findings

There were no significant findings identified during this inspection.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed or reviewed the following tests:

- Surveillance Procedure 6.2DG.101, “Diesel Generator 31 Day Operability Test (Div 2),” Revision 18
- Surveillance Procedure 6.SLC.101, “Standby Liquid Control Pump Operability Test,” Revision 8

b. Findings

There were no significant findings identified during this inspection.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors observed the licensee install a temporary plant modification on August 24, 2000. The modification installed a temporary generator to support emergent repairs associated with the 345/161Kv switchyard auxiliary control power system. Normal supply of power to the auxiliary control power system was lost following an electrical fire. The inspectors assessed the licensee's ability to install the modification along with the ability of the generator to perform its design function.

b. Findings

The inspectors found no significant findings associated with the installation of the temporary plant modification. However, during review of this activity the inspectors noted that Temporary Procedure SP00-008, "Emergency Feed of PC1 in the 345KV Substation," Revision 0, was used. This procedure was written as a reference procedure for use during a loss of offsite power. Operators stated that the procedure could not be followed as written because it was specific to a loss of offsite power. However, engineering personnel stated that this was not a concern because no authorized procedures were required for performing activities associated with the offsite access circuits. The inspectors determined that no specific procedures for performing both routine operations and maintenance activities for offsite access circuits were established by the licensee.

Technical Specification 5.4.1(a) requires, in part, that written procedures be established, implemented, and maintained covering applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Procedures for offsite electrical access circuits are referenced in Appendix A.

The failure to establish, implement, and maintain procedures for performing activities associated with offsite electrical access circuits is a violation of Technical Specification 5.4.1(a). This violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy (50-298/0013-02). The licensee documented this issue in their corrective action process as PIR 4-11269.

This noncited violation was characterized as having very low safety significance through the use of the significance determination process. The lack of adequate procedural guidance for performing activities on the offsite access circuits did not result in any identified loss of a safety or safety support system function.

OTHER ACTIVITIES

4OA4 Cross-cutting Issues

.1 Aspects of Human Performance

The inspectors identified a trend with human performance, in determining operability of safety-related equipment, being the common element. This trend was evidenced by the following:

- Ten months prior to this inspection, operations personnel failed to perform an operability determination for a reactor recirculation valve degraded condition (NCV 50-298/0004-02).

- During the last 3 months, three additional 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 function(s) for safety-related equipment. The inspectors considered this performance trend to be a substantive cross-cutting issue, not captured in individual issues, indicating a performance trend. The identification of this trend is considered to be a finding (50-298/0013-03). The significance determination process does not address such human performance issues. Therefore, this finding is considered to have no color. The licensee submitted this issue into their corrective action program as Problem Identification Report (PIR 4-12295).

4OA6 Meetings

.1 Exit Meeting Summary

At the conclusion of the maintenance rule inspection on September 28, 2000, the inspector presented the inspection results to Mr. William Macecevic, Manager of Operations, and other staff personnel. These personnel acknowledged the inspection results.

On November 2, 2000, the results of the inspection were discussed with Mr. Paul Caudill, and other members of the Cooper staff. The plant management acknowledged the findings presented.

Plant management informed the inspectors at both meetings that no proprietary material was examined during the inspection.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Baldwin, Supervisor, Plant Engineering Department
C. Blair, Senior Engineer, Licensing
M. Boyce, Risk and Regulatory Affairs Manager
P. Caudill, Senior Manager of Technical Services
B. Dettman, Manager, Security
P. Donahue, Manager, Plant Engineering Department
J. Dubois, Acting Supervisor, System Engineering
C. Fidler, Assistant Maintenance Manager
M. Gillan, Manager, Outage Group
S. Hans, Supervisor, Outage Group
V. Hoefler, Coordinator, Maintenance Rule Program
B. Houston, Quality Assurance Operations Manager
M. Kaul, Operations Support Specialist
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J. Lewis, Manager, Reactor Engineering
W. Macecevic, Manager, Operations
S. Mahler, Assistant Manager, Licensing
C. Markert, Manager, Engineering Support Department
E. McCutchen, Senior Licensing Engineer
J. McDonald, Plant Manager
J. McMahan, Supervisor, Work Control
B. Rash, Senior Engineering Manager
R. Thorson, Manager, Work Control
R. Wachowiak, Supervisor, Risk Management

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed During this Inspection

50-298/0013-01	NCV	Failure to perform operability determination and/or declare equipment inoperable
50-298/0013-02	NCV	Failure to establish, implement, and maintain procedures for the off-site ac power circuits
50-298/0013-03	FIN	Substantive finding of a cross-cutting human performance issue for operability determinations

Documents Reviewed

PROCEDURES		
NUMBER	DESCRIPTION	REVISION
AP 0.27	Maintenance Rule Program	10
AP 0.27.3	Maintenance Rule Program Periodic Assessment	3

PROBLEM IDENTIFICATION REPORTS

2-27719	4-01892	4-04915
3-40024	4-01946	4-04919
4-00011	4-01963	4-04920
4-00952	4-02971	4-05605
4-01315	4-02972	4-05606
4-01345	4-02973	4-10962
4-01392	4-03553	4-11469
4-01891	4-03572	4-11693

MAINTENANCE RULE PROGRAM EXPERT PANEL MEETING MINUTES

April 28, 1998	April 27, 1999	December 21, 1999
June 24, 1998	May 25, 1999	January 25, 2000
July 20, 1998	June 25, 1999	February 22, 2000
August 24, 1998	July 27,1999	June 27, 2000
December 21, 1998	June 29, 1999	July 25, 2000
January 26, 1999	July 27, 1999	August 22, 2000
February 23, 1999	August 31, 1999	September 12, 2000
March 30,1999	November 30, 1999	September 26, 2000

SURVEILLANCE, AUDIT AND ASSESSMENT REPORTS		
NUMBER	DESCRIPTION	REVISION
----	Maintenance Rule Program Periodic Assessment Report	09/03/97
----	Maintenance Rule Program Periodic Assessment Report	05/24/99
S302-0007	Quality Assurance Surveillance Report-Maintenance Rule	09/19/00
99-11	CNS Quality Assurance Report	08/25/99

SURVEILLANCE, AUDIT AND ASSESSMENT REPORTS		
NUMBER	DESCRIPTION	REVISION
	Self Assessment-Maintenance Rule Implementation	03/29/99

MISCELLANEOUS DOCUMENTS	
DESCRIPTION	REVISION
List of Maintenance Rule Program In-Scope Functions	9/25/00
History of Maintenance Rule Program (a)(1) Functions	9/25/00
Maintenance Rule Performance Criteria Summary	9/15/00
Maintenance Rule (a)(1) and Watch List Report	9/26/2000

ATTACHMENT 2

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the significance determination process, and assigned colors of GREEN, WHITE, YELLOW, or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, or RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.