



Nebraska Public Power District

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November 6, 1996

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Gentlemen:

Subject: Reply to a Notice of Violation
NRC Inspection Report No. 50-298/96-12
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

Reference: 1. Letter to G. R. Horn (NPPD) from K. E. Brockman (USNRC) dated October 7, 1996, "NRC Inspection Report 50-298/96-12 and Notice of Violation"

By letter dated October 7, 1996 (Reference 1), the NRC cited Nebraska Public Power District (District) as being in violation of NRC requirements. This letter, including Attachment 1, constitutes the District's reply to the referenced Notices of Violation in accordance with 10 CFR 2.201. Whereas the District admits violations to 10 CFR 50 Appendix B and 10 CFR 50.65 did occur as cited in Violations 9612-01, 9612-04, and 9612-05, the District denies Violations 9612-02, 9612-03, and 9612-06. Corrective actions necessary to return CNS to full compliance with respect to the identified violations have been completed, where appropriate.

Should you have any questions concerning this matter, please contact me.

Sincerely,

P. D. Graham
Vice President, Nuclear

/crm
Attachment

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PDR ADOCK 05000298
G PDR

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cc: Regional Administrator
USNRC - Region IV

Senior Project Manager
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector
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NPG Distribution

REPLY TO OCTOBER 7, 1996, NOTICE OF VIOLATION
COOPER NUCLEAR STATION
NRC DOCKET NO. 50-298, LICENSE DPR-46

During NRC inspection activities conducted from August 12, 1996, through August 16, 1996, six violations of NRC requirements were identified. The particular violations and the District's reply are set forth below:

Violation A

10 CFR Part 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," as described in 10 CFR 50.65(b)(2) requires, in part, that the scope of the monitoring program include nonsafety-related structures, systems, and components: (i) that are used in plant emergency operating procedures; (ii) whose failure could prevent safety-related structures, systems, and components from fulfilling their safety-related function; or (iii) whose failure could cause a reactor scram.

Contrary to the above, as of August 12, 1996, the following nonsafety-related structures, systems, and components were not included in the licensee's 10 CFR Part 50.65 monitoring program scope:

- *The building, room, and ventilation system radiation monitors described in Function RMV-F01 that are utilized in plant emergency operating procedures.*
- *The air ejector off gas system radiation monitors described in Function RMP-F02 that could cause a reactor scram if a monitor failed.*
- *The auxiliary steam for heating the reactor building, control and office buildings, diesel generator rooms, and the intake structure as described in Functions AS-F04, AS-F07, AS-F013, and AS-F014. The loss of auxiliary steam heating system in these areas could prevent safety-related structures, systems, and components from fulfilling their safety-related functions.*
- *The gaitronics communication system that is used in plant emergency operating procedures, described in Function IC-F01.*

This is a Severity Level IV violation (Supplement 1) (50-298/9612-01).

Admission or Denial to Violation

The District admits the violation but takes exception to two of the four findings. The basis for this exception is detailed below.

Reason for Violation

The scoping of components for inclusion in the Maintenance Rule Program at CNS was accomplished per the guidance of NUMARC 93-01⁽¹⁾ as endorsed by the NRC in Regulatory Guide 1.160⁽²⁾. In general, each structure, system and component (SSC) was screened against the following questions:

- Are SSCs safety-related?
- Do nonsafety-related SSCs mitigate accident/transient?
- Are nonsafety-related SSCs in Emergency Operating Procedures (EOPs)?
- Do nonsafety-related SSCs prevent safety-related SSCs from fulfilling function?
- Do nonsafety-related SSCs cause scram or actuate safety-related systems?

In addition to the above NUMARC 93-01 scoping questions, one question was included to assess the impact to shutdown operations:

- Are nonsafety-related SSCs required to support a key safety function (as defined in NUMARC 91-06⁽³⁾) during shutdown operations?

Screening results were then presented to an expert panel for concurrence and risk ranking. Using this process, over 40,000 SSCs were identified for inclusion in the Maintenance Rule Program. While this process provided conservative results, certain SSCs were identified during the inspection, as cited in the above violation, where independent scoping by the NRC produced different results. A discussion of these differences is provided below.

Case 1 (Function RMV-F01)

During the review of EOP flowcharts, Table 10, "Secondary Containment Radiation Levels," was inadvertently overlooked. This table contains the EOP reference to the components that were omitted from the scope of the Maintenance Rule. The District agrees that these components should be in scope of the Maintenance Rule.

Case 2 (Function RMP-F02)

During the initial scoping, it was assumed that adequate time existed for operations personnel to respond to a failure of the subject process radiation monitors to avoid a plant shutdown. Based on further discussions with Operations personnel, this position has been re-evaluated. The District agrees that these components should be in scope of the maintenance rule.

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- (1) NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants"
- (2) Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants"
- (3) NUMARC 91-06, "Guidelines for Industry Actions to Assess Shutdown Management"

Case 3 (Functions AS-F04, AS-F07, AS-F013, and AS-F014)

The focus of this concern is the operational impact of a loss of auxiliary steam heating in the reactor building, control building, diesel generator rooms, or intake structure. Since no portion of the auxiliary steam heating is safety-related, the applicable NUMARC 93-01 screening question is: could these nonsafety-related SSCs prevent safety-related SSCs from fulfilling their safety function?

During the original scoping effort, this question was addressed by applying guidance from NUMARC 93-01, Section 8.2.1.4 which states, in part:

"A utility should rely on actual plant-specific and industry wide operating experience, prior engineering evaluations such as PRA, IPE, IPEEE, environmental qualification (EQ), and 10 CFR 50 Appendix R analyses

Industry wide operating experience is reviewed for plant-specific applicability and, where appropriate, is included in utility specific programs and procedures. It is appropriate to use this information to the extent practical to preclude unacceptable performance experienced in the industry from being repeated. An event that has occurred at a similarly configured plant should be considered for applicability to the reviewing utility.

The determination of hypothetical failures that could result from system interdependencies but have not previously been experienced is not required. Failures subsequent to implementation of this guideline shall be addressed in the determination of cause, corrective action, and performance monitoring as described in Sections 8.0, 9.0 and 10.0."

Pursuant to this guidance, it was determined that:

- No auxiliary heating steam components are taken credit for in engineering evaluations such as PRA, IPE, environmental qualification (EQ), or 10 CFR 50 Appendix R analyses.
- No plant specific operating experience data exists where a failure of a safety related system was caused by a loss of auxiliary heating steam at CNS.
- No industry operating experience data exists where a failure of a safety related system was caused by a loss of auxiliary heating steam during the 36 month historical review period.

Thus, the expert panel concluded that the subject scenario is a hypothetical failure that would not prevent any safety-related SSC from fulfilling its safety function. Accordingly, the District does not agree that these components should be in scope of the Maintenance Rule Program.

Case 4 (Function IC-F01)

The focus of this concern is the operational impact of a loss of the gaitronics communication system during the execution of an EOP. Since no portion of the gaitronics is safety-related, the applicable NUMARC 93-01 screening question is: are nonsafety-related SSCs used in support of EOPs?

As with Case 3, this question was addressed during the original scoping effort by applying guidance from NUMARC 93-01. Section 8.2.1.3 states, in part:

"This step requires an evaluation be performed to identify important nonsafety-related SSCs under utility control that are used in EOPs. For a nonsafety-related SSC to be considered important, it must add significant value to the mitigation function of an EOP by providing the total or a significant fraction of the total functional ability required to mitigate core damage or radioactive release (e.g., required quantity of water per minute to fulfill the safety function). Nonsafety-related SSCs used in EOPs that are under the control of a utility and are important as established above are within the scope of the Maintenance Rule."

With regard to "significant fraction," additional guidance was provided during the industry workshops on the implementation of the Maintenance Rule. Specifically, in response to Scoping Question 30⁽⁴⁾:

Scope 30: "How is significant contribution in the EOP determined?"

Response: "No specific value has been established. PRA data and expert panel reviews could be considered in the determination of significant contribution. See Section 8.2.1.3 of NUMARC 93-01 for an example."

Pursuant to this guidance, an expert panel sub-committee was formed. The sub-committee, consisting of a licensed senior reactor operator and one member of the Maintenance Rule implementation staff, was tasked with:

- 1) determining what communication equipment is specified for use by the EOPs, and
- 2) identifying the specific communication equipment utilized during performance of EOP steps requiring information exchange.

As a result of this effort, the sub-committee determined that the EOPs do not mandate the use of any specific communication system (i.e., the steps requiring communication are either silent on which communication system to use or provide a list of equally effective systems). As such, the selection of the specific communication system for use is based simply on convenience and availability.

⁽⁴⁾ Letter to R. Ng (Nuclear Energy Institute) from S. C. Black (USNRC) dated June 29, 1994, "Final NRC Staff Review of Questions and Answers from the August 1993 NUMARC Maintenance Workshops"

Consequently, the expert panel concluded that the gaitronics communication system clearly did not provide the total or a significant fraction of the total functional ability required to mitigate core damage or radioactive release. Accordingly, the District does not agree that the gaitronics communication system should be in scope of the Maintenance Rule Program.

Corrective Steps Taken and the Results Achieved

Corrective actions have been taken to address the scoping issues where the District is in concurrence with the NRC's findings.

The RMV-F01 and RMP-F02 functions have been added to the scope of the Maintenance Rule Program and are categorized as non-risk significant. Since there have been no functional failures recorded during the historical review period, both functions are currently being monitored under (a)(2) of the Maintenance Rule.

Corrective Steps That Will Be Taken to Avoid Further Violations

While over 4,200 EOP related SSCs have been included in the CNS Maintenance Rule Program, an EOP flow chart review is in progress to ensure that no other components were inadvertently overlooked, as was the case for RMV-F01. This review will be completed by December 31, 1996.

Date When Full Compliance Will Be Achieved

The District has completed all corrective actions necessary to return CNS to full compliance with respect to the identified violation.

Violation B

10 CFR 50.65(a)(2) states, in part, that monitoring under (a)(1) is not required where it has been demonstrated that the performance or condition of a structure, system, or component is being effectively controlled through the performance of appropriate preventive maintenance of the structure, system, or component and that structure, system, or component remains capable of performing its intended function.

Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," endorses NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," as an acceptable method for implementing the requirements of 10 CFR [5]0.65. Regulatory Guide 1.160 states, that the methods described in the guide will be used in the evaluation of the effectiveness of maintenance activities of licensee who are required to comply with 10 CFR 50.65 unless a licensee has proposed an acceptable alternative method for compliance. The licensee subscribed to the NUMARC 93-01 methodology in Administrative Procedure 0.27, "Maintenance Rule Program," Revision 1, Section 2.2.

NUMARC 93-01, Section 9.3.2, states, in part, that performance criteria for risk significant structures, systems, or components should be established to assure that the reliability and availability assumptions used in the plant specific probabilistic risk assessment, individual plant examination, or other risk determining analysis are maintained or adjusted when necessary.

Contrary to the above, the licensee had not established performance criteria for structures, systems, or components commensurate with safety by failing to demonstrate that the performance criteria used for reliability preserved the assumptions used in the probabilistic risk assessment. The licensee had only used two maintenance preventable functional failures as the general reliability performance criterion.

This is a Severity Level IV violation (Supplement 1) (50-298/9612-02).

Admission or Denial to Violation

The District denies the violation.

Basis for Disputing the Violation

After careful review of the guidance, the District has concluded that the performance criteria implemented under the CNS Maintenance Rule Program meet the intent of NUMARC 93-01 and, thus, the requirements of 10 CFR 50.65. The basis for this conclusion is provided below.

NUMARC 93-01, Section 9.3.2 states, in part:

"Performance criteria for evaluating SSCs are necessary to identify the standard against which performance is to be measured. Criteria are established to provide a basis for determining satisfactory performance and the need for goal setting. The actual performance criteria used should be SSC availability, reliability, or condition."

Under the CNS Maintenance Rule Program, all risk significant SSCs have two performance criteria: 2.5% unavailability taken on a rolling 36 month basis and two maintenance preventable functional failures (MPFFs) taken on a rolling eighteen month basis. As further discussed below, the absolute MPFF value selected (as opposed to a value tied to start demands) is considered to be conservative and responsive to the NUMARC guidance provided in Sections 9.3.2 and 10.2.1.3.

NUMARC 93-01, Section 10.2.1.3, requires performance be trended against the performance criteria so that adverse trends can be identified. Although a start demand value could be developed for use with the MPFF performance criteria by using the frequency of surveillance testing for each function, this method is not considered valid because the sample size would be too small to be statistically reliable when approximating the failure rates assumed in the PRA. For example, at CNS the typical frequency of demands for the functions monitored under the Maintenance Rule is monthly (i.e., 18 demands per cycle). Even if there were no failures during the cycle, these results would not be adequate to validate the average train failure rates assumed in the PRA, which are generally on the order of 1 in 100.

While the frequency of testing could be increased or the data compiled based on multiple trains such that the frequency approaches PRA failure rates, the results would still allow no margin for statistical fluctuation (i.e., there could be periods with multiple failures followed by several periods with no failures).

A different approach to achieving statistically reliable data would be to increase the monitoring period (i.e., resulting in a larger sample size), however, the period would be so long that trending results would not prompt timely adjustments to the preventive maintenance program, thus defeating the intent of Section 10.2.1.3.

Therefore, the District believes an absolute MPFF value for a reliability performance criteria that can be accurately trended provides more value to the Maintenance Rule Program than an indicator directly linked to PRA assumptions. This is similar to the position presented by EPRI during the October 16, 1996, NEI Maintenance Rule workshop⁽⁵⁾ and documented in EPRI TR-106280⁽⁶⁾.

While the District agrees that plant specific analyses, such as the PRA, should be updated to reflect actual reliability and availability data as suggested by the NUMARC guidance, this is not viewed as a requirement for an effective performance monitoring program under the Maintenance Rule. Accordingly, the District denies the violation.

Whereas the District recognizes the value of accumulated reliability and availability data, a methodology will be developed to reconcile significant discrepancies with the PRA component failure rates. This methodology will be used in developing the next periodic PRA update, currently scheduled for June 1997. In addition, this methodology will provide a basis for further validating or modifying the current MPFF performance criteria value.

Corrective Steps Taken and the Results Achieved

No corrective actions are planned at this time.

Corrective Steps That Will Be Taken to Avoid Further Violations

No corrective actions are planned at this time.

Date When Full Compliance Will Be Achieved

The District is in full compliance with the requirements of 10 CFR 50.65 and with the guidance provided in NUMARC 93-01 in regard to establishing performance criteria.

⁽⁵⁾ Presentation by J. M. Gisclon (EPRI) and D. H. Worledge (EPRI/ARM), NEI Maintenance Rule Baseline Workshop, Hotel Washington, October 16, 1996, "Technical Bases for Performance Criteria"

⁽⁶⁾ EPRI TR-106280, "Insights from EPRI Maintenance Rule Projects"

Violation C

10 CFR Part 50.65(a)(2) states, in part, that monitoring under (a)(1) is not required where it has been demonstrated that the performance or condition of a structure, system, or component has been effectively controlled through the performance of appropriate preventive maintenance of the structure, system, or component, and that the structure, system, or component remains capable of performing its intended function.

Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," endorses NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," as an acceptable method for implementing the requirements of 10 CFR [5]0.65. Regulatory Guide 1.160 states, that the methods described in the guide will be used in the evaluation of the effectiveness of maintenance activities of licensee who are required to comply with 10 CFR 50.65 unless a licensee has proposed an acceptable alternative method for compliance.

To satisfy NUMARC 93-01 methodology, performance is established from historical data going back two fuel cycles or 3 years. Then, performance criteria are established and, if the criteria are not met, the basis for the criteria are reviewed to determine if goal setting is required. The licensee subscribed to the NUMARC 93-01 methodology in Administrative Procedure 0.27, "Maintenance Rule Program," Revision 1, Section 2.2. NUMARC 93-01 defines availability as the time that a structure, system, or component is capable of performing its intended function as a fraction of the total time that the intended function may be demanded. Unavailability is defined as the numerical complement of availability. As a measure of the ability of certain safety-related systems to perform the intended functions, the licensee chose to monitor against a performance criteria of 2.5 percent unavailability.

Contrary to the above, the licensee failed to monitor the unavailability for functions performed by the automatic depressurization, emergency diesel generator, high pressure coolant injection, and residual heat removal systems when the functions were required to be available, and the reactor was shutdown.

This is a Severity Level IV violation (Supplement 1) (50-298/9612-03).

Admission or Denial of Violation

The District denies the violation.

Basis for Disputing the Violation

NUMARC 93-01, Appendix B, defines availability as:

"The time that a SSC is capable of performing its intended function as a fraction of the total time that the intended function may be demanded. The numerical complement of unavailability."

While this definition was broadly accepted within the industry, it was recognized during the early phases of program development that the definition of "demand period" was being inconsistently applied. As a result, additional guidance was provided during the industry workshops on the implementation of the Maintenance Rule. Specifically, in response to Performance Criteria Question 17⁽⁷⁾:

Question PerfCrit 17: "During the St. Louis workshop breakout session, it was brought up that each utility may define "unavailability" as it sees fit. This conflicts with the information communicated in Atlanta when the question came up as to whether credit could be taken for operations' manual manipulation of an MOV for example. . . . Although each utility should be able to define unavailability according to their own work practices and procedures, this point needs to be clarified."

Response: "Utilities should have a clear and consistent understanding of how they establish, monitor, and document unavailability time (e.g., consistent with PRA assumptions used when analyzed). . . . This assumes that there is no conflict with the PRA."

In effect, utilities were given the freedom to define unavailability (including demand period) according to their own work practices and procedures, provided the definition was consistent with PRA assumptions. Using this NRC endorsed guidance the District applied the PRA assumption of power operations (i.e., the time the reactor is critical) as a clear and consistent basis for defining demand period. Therefore, it is the District's position that the definition of unavailability as applied under the CNS Maintenance Rule Program is not in violation of 10 CFR 50.65 requirements nor the guidance provided in NUMARC 93-01.

CNS Technical Specifications can also be used to define the period of demand. The Technical Specifications require that certain configurations of equipment be operable at different times. For example, the high pressure coolant injection system is required when the reactor pressure is greater than 150 psig and prior to startup; the safety relief valves are required when the reactor pressure is greater than 0 psig and prior to startup; the automatic depressurization system logic is required when the reactor pressure is greater than 113 psig and prior to startup; two diesel generators are required when the reactor is critical whereas one is required during cold shutdown when fuel is being moved; two subsystems of residual heat removal system (RHR) are required when the reactor pressure is greater than 0 psig and prior to startup while during cold shutdown, one subsystem of RHR is required (if one subsystem of core spray is available, otherwise, two RHR subsystems are required).

⁽⁷⁾ Letter to R. Ng (Nuclear Energy Institute) from S. C. Black (USNRC) dated June 29, 1994, "Final NRC Staff Review of Questions and Answers from the August 1993 NUMARC Maintenance Workshops"

From a risk perspective, the period during cold shutdown must be considered separately. While the expert panel recognized five key outage safety functions as risk significant, the systems that provide those functions can vary greatly during the course of the outage. Therefore, the panel concluded that none of the individual system functions were risk significant during cold shutdown. In addition, the meaning of the quantified unavailability is substantially different during shutdown than power operation because the demand on the equipment is substantially different. For example, when a diesel generator is taken out of service during power operations, its loads are all typically available; however when it is out of service during the outage, many of the loads are also out of service. The same unavailability from these situations do not equate to equivalent increase in risk. The same type of argument should be considered for the required response and mission times of equipment in the various modes. It is therefore appropriate that shutdown functions are monitored only for failures and not for unavailability.

In response to this issue, a more encompassing definition of demand period was assessed: the time when the plant is not in cold shutdown as determined by the position of the reactor head vent. Using this definition, the demand periods for the functions cited in the violation were modified resulting in an increased cumulative demand time of approximately 166 hours during the period of January 1992 through December 1995. The effect of adding the demand and out-of-service time did not change the (a)(1) or (a)(2) status of any of these functions. It is therefore concluded that, although a demand period based on the head vent status may be more precise, hours critical is an adequate measure of demand for risk significant functions.

Corrective Steps Taken and the Results Achieved

While the District denies a violation of 10 CFR 50.65 has occurred, it is the opinion of the expert panel that the period of demand for the functions identified in the cited violation is more accurately defined by the status of the reactor head vent as recorded in the Shift Supervisor's Log. Accordingly, this revised definition has been applied to these functions and the unavailability values appropriately adjusted. As noted above, this adjustment resulted in no change to the (a)(1)/(a)(2) status for the subject functions.

Corrective Steps That Will Be Taken to Avoid Further Violations

No additional corrective actions are planned at this time.

Date When Full Compliance Will Be Achieved

The District is in full compliance with 10 CFR 50.65 requirements and with the guidance provided in NUMARC 93-01 in regard to defining and applying the unavailability performance criteria.

Violation D

10 CFR 50, Appendix B, Criterion V requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

10 CFR Part 50.65, paragraph (a)(3) requires, in part, that in performing monitoring and preventive maintenance activities, an assessment of the total plant equipment that is out of service should be taken into account to determine the overall effect on performance of safety functions. Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 1, January 1995, endorses NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," as an acceptable method for implementing the requirements of 10 CFR [5]0.65. The licensee subscribed to NUMARC 93-01 methodology in Administrative Procedure 0.49, "Schedule Risk Assessment," Section 8.1, Revision 1, which contains the guidance for evaluating the risk associated with taking structures, systems, and components out of service for monitoring or preventive maintenance.

Contrary to the above, the licensee did not provide adequate instructions regarding guidance and responsibility for ensuring that risk assessments were performed when removing safety-related equipment from service for monitoring or preventive maintenance. As a result, several safety-related components were removed from service without the prior performance of a risk assessment.

This is a Severity Level IV violation (Supplement 1) (50-298/9612-04).

Admission or Denial of Violation

The District admits the violation.

Reasons for Violation

Procedure 0.49, "Schedule Risk Assessment," provides decision making and scheduling guidance for the development and execution of system outage windows during power operation based on PRA insights and sound operating judgement. Under this process, work is scheduled and, once "frozen" for a given week, the overall risk assessed. However, other than for emergent work, Procedure 0.49 does not provide explicit instructions for assessing risk prior to making changes during a frozen work week schedule. Additionally, the schedule impact form used to document schedule changes did not require approval by the Scheduling Supervisor (i.e., the individual charged by Procedure 0.49 with ensuring proper levels of review are performed to assess impact to plant safety) if the changes were made during the work week. Consequently, changes were being made to the schedule during the work week without assessing risk per Procedure 0.49.

Corrective Steps Taken and the Results Achieved

Additional training has been provided on Procedure 0.49. In addition, the schedule impact form has been revised to require approval by the Scheduling Supervisor for any change to a "frozen" work week schedule. As a result, all changes made to the schedule during the work week are reviewed to assess impact to plant safety.

Corrective Steps That Will Be Taken to Avoid Further Violations

Procedure 0.49 will be revised to better describe the methodology to be used for making changes to a "frozen" work week schedule. The Procedure 0.49 revision will be implemented by December 31, 1996.

Date When Full Compliance Will Be Achieved

The District is in full compliance with respect to the cited violation.

Violation E

10 CFR 50, Appendix B, Criterion V requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings.

10 CFR Part 50.65(a)(3) requires, in part, that in performing monitoring and preventive maintenance activities, an assessment of the total plant equipment that is out of service should be taken into account to determine the overall effect on performance of safety functions. Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 1, January 1995, endorses NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," as an acceptable method for implementing the requirements of 10 CFR [50.65. The licensee's requirement for performing risk assessment associated with removing safety-related equipment from service is contained in Administrative Procedure 0.49, "Schedule Risk Assessment," Revision 1, Step 8.1.7, which requires the performance of a risk-significant window checklist.

Contrary to the above, on July 17, 1996, an activity affecting quality was not accomplished in accordance with the procedure in that the No. 2 emergency diesel generator was removed from service for planned maintenance without a risk-significant window checklist being initiated.

This is a Severity Level IV violation (Supplement 1) (50-298/9612-05).

Admission or Denial of Violation

The District admits the violation.

Reasons for Violation

Procedure 0.49 was developed and implemented in April 1996 in support of the Maintenance Rule. While ownership of the procedure rests within the Work Control Department, it was initially developed by the Maintenance Rule Group. Consequently, when initially implemented, there was not a clear sense of ownership and consistent application of the procedure by the Work Control staff. Although training had been provided on the "new" procedure, the lack of ownership fostered a general lack of knowledge with respect to the intent of the procedure. As a result, the removal of the diesel generator from service was not recognized by Work Control as a risk significant activity requiring the completion of a Risk Significant Window Checklist.

Corrective Steps Taken and the Results Achieved

Upon discovery, a Risk Significant Window Checklist was performed per Procedure 0.49. The checklist documented that no undue risk was incurred while the diesel generator was out of service. Further, the checklist documented that risk reduction actions which would have been required by the checklist had in fact been taken prior to the diesel generator being removed from service. To emphasize the intent and application of Procedure 0.49, retraining was provided to the System Schedulers. This training refocused procedure ownership within the Work Control staff and resulted in a significant revision (Revision 1 dated August 9, 1996) which incorporated many enhancements developed by the System Schedulers.

Corrective Steps That Will Be Taken to Avoid Further Violations

No additional corrective actions are planned at this time.

Date When Full Compliance Will Be Achieved

The District is in full compliance with respect to the cited violation.

Violation F

10 CFR 50.65(a)(2) states, in part, that monitoring under (a)(1) is not required where it has been demonstrated that the performance or condition of a structure, system, or component has been effectively controlled through the performance of appropriate preventative maintenance of the structure, system, or component, such that the structure, system, or component remains capable of performing its intended function.

Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 1, endorses NUMARC 93-01, "Industry Guidelines for Monitoring Effectiveness of Maintenance at Nuclear Power Plants," as an acceptable method for implementing the requirements of 10 CFR 50.65. Regulatory Guide 1.160 states that the methods described in the regulatory guide will be used in the evaluation of the effectiveness of maintenance activities of licensees who are required to comply with 10 CFR 50.65 unless a licensee has proposed an acceptable alternative method for compliance. The licensee subscribed to the NUMARC 93-01 methodology in

Administrative Procedure 0.27, "Maintenance Rule Program," Revision 1, Section 2.2. NUMARC 93-01, Section 9.4.4, states, in part, that a cause determination is required for a failure of a risk-significant structure, system, or component, and for any repetitive maintenance preventable functional failure of equipment within the scope of the Maintenance Rule, and that the cause determination identify the cause of the failure and any corrective action to preclude recurrence. Section 9.2.2 of Administrative Procedure 0.5, "Problem Identification and Resolution," Revision 8, implements this NUMARC 93-01 requirement and specifies that if the condition has affected Maintenance Rule equipment, the condition report must address the root cause or apparent cause of the failure and corrective action.

Contrary to the above, the problem identification reports listed below were not dispositioned in accordance with Section 9.2.2 of Administrative Procedure 0.5 in that root cause or apparent cause evaluations for failures of equipment under the Maintenance Rule were not required to be performed.

- *Problem Identification Report 2-04776 dated July 22, 1996, identified excessive stroke time of air-operated Control Room Ventilation Valve HV-AO-261.*
- *Problem Identification Report 2-04779 dated July 23, 1996, identified an excessive moisture condition in the instrument air system.*

This is a Severity Level IV violation (Supplement 1) (50-298/9612-06).

Admission or Denial of Violation

The District denies a violation of 10 CFR 50.65 occurred with respect to the listed problem identification reports (PIRs).

However, as discussed below, the District admits that PIR 2-04776 was not dispositioned in accordance with Administrative Procedure 0.5 in that an apparent cause evaluation was required under criteria not associated with the CNS Maintenance Rule Program.

Basis for Disputing the Violation

NUMARC 93-01, Section 9.4.4, states, in part:

"A cause determination of appropriate depth will be required for the following conditions:

- A goal not being met;
- A performance criteria not being met;"

Since these conditions were not met for either of the identified PIRs, a cause determination was not required per the requirements of 10 CFR 50.65.

Upon reevaluation of the classification of PIRs 2-04776 and 2-04779 per Administrative Procedure 0.5, Attachment 5, it was determined that both were properly classified with regard to the CNS Maintenance Rule Program (i.e., neither were determined to be a Condition Adverse to Quality (CAQ) or a Significant Condition Adverse to Quality (SCAQ) under Maintenance Rule criteria specified in Administrative Procedure 0.5). Accordingly, the requirements of Administrative Procedure 0.5, Section 9.2, "CAQ Condition Report Disposition and Closure," and, hence Section 9.2.2, did not apply. Therefore, the District denies the violation as cited. However, as previously noted, the District admits that PIR 2-04776 was not dispositioned in accordance with Administrative Procedure 0.5, Attachment 5, in that an apparent cause evaluation was required under criteria not associated with the CNS Maintenance Rule Program. Specifically, PIR 2-04776 should have been classified as a CAQ per Step 3.2 of Attachment 5 which states, in part:

"Some examples of conditions to be considered for apparent cause determination:

3.2.1.1 Equipment failures resulting in Tech Spec LCO entry (with no loss of system/train safety function)."

Following the discovery, PIR 2-04776 was upgraded to a CAQ and CAQ 96-0700 was initiated to investigate the miscategorization. The apparent cause for this condition was subsequently determined to be inattention to detail on the part of the Corrective Action Program (CAP) Evaluator involved. As this was the same CAP Evaluator who performed the CAQ 96-0700 evaluation, the individual involved was fully aware of the error and the need for attention to detail. Therefore, no additional corrective action was taken with regard to the CAP Evaluator.

It should be noted that, while not initially required by Administrative Procedure 0.5, a cause determination of appropriate depth was conducted for both PIR 2-04776 and 2-04779 as part of routine maintenance and system engineer support activities.

Corrective Steps Taken and the Results Achieved

As detailed above, PIR 2-04776 was upgraded to a CAQ and processed in accordance with Section 9.2 of Administrative Procedure 0.5. While unrelated to the cited violation, this corrective action was taken to address the miscategorization of the subject PIR under criteria unrelated to the Maintenance Rule.

Corrective Steps That Will Be Taken to Avoid Further Violations

No additional correctives are planned at this time.

Date When Full Compliance Will Be Achieved

The District is in full compliance with the requirements of 10 CFR 50.65, the guidance provided in NUMARC 93-01, and the mandates of Administrative Procedure 0.5 in regard to evaluations of failures of equipment within the Maintenance Rule Program scope.

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The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

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