Nebraska Public Power District
Nebraska's Energy Leader

NLS2001104
November 8, 2001

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. 50-298/00-07 (EA-00-248)
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

References:
1. Letter to J. H. Swailes (Nebraska Public Power District) from K. E. Brockman (Nuclear Regulatory Commission) dated September 28, 2001, "NRC Inspection Report 50-298/00-07 and Notice of Violation."

2. Letter to J. H. Swailes (Nebraska Public Power District) from K. E. Brockman (Nuclear Regulatory Commission) dated December 18, 2000, "NRC Inspection Report 50-298/00-07; Preliminary Yellow Finding."

3. Letter (NLS2000070) to U.S. Nuclear Regulatory Commission from J. A. McDonald (Nebraska Public Power District) dated August 28, 2000, "Licensee Event Report No. 2000-008-01."

By letters dated September 28, 2001 (Reference 1) and December 18, 2000 (Reference 2), the Nuclear Regulatory Commission (NRC) cited Nebraska Public Power District (the District) as being in violation of NRC requirements. This letter, including Attachments 1 and 2, constitutes the District's reply to the referenced Notice of Violation in accordance with 10 CFR 2.201. The due date for the response was extended to November 8, 2001, per discussion between Kriss Kennedy, Chief, Project Branch C, NRC Region IV and David F. Kunsemiller, Manager, Risk and Regulatory Affairs, Cooper Nuclear Station (CNS). The District accepts the violations (as discussed in Attachment 1) and is implementing the corrective actions necessary to return CNS to full compliance.

During the spring 2000 outage, the District and the NRC identified numerous environmental qualification (EQ) termination treatments as nonconforming and some were determined to be unqualified. The review of the extent of condition and initial activities to produce

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"qualifiability" information for all possible configurations in the plant indicated to management that it was expedient to pursue wholesale replacement rather than complete the qualifiability and qualification reviews of the installed termination treatments. The questionable treatments were replaced prior to startup with termination treatments for which District documents clearly support qualification.

While it has been determined that the subject violations have a very low safety significance, the District recognizes, and shares, the NRC concerns for the broad-based programmatic deficiencies identified in the CNS EQ program. The District agrees with the NRC conclusion that the "lack of documentation and the performance deficiencies" noted during the inspections do not reflect a "viable problem identification and resolution process" with regard to the EQ program. Therefore, the District has prepared and is implementing a comprehensive plan to improve the EQ program at CNS.

The District commits to including the corrective actions that will be taken to avoid further violations (as identified in this response to the IR 00-07 Notice of Violation) in the scope of the Project Plan for the EQ Improvement Project. The District expects to complete the EQ Improvement Project to restore compliance with 10 CFR 50.49 by June 30, 2003. The District therefore requests that the NRC exercise discretion, consistent with the NRC Enforcement Policy (including the criteria in Section VII.B.4, thereof) and the Reactor Oversight Process, as appropriate, in considering the enforcement implications of additional EQ findings (similar to the examples cited in the subject violation) that may be identified as a result of the corrective actions taken in response to this enforcement action, including findings made as a result of the EQ Improvement Project. Longstanding NRC policy places a premium on licensee efforts to identify and correct violations that may not otherwise be identified by routine efforts or corrective actions. In that light it would be appropriate to exercise such discretion as may be authorized in the enforcement and oversight arenas.

The EQ Improvement Project reflects a significant component of the District's corrective actions concerning specific EQ deficiencies. In addition, it also addresses the programmatic concerns identified as part of the District's root cause evaluations. Indeed, the Project is a comprehensive initiative designed to restore EQ program integrity and establish mechanisms to maintain that integrity. The Project is described in a detailed Project Plan (a summary of which is provided in Attachment 2) that defines the Project scope, staffing, objectives, and schedule. Further, additional findings will be evaluated and the Project scope revised (i.e., expanded) accordingly in conjunction with the District's corrective action program.

The full Project Plan, the included actions, and the completion status are available for NRC review.

Should you have any questions concerning this matter, please contact David F. Kunsemiller at (402) 825-5236.

Sincerely,

David L. Wilson
Vice President of Nuclear Energy

/erg

Attachment 1 - Reply to Notice of Violation
Attachment 2 - Summary Description of EQ Improvement Project
Attachment 3 - List of Regulatory Commitments

cc: Regional Administrator
USNRC - Region IV

Senior Project Manager
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector
USNRC

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

During Nuclear Regulatory Commission (NRC) inspection activities conducted from April 2000 through December 2000, two violations (with a "green" final significance determination, i.e., very low safety significance) of NRC requirements were identified. The particular violations (as identified in Reference 1) and the Nebraska Public Power District's (the District's) reply are set forth below:

FIRST VIOLATION

10 CFR 50.49(a) states, in part, that each licensee shall establish a program for environmentally qualifying electric equipment defined in the regulation. 10 CFR 50.49(f) requires each item of electric equipment important to safety to be qualified by one of the following methods: (1) testing an identical or similar item of equipment under identical or similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable; (2) experience with identical or similar equipment under similar conditions with a supporting analysis; or (3) analysis in combination with partial type test data that supports the analytical assumptions and conclusions. 10 CFR 50.49(j) requires that a record of the qualification must be maintained in an auditable form to permit verification that each item of electric equipment important to safety is qualified for its application and meets its specified performance requirements when it is subjected to the conditions predicted to be present when it must perform its safety function.

Contrary to the above, on April 19, 2000, approximately 2000 electrical termination treatments required to be environmentally qualified were not qualified by testing of identical or similar equipment with supporting analysis, by equipment experience, nor by analysis in combination with partial type test data. These electrical terminations lacked the proper configuration and documentation to support qualification. Additionally, environmental qualification files for approximately 600 items of electric equipment important to safety were not maintained in an auditable form and did not permit verification that they were environmentally qualified for their application. Specifically, the documentation did not specify the actual termination treatment that was used on electrical terminations.

Admission or Denial to Violation

The District accepts the violation. However, the District would also like to offer the following clarifications.

The District acknowledges that Cooper Nuclear Station (CNS) did not have auditable records to demonstrate reasonable assurance that specific electrical termination treatments were applied and maintained in a manner consistent with the test report configurations used to establish environmental qualification. Following discovery of deficiencies in the tape splice installations, and based on initial reviews, the District elected to implement a wholesale replacement of those termination treatment types irrespective of the likelihood that any specific termination was, or could be, qualified based on available qualification data.

The environmental qualification of specific electrical termination treatments was documented in a generic manner for the most limiting applications and environments. Records demonstrating application of qualified treatments to field installation are maintained in installation documentation. There is no specific requirement in 10 CFR 50.49 to have all elements of auditability maintained within the EQ documentation package. Consistent with 10 CFR Part 50, Appendix B, the auditable documentation that reflects the implementation of the qualification requirements applicable to these treatments is based on a combination of information that includes qualification test data, the EQ documentation package, procurement documentation, design documents, drawings and databases, and maintenance procedures and associated records. Thus, the actual plant configuration is controlled by processes outside the EQ documentation package (e.g., design change evaluation document (CED) and maintenance processes).

Reason for Violation

The cause of the specific failures to maintain the required environmental qualification of electrical termination treatments through proper configuration and documentation has been identified as a process deficiency. In summary, the process of translating and transmitting EQ information from fundamental environmental qualification data package (EQDP) test configuration documents to personnel making EQ terminations in the field was not adequate.

Corrective Steps Taken and the Results Achieved

The plant was shutdown for a refueling outage at the time of discovery of the deficient splices. Therefore, the District was able to take prompt initial efforts to replace deficient EQ termination treatments with configurations that met the then current EQDP test configuration requirements. As additional splice configuration issues were identified, the issues were investigated and suspect terminations were evaluated and replaced, repaired, or accepted prior to restart of the unit in May 2000.

Also, an investigation was promptly conducted to determine the cause of these EQ problems. Several EQDPs were found to have EQ-related implementation discrepancies involving procedure writing, quality control, training, evaluation and execution of 10 CFR 50.49 requirements and EQ program protocols. These discrepancies were determined to be the result of

deficiencies in the information translation processes. The identified deficiencies were evaluated for impact and were corrected, or determined to not have a significant impact on safety, prior to restart of the unit in May 2000.

In addition, the District also recognized that to improve these processes there was a need to further improve the information feedback loop within the program and provide more active involvement of the program owner. Thus, revisions to procedures were implemented which included development, or modification, of procedures that provide EQ program oversight and review of EQ related maintenance training materials, classroom training activities, and procedures for accuracy, completeness, and compliance with the EQDP source documents. These revisions are complete.

Additionally, open EQ related issues have been assessed (pursuant to Generic Letter 91-18) for impact on the ability of the equipment to perform as required under harsh design basis accident conditions. To date, these operability determinations have concluded that the equipment is capable of performing the required safety function under the required conditions, or the condition has been corrected. One example of a corrected condition involved the Regulatory Guide 1.97 post accident monitoring function (not required by the CNS Technical Specifications) of the safety relief valve tailpipe pressure switches. This condition was corrected during the mid-cycle outage. Other open EQ related operability determination corrective actions are scheduled to be completed during the current refueling outage. The EQ Program Improvement Project provides for similar assessment of any additional EQ related issues that may be identified. These assessments and corrective actions provide reasonable assurance that the plant can continue to operate safely during implementation of the project.

Corrective Steps That Will Be Taken to Avoid Further Violations

A review of the EQ programmatic control revisions (as identified above) is underway to determine the effectiveness of the changes, and to identify and implement any additional improvements.

In addition to the above process revisions, the District will enhance the Maintenance Department EQ type procedures to become more understandable for the people who have to use them in the field.

These actions have been included in, and will be completed under the scope of, an ongoing EQ Improvement Project which is a comprehensive project designed to assess and to enhance the overall EQ program processes, documentation, and installation records maintained to document compliance with EQ requirements. This project is intended to confirm the adequacy of prior corrective actions, identify any additional deficiencies with regard to the EQ program, and

initiate additional corrective actions, as necessary. A summary description of the project is provided in Attachment 2.

Date When Full Compliance Will Be Achieved

The District has corrected the known material deficiencies and completed several process improvements. An EQ Improvement Project has been undertaken which includes specific actions and reviews that may produce additional, related findings in the course of its performance. The District expects to complete the EQ Improvement Project to restore compliance with 10 CFR 50.49 by June 30, 2003.

SECOND VIOLATION

> *The requirements of 10 CFR Part 50, Appendix B, Criterion XVI, state that measures will be established to assure that conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.*
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> *Contrary to the above, from April to May 2000, plant personnel failed to identify problems with the environmental qualifications program until they were specifically characterized by the NRC. During field walkdowns, plant personnel failed to identify problems with equipment that did not meet program requirements. Plant personnel also failed to enter self-identified environmental qualification program deficiencies into the corrective action program.*

Admission or Denial to Violation

The District accepts the violation. The following violation response will discuss this violation in two parts: 1) failure to identify the programmatic and equipment problems, and 2) failure to enter self-identified program problems into the corrective action program (CAP).

Reason for Violation

Failure to identify problems

The cause of the specific failures of plant personnel to identify problems with the EQ program and with equipment that did not meet program requirements has been identified by the District as a lack of management attention to the EQ program. The lack of attention to the EQ program manifested itself as a failure to effectively communicate, implement, and enforce the EQ program standards and expectations.

Failure to enter identified problems into CAP

The cause of the specific failure to enter the self-assessment actions into the corrective action program (CAP) has been identified as a personnel error. Administrative procedure 0-CNS-25, "Self Assessment," contains an appropriate requirement to evaluate and include pertinent corrective action in CAP. Rather than initiate the appropriate, procedurally required corrective action program reviews, the responsible individual elected to address the issues informally in violation of the existing procedure.

Corrective Steps Taken and the Results Achieved

Failure to identify problems

With regard to the failures to identify problems with the program and with equipment, EQ programmatic corrective actions have been initiated. Additional management attention applied since the spring 2000 outage has provided for a review of the pertinent processes and program attributes, and resulted in identification and implementation of process revisions to increase the effectiveness of communication, implementation, and enforcement of the EQ program standards and expectations.

The short-term actions included verifying or initiating controls that ensure EQ Program interfaces are maintained (as additional barriers to prevent recurrence in the near term). Additionally, a review of CEDs, preventive maintenance activities (PMs), PM deferrals, maintenance work requests (MWRs), EQDPs, Station Operations Review Committee (SORC) procedures, calculations, and procurement activities was performed to assess whether adequate EQ program interfaces existed. This review indicated inadequate EQ process controls for CEDs, PM deferrals, EQDPs, and SORC procedures. As such, additional process controls were established to improve these program interfaces. This action was completed prior to restart of the unit.

Long-term corrective actions related to the issues of problem identification included implementation of management and administrative requirements and guidance for personnel responsibilities, process interfaces, program implementation, strategy, and performance measures for the EQ Program. These are addressed in CNS Engineering Division Procedures for management and administration of Engineering Division Programs, and for structure and content of Engineering Program Documents. As committed in Licensee Event Report 2000-008-01 (Ref. 3), this action was completed by November 18, 2000, through revisions to Administrative Procedure 0.20 and Engineering Procedures 3.12.1, 3.12.2, 3.12.3, 3.12.5, and 3.12.7. The additional management and administrative requirements and guidance included in these procedures have since also been incorporated into Administrative Procedure 0-CNS-12, "CNS Program Administration."

Additionally, the District's actions included revision of the EQDP initiation and revision process to incorporate additional administrative controls to address interface deficiencies. The revised controls are similar to the administrative controls previously included in procedures for the design calculation process. As committed in LER 2000-008-01, this action was completed by November 18, 2000, through revisions to Engineering Procedure 3.12.2, "Equipment Qualification Data Package." These revisions provide an improved process interface.

Failure to enter identified problems into CAP

With regard to the failure to enter identified self-assessment actions into CAP, the District's immediate response was to appropriately include the EQ self-assessment findings in the corrective action program. Additionally, the responsible individual was counseled regarding the procedural requirements and the necessity of procedural compliance. These activities were completed in July 2000.

In order to correct the underlying cause of this problem and to prevent further violations, the District also recognized the need to provide additional attention and controls for the EQ program. In order to improve the EQ program and provide additional attention and controls related to problem identification and documentation, the engineering procedures (0-CNS-22, "Conduct of Engineering") have been revised to reinforce formal self-assessment controls, consistent with Administrative Procedure 0-CNS-25.

In addition, the site-wide self-assessment program requirements have been revised and re-issued to raise station personnel awareness of the corrective action program requirements. As part of this revision, a site wide Station Self-Assessment Coordinator has been established to promote, track, and assess the implementation of the self-assessment program.

Corrective Steps That Will Be Taken to Avoid Further Violations

A review of the above process revisions is underway to determine the effectiveness of the completed changes, and to identify and implement any additional improvements. This review is part of the comprehensive EQ Improvement Project to assess and enhance the overall EQ program and related processes as they may impact environmental qualification. A summary description of the project is provided in Attachment 2.

Date When Full Compliance Will Be Achieved

CNS management, through the implementation of the EQ Improvement Project, has established sufficient measures such that EQ-related conditions adverse to quality will be identified, entered into the CAP, and subsequently corrected. Therefore, full compliance with 10 CFR Part 50, Appendix B, criterion XVI, has been achieved.

SUMMARY DESCRIPTION OF ENVIRONMENTAL QUALIFICATION IMPROVEMENT PROJECT COOPER NUCLEAR STATION NRC DOCKET NO. 50-298, LICENSE DPR-46

The Nebraska Public Power District (District) has prepared and is implementing a formal, documented plan to improve the environmental qualification (EQ) program at Cooper Nuclear Station (CNS). The comprehensive Plan has been approved by plant management with a primary objective of restoring program integrity. The EQ Improvement Project is described in a written Project Plan that is available for NRC review. The Project is expected to be completed by June 30, 2003. Development and satisfactory completion of this multi-million dollar project serves to reflect and implement renewed management attention to the EQ program.

During and following refueling outage (RFO)-19 in the spring of 2000, a significant number of qualification issues and programmatic weaknesses were identified. The major issues were evaluated by the District within Significant Condition Report (SCR) 2000-0330 (April 2000), SCR 2000-0386 (June 2000), and SCR 2000-0423 (July 2000). Additionally, Licensee Event Report (LER) 2000-008-01 (submitted August 28, 2000) identified and discussed the major issues, and the Nuclear Regulatory Commission (NRC) inspection report (IR) 50-298/00-07 discussed these concerns.

The District initially implemented an EQ Recovery Project during RFO-19 (March - April 2000) to ensure the identified field deficiencies were resolved prior to startup from the outage in May 2000. Subsequently, an independent Project organization was established to separate (as much as practical) the project activities from the station EQ program personnel to minimize diversion of project resources from day-to-day activities and non-project related emergent issues. The EQ Improvement Project has been developed to address the programmatic issues identified and discussed in these reports, as well as concerns and enhancements identified by subsequent reviews and assessments. The scope of the project includes three elements of the EQ program: 1) design input, 2) design verification, and 3) program implementation.

In addition to the principal objective of verifying the CNS EQ program is in compliance with 10 CFR 50.49, the CNS design and licensing basis, and resolution of the above identified issues, the following objectives are included:

1. Validate/reconstitute CNS design basis environmental conditions used as design inputs into the EQ program;

2. Enhance the technical quality, content, auditability, and maintainability of EQ program documentation;

3. Establish EQ as a site wide program by ensuring that the EQ program has identified, described, documented, and proceduralized interfaces and interface responsibilities;

4. Clearly define the EQ program requirements related to design/configuration control, maintenance, and procurement;

5. Strengthen and clarify EQ program requirements contained in site processes and procedures to ensure that the qualified status of equipment is maintained (these programmatic controls will be integrated into existing plant processes whenever possible);

6. Develop task specific EQ training for EQ staff and site personnel; and

7. Perform field verification of selected EQ equipment.

The initial activities include an update of the primary containment environmental qualification data packages (EQDPs) and a complete review of the high energy line break (HELB) in preparation to update the secondary containment EQDPs. Another major activity is a validation of the EQ master equipment list. These activities are expected to be completed in 2002.

While the document validations and upgrades are underway, the programmatic controls will also be re-evaluated and further upgraded as necessary. This activity is scheduled to continue well after the documentation upgrades are completed in order to provide programmatic controls that encompass the concerns identified during the documentation upgrade portion of the project.

Finally, an upgrade of the EQ related training activities will also be implemented. Again, however, this upgrade is not scheduled to be completed until well after the programmatic revisions are completed in order to provide improved training activities that encompass the concerns identified during the programmatic revision portion of the project. Because of the comprehensive scope of the project, and the dependency of these latter portions of the project on the previous activities, the District expects to complete the project to restore compliance with 10 CFR 50.49 by June 30, 2003.

This voluntary initiative is intended to confirm the adequacy of prior corrective actions, identify any additional deficiencies with regard to the EQ program, and initiate additional corrective actions, as necessary. The District recognizes that the current EQ programmatic problems are, in large measure, the result of a lack of station-wide attention to the EQ program. Thus, through the EQ Improvement Project, the District is now committing significant project resources to identify additional issues within the program that would not likely be identified by routine licensee efforts such as normal surveillance or quality assurance activities. The program will require that any additional violations, or other conditions adverse to quality, identified as a result of this program

will be entered into the corrective action program and corrected within a reasonable time following identification. These actions will include both immediate corrective action and long term comprehensive corrective action to prevent recurrence, and will include expansion of the initiative, as necessary, to identify other failures caused by similar root causes.

LIST OF REGULATORY COMMITMENTS
COOPER NUCLEAR STATION
NRC DOCKET NO. 50-298, LICENSE DPR-46

Correspondence Number: NLS2001104

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 for information only and are not regulatory commitments. Please notify the NL&S Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
The District commits to including the identified corrective actions (that will be taken to avoid further violations (as identified in the District's response to the IR 00-07 Notice of Violation) in the scope of the Project Plan for the EQ Improvement Project. The EQ Improvement Project is expected to be completed to restore compliance with 10 CFR 50.49 by June 30, 2003.	June 30, 2003