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

September 28, 2001

EA-00-248

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

SUBJECT: FINAL SIGNIFICANCE DETERMINATION AND NOTICE OF VIOLATION (NRC INSPECTION REPORT 50-298/00-07) (COOPER NUCLEAR STATION)

Dear Mr. Swailes:

The purpose of this letter is to provide you with the final results of our significance determination of the preliminary Yellow finding identified in the subject inspection report. Inspection findings were assessed using the significance determination process and were preliminarily characterized as Yellow, i.e., an issue with substantial importance to safety that would result in additional NRC inspection and, potentially, other NRC action. This preliminary Yellow finding involved programmatic environmental qualification (EQ) design, implementation, and documentation deficiencies. The deficiencies resulted in the misapplication of approximately 2000 environmental qualification treatments affecting over 600 components.

At your request, a Regulatory Conference was held on March 29, 2001, to further discuss your views on this issue. During the meeting, your staff described your assessment of the significance of the findings and discussed the initial corrective actions which you had undertaken. Specifically, your presentation included a circuit analysis of the 125 Vdc electrical system, a similar evaluation of the battery system, your risk perspective using probabilistic safety assessment insights, and your regulatory perspective on the apparent violation. Based on your probabilistic safety assessment, you concluded that the existing degraded conditions associated with the NRC identified EQ deficiencies were of very low safety significance.

In response to questions posed by the NRC at the regulatory conference, you agreed to conduct a sensitivity analysis on the potential integrated impacts of affected EQ treatments. This analysis was completed and submitted to the NRC by letter dated May 16, 2001. The NRC staff reviewed your analysis and had questions concerning entry condition assumptions and the actual environmental conditions resulting from an accident that could reasonably be expected in the area of the degraded treatments. In conjunction with an on-site review of the Phase 2 significance determination process worksheets (July 30 through August 1, 2001), a probabilistic risk expert from the NRC's headquarters office walked down the physical areas in which the degraded treatments existed. The risk expert verified that the assumptions used in your probabilistic safety assessment were reasonable.

The NRC conducted a thorough review of the results of the special inspection, the information you presented during the regulatory conference, and supplemental information you provided in response to NRC requests. In addition, the NRC staff independently reviewed the safety significance of the degraded EQ treatments that existed at the time the condition was identified and conducted independent plant walkdowns to verify that the assumptions used in your risk assessment were valid. Based on the results of these activities, the NRC has concluded that the actual deficient conditions which existed in April 2000 were such that the risk to the plant is appropriately characterized as Green, i.e., an issue with very low safety significance.

While the risk associated with the plant configuration created by the EQ deficiencies which existed in the plant in April 2000 was very low, the exact configurations which existed prior to April 2000 could not be reasonably verified or inspected. Further effort, by your staff or the NRC, to specifically determine all of the possible configurations and treatment of EQ components prior to April 2000 would require unwarranted expenditure of significant resources. However, based on our review of your risk assessment and related sensitivity analyses, it is very unlikely that additional EQ deficiencies which may have existed prior to April 2000 would have resulted in a condition of high risk significance.

It would be inappropriate, however, for the NRC to ignore the broad-based programmatic deficiencies identified in your EQ program. The lack of documentation and the performance deficiencies noted during our inspections do not reflect a vibrant and viable problem identification and resolution process. The NRC's Enforcement Policy (NUREG-1600) provides that violations associated with "green" SDP findings are normally dispositioned as Non-Cited Violations (NCVs). The policy states, however, that "Because the NRC will not normally obtain a written response from licensees describing actions taken to restore compliance and prevent recurrence of these violations, this enforcement approach places greater NRC reliance on licensee corrective action programs." Accordingly, treating violations as NCVs is incumbent on licensees restoring compliance within a reasonable time after violations are identified and placing violations into a corrective action program to address recurrence.

With respect to the environmental qualification of equipment problems at CNS, the NRC does not believe that NPPD's corrective action program was effective in identifying or recognizing problems requiring corrective action. Plant personnel failed to identify problems with the EQ program until they were specifically characterized by the NRC. Plant personnel also failed to identify problems with equipment that did not meet program requirements during field walkdowns. In addition, plant personnel failed to enter self-identified deficiencies in the EQ program into the corrective action program. Therefore, we conclude that, although the significance of the conditions which existed in April 2000 was very low (Green), your demonstrated inability to identify or correct the issue without NRC intervention warrants the issuance of cited violations requiring a formal response. Specifically:

- The NRC has determined that your failure to environmentally qualify, maintain the qualification of, and document qualifications in an auditable form for equipment important to safety is a violation of 10 CFR 50.49 as cited in the attached Notice of Violation (Notice). The circumstances surrounding the violation were described in detail in NRC Inspection Report 50-298/00-07, dated December 18, 2000.

- The NRC has further determined that failures to identify problems or enter self-identified problems with equipment and environmental qualifications into your corrective actions program until they were specifically characterized by the NRC was a violation of 10 CFR Part 50, Appendix B, Criterion XVI, as cited in the attached Notice. The circumstances surrounding the violation were described in detail in NRC Inspection Report 50-298/00-07, dated December 18, 2000.

The special inspection report also identified an apparent violation of the requirements of Criterion III, Appendix B, 10 CFR Part 50. Your demonstration of the qualifiability of the pressure switches for the safety relief valves (presented at the regulatory conference) has been determined to have adequately shown that this violation did not occur.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

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

Sincerely,

/RA/

Ken E. Brockman, Director
Division of Reactor Projects

Docket: 50-298
License: DPR-46

Enclosure:
Notice of Violation

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NOTICE OF VIOLATION

Nebraska Public Power District
Cooper Nuclear Station

Docket 50-298
License DPR-46
EA-00-248

During an NRC inspection completed on December 14, 2000, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

a. 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.

b. 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.

   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.

These violations are associated with a Green SDP finding.

Pursuant to the provisions of 10 CFR 2.201, Nebraska Public Power District is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region IV, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice of Violation (Notice), within 30 days of the date of the letter transmitting this Notice. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room). If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this 28th day of September 2001