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

JUL 10 1992

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

Nebraska Public Power District
ATTN: Guy R. Horn, Nuclear Power
Group Manager
P.O. Box 499
Columbus, Nebraska 68602-0499

Gentlemen:

SUBJECT: NRC INSPECTION REPORT NO. 50-298/92-04

Thank you for your letter of June 19, 1992, in response to our letter and Notice of Violation dated May 21, 1992. We have reviewed your reply and find it responsive to the concerns raised in our Notice of Violation. We will review the implementation of your corrective actions during a future inspection to determine that full compliance has been achieved and will be maintained.

Sincerely,

/s/ A. Bill Beach, Director
Division of Reactor Projects

cc:
Nebraska Public Power District
ATTN: G. D. Watson, General Counsel
P.O. Box 499
Columbus, Nebraska 68602-0499

Cooper Nuclear Station
ATTN: John M. Meacham, Division
Manager, Nuclear Operations
P.O. Box 98
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IE01

Nebraska Department of Environmental
Control
ATTN: Randolph Wood, Director
P.O. Box 98922
Lincoln, Nebraska 68509-8922

Nemaha County Board of Commissioners
ATTN: Larry Bohlken, Chairman
Nemaha County Courthouse
1824 N Street
Auburn, Nebraska 68305

Nebraska Department of Health
ATTN: Harold Borchert, Director
Division of Radiological Health
301 Centennial Mall, South
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Kansas Radiation Control Program Director

bcc to DMB (IE01)

bcc distrib. by RIV:

R. D. Martin
DRP
Lisa Shea, w/ ALF, MS: MNBB 4503
DRSS-FIPS
Project Engineer (DRP/C)
DRS
Senior Resident Inspector - River Bend
Senior Resident Inspector - Fort Calhoun
Resident Inspector
Section Chief (DRP/C)
MIS System
RSTS Operator
RIV File
Chief, Technical Support Section

RIV:C/PSC:DRP	D:DRP			
PHHarrell:lt	ABBeach			
7/9/92	7/10/92			

bcc to DMB (IE01)

bcc distrib. by RIV:

R. D. Martin	Resident Inspector
DRP	Section Chief (DRP/C)
Lisa Shea, RM/ALF, MS: MNBB 4503	MIS System
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Senior Resident Inspector - River Bend
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RIV:C/PSC:DRP	D:DRP			
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7/9/92	7/10/92			

Nebraska Public Power District

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June 19, 1992

A. Bill Beach, Director
Division of Reactor Projects
Nuclear Regulatory Commission
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611 Ryan Plaza Drive, Suite 1000
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REGION IV

Gentlemen:

Subject: NOTICE OF VIOLATION (NRC INSPECTION REPORT NO. 50-298/92-04)

This letter is written in response to your letter dated May 21, 1992, which transmitted the Notice of Violation (NRC Inspection Report No. 50-298/92-04). Therein you identified two violations.

Following are the statements of violation and our responses thereto in accordance with 10 CFR 2.201. This submittal is being sent in on a schedule that includes an additional 10 days as verbally granted by E. H. Harrell in a conversation with G. R. Smith on May 27, 1992.

Statement of Violation

10 CFR Part 50, Appendix B, Criterion XVI, requires, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. 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.

Cooper Nuclear Station Quality Assurance Plan QAP-2300, Revision 0, Section 1.2, states that corrective action activities include nonconformance reports. Section 1.3.b states that actions taken in response to identified deficiencies include in part, immediate corrective action and action to preclude recurrence.

Cooper Nuclear Station Technical Specification Limiting Condition for Operation 3.9.A.1.d requires that the reactor shall not be made critical unless the 250-volt batteries are operable. Surveillance Requirement 4.9.A.4.b.2 requires each connected cell of the 250-volt batteries to be 2.15 volts minimum.

Cooper Nuclear Station Updated Safety Analysis Report (USAR), Section VIII-6.5 states that periodic tests of the equipment and the system are conducted to detect the deterioration of the equipment in the system toward an unacceptable condition. The 250-volt batteries meet the requirements of "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Stationary Type Power Plant and Substation lead Storage Batteries" IEEE Standard 450-1987. (break) IEEE 450-1987, Section 4,4,3, states that an equalizing charge should

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be given immediately if any cell voltage is below 2.13 volts at the time of inspection.

Contrary to the above:

1) On December 18, 1991, the licensee measured Cell 110 of 250-volt Battery EE-BAT-250(1A) at 2.05 volts, a condition adverse to quality caused by copper contamination, and immediate corrective action was not taken to perform an equalizing charge or to remove the degraded cell from service.

2) Actions also were not taken to prevent recurrence. Redundant train 250-volt Battery EE-BAT-250(1B) was found on February 5, 1992, to be degraded due to copper contamination in that Cell 88 was measured at 2.13 volts. Again, no immediate corrective action was taken to perform an equalizing charge or to remove the degraded cell from service. On February 10, 1992, Cell 88 was measured at 2.06 volts.

This is a Severity Level IV violation (Supplement I).

Reason for Violation

With regard to Cell 110 of the A 250-volt Battery, a work item to disconnect the cell from the battery was written. However, its performance was not considered to be immediately required because:

1) The battery was evaluated as being operable, and

2) Since the battery was evaluated as being operable, the work activity was not believed to be a prudent course of action during plant operation.

With regard to Cell 88 of the B 250-volt Battery, the low ICV data of February 5 was missed by the System Engineer during his review of the results of an enhanced 250-volt battery monitoring program. The enhanced monitoring, which was being performed in addition to the routine surveillances, had been informally initiated in January by the System Engineer in order to:

1) More frequently monitor the overall status of both batteries, and

2) Obtain copper contaminated cell voltage and specific gravity data to ensure that the overall operability of the battery was maintained.

Corrective Steps Taken and Results Achieved

The surveillance test administrative procedure has been updated to require immediate declaration of inoperability in the event that Technical Specification limits are not met during testing. Additionally, the Operability Determination Program has been

significantly upgraded. The program was developed to be consistent with the guidance provided in GL 91-18. Under the revised program, an operability evaluation is performed for surveillance test discrepancies that are not associated with Technical Specification limits. These program upgrades were implemented May 1, 1992.

With regard to the 250-volt batteries, the A Battery was declared inoperable on February 7 after discussing the condition with the NRC. The 10 day Technical Specification LCO was entered. Engineering verified through performance of formal calculations that the A Battery could perform its required function with up to 5 cells removed (Calculations revealed that the B Battery could perform its safety function with 4 cells removed.) Plans were initiated to restore the A 250-volt Battery to an operable condition.

On February 10, following an inquiry by one of the Station Electricians regarding the condition of Cell 88 of the B 250-volt Battery, the System Engineer re-examined the data taken February 5, reassessed the condition of the cell and advised management of the condition. The B Battery was declared inoperable and a plant shutdown in accordance with the requirements of the Technical Specifications was immediately commenced. The required time frames for achieving HOT SHUTDOWN and COLD SHUTDOWN (6 hours and an additional 30 hours, respectively) were met.

The following additional actions were taken prior to returning the plant to power operation:

1) Cell 110 of the A 250-volt Battery and six other cells in that battery that were exhibiting indications of "advanced" copper contamination were replaced.

2) Cell 88 of the B 250-volt Battery and two other cells in that battery were also replaced.

3) A Battery Action Plan requiring the frequency of individual cell monitoring to be increased and requiring trending of individual cell voltages (ICV) for those cells where there was evidence of copper contamination was formally implemented.

4) A Temporary Design Change (TDC) for jumpering and replacing a cell was developed. Should the need arise, the TDC will be approved and implemented.

Subsequently, following plant startup, a test discharge of 5 of the cells removed during shutdown, including cell 110 from the A 250-volt Battery, was performed. The test verified that the cells, even though in a degraded condition, would have met their design basis performance requirement.

Finally, a change to the Technical Specifications was submitted which delineates specific parameter limits for individual cells and the corresponding effect on battery operability.

Corrective Steps Which Will Be Taken To Avoid Further Violations

The reviewability of the data tables contained within surveillance procedures is being improved so Technical Specification limits are clearly presented. This human factors improvement will aid the procedure performer and Shift Supervisor in making initial operability determinations.

Upon approval by the NRC, the Technical Specification change addressed by these contents will be implemented.

Date When Full Compliance Will Be Achieved

Full compliance with the upgraded Surveillance Test Program and Operability Determination Program requirements has been achieved.

Full compliance with all existing Technical Specification requirements associated with the 250-volt batteries has been achieved.

The human factors improvements to the surveillance procedures will be completed by January 1, 1993.

Full compliance with the Technical Specification change will be achieved upon its receipt.

Statement of Violation

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

Cooper Nuclear Station Procedures 0.27, Component Operability, Revision 6, Section 8.3.1, states, in part, that the Station Operation Review Committee (SORC) shall normally review within 1 working day all operability evaluations involving components subject to Technical Specification Limiting Conditions for Operations.

Contrary to the above, the operability evaluation performed on January 15, 1992, addressing the low cell voltage condition of 250-volt Battery EE-BAT-250 (1A), a component subject to Technical Specification Limiting Conditions for Operation, was not reviewed by SORC.

This is a Severity Level IV violation (Supplement I).

Reason For Violation

The battery operability evaluation was performed on January 15, 1992, to confirm A 250-volt Battery operability with the degraded cell. However, the procedural requirements of 0.27 were not followed in that the operability evaluation was not formally submitted for SORC review and approval.

Corrective Steps Which Have Been Taken and the Results Achieved

Surveillance test discrepancies associated with Technical Specification limits now result in an immediate declaration of inoperability. In addition, the Operability Determination Program has been significantly upgraded. Under the revised program, an operability evaluation is performed for all other surveillance test discrepancies that are not associated with Technical Specification limits. The program was developed to be consistent with the guidance provided in GL 91-18, and requires SORC review within one working day if the discrepancy is associated with functionality, the discrepancy is existing (has not been corrected), and the affected structure, system or component (SSC) is being considered OPERABLE. The program was implemented May 1, 1992.

Corrective Steps Which Will Be Taken to Avoid Further Violations

The reviewability of the data tables contained within surveillance procedures is being improved so Technical Specification limits are clearly presented.

Date When Full Compliance Will Be Achieved

SORC review of all operability determinations performed in accordance with CNS Procedure 0.27 is being performed as specified by the procedure. Full compliance has been achieved.

The human factors improvements to the surveillance procedures will be completed by January 1, 1993.

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

Sincerely,

G. R. Horn
Nuclear Power Group Manager

GRH/RLG/dlr

cc: Regional Administrator
USNRC - Region IV

NRC Resident Inspector
Cooper Nuclear Station