

AUG 13 1990

In Reply Refer To:
Docket: 50-298/90-09

Nebraska Public Power District
ATTN: George A. Trevors, Senior Staff
Advisor - Nuclear Power Group
P.O. Box 499
Columbus, Nebraska 68602-0499

Gentlemen:

Thank you for your letter, dated July 31, 1990, regarding your position on the use of tape splices in instrumentation circuits subject to the harsh environments resulting from a high energy line break or loss of coolant accident (HELB/LOCA). Your letter attempts to clarify an apparent misunderstanding noted during your review of NRC Inspection Report 50-298/90-09, dated April 20, 1990.

We are concerned that your letter may endorse the inappropriate use of tape splices; therefore, we find it necessary to restate our position regarding this issue. The NRC staff has reviewed several test reports related to the qualification of tape splices for use in HELB/LOCA environments. The staff has concluded that qualification has been demonstrated for an in-line splice configuration for use in power and control circuits. However, these test reports do not demonstrate qualification for tape splices in instrumentation circuits subject to HELB/LOCA environments.

In order to remove any further ambiguity on this issue, we request that you inform us if tape splices have been installed in instrumentation circuits subject to HELB/LOCA environments at the Cooper Nuclear Station, and, if so, which circuits are involved. Should any circuits be identified, it is incumbent on you to either demonstrate the qualification of the splices in accordance with 10 CFR 50.49, or to perform an operability evaluation in order to justify continued operation for a finite time until a qualified configuration can be installed.

We request that you provide us with your response within 30 days of the date of this letter. Should you have any questions, please feel free to contact us.

Sincerely,
Original Signed By:
Thomas P. Gwynn

Samuel J. Collins, Director
Division of Reactor Projects

cc: (see next page)

*RIV:RI:PSS
CPaulk/cjg
/ /90

*C:PSS
TStetka
/ /90

D:DRS
LJCallan
8/10/90

TJG
D:DRP
for SJCcollins
8/13/90

*Previously concurred

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Nebraska Public Power District

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

Cooper Nuclear Station
ATTN: Guy R. Horn, Nuclear
Power Group Manager
P.O. Box 98
Brownville, Nebraska 68321

Cooper Nuclear Station
ATTN: John M. Meacham, Division
Manager, Nuclear Operations
P.O. Box 98
Brownville, Nebraska 68321

Nebraska Department of Environmental
Control
ATTN: Dennis Grams, 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
501 Centennial Mall, South
P.O. Box 95007
Lincoln, Nebraska 68509-5007

Kansas Radiation Control Program Director

U.S. Nuclear Regulatory Commission
ATTN: Senior Resident Inspector
P.O. Box 218
Brownville, Nebraska 68321

U.S. Nuclear Regulatory Commission
ATTN: Regional Administrator, Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

bcc to DMB (IE01)

bcc distrib. by RIV:

R. D. Martin

Section Chief (DRP/C)

DRSS-FRPS

RIV File

DRP

Resident Inspector

Lisa Shea, RM/ALF

MIS System

Project Engineer (DRP/C)

P. O'Connor, NRR Project Manager (MS: 11-D-23)

DRS

T. Stetka

C. Paulk

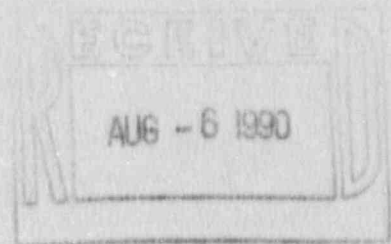
RSTS Operator



Nebraska Public Power District

GENERAL OFFICE
P.O. BOX 499, COLUMBUS, NEBRASKA 68602-0498
TELEPHONE (402) 564-8561
FAX (402) 563-5551

NLS9000196
July 31, 1990



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

Gentlemen:

Subject: Response to NRC Inspection Report No. 90-09
Cooper Nuclear Station
NRC Docket 50-298, DPR-46

Reference: NRC Inspection Report 50-298/90-09 dated April 20, 1990.

NRC Inspection Report 90-09 (Reference 1) documents the NRC inspection of instrumentation calibration conducted at Cooper Nuclear Station (CNS) during the period April 2-6, 1990. Statements made in the Inspection Report indicate an apparent misunderstanding may exist regarding the use of Okonite splices in instrumentation circuit applications. The Nebraska Public Power District (District) hereby provides some additional information to clarify its position regarding use of Okonite T95/35 tape splices in instrumentation applications.

The splicing of environmentally qualified equipment with Okonite T-95/35 tape is controlled through CNS Procedures 7.3.25.1, "Environmentally Qualified Okonite Tape Wrapped Cable Breakouts, Splices, and Terminations (Bolted)," and 7.3.26.2, "Environmentally Qualified Okonite Tape Wrapped Splices and Terminations (Crimped)." During the inspection, the NRC inspector reviewed Revisions 3 and 2 of these procedures. NRC Inspection Report 90-09 states, in part:

"The inspector found that the [Okonite splicing] procedure[s] did not permit the use of taped splices in harsh environments for instrumentation circuits."

The environmental qualification of Okonite is documented in Equipment Qualification Data Package (EQDP) 224. Sections E.3, "Normal Functional Requirements," and E.4, "Accident Functional Requirements," of EQDP 224 each state:

"Splices provide electrical interface to Class 1E electrical equipment. The splices are used on power, control and instrumentation leads."

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EQDP 224, in Subsection 5, "Functional Testing," of Section F, "Equipment Evaluation," documents further the qualification of Okonite tape splices for use in instrumentation circuits. This section states that during qualification testing, the Okonite splices demonstrated a minimum insulation resistance of 9×10^7 ohms. In addition, Design Input (DI) 2407, "Loop Accuracy Calculations," (Reference 20 of EQDP 224) demonstrates analytically the acceptability of Okonite splices in instrumentation and control applications. Therefore, the environmental qualification of Okonite splices in instrumentation applications is well documented.

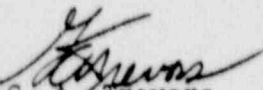
It is the intent of CNS Procedures 7.3.26.1 and 7.3.26.2 to allow use of Okonite tape splices in instrumentation applications. However, the District acknowledges that CNS Procedures 7.3.26.1 and 7.3.26.2 may need further clarification in their application statement. Section 1.0, "Purpose" of both of the above procedures state:

"To provide Maintenance personnel with instructions for making Okonite tape wrapped splices and lead terminations . . . on EQ (Environmentally Qualified) components and power or signal and control cables rated at 1000 volts or less . . ."

The above purpose statement allows use of Okonite splices in "signal" cables. The intent of this statement was that "signal" carrying cables encompasses instrumentation circuits. To ensure future clarity, the District will revise these procedures to clearly indicate acceptability of Okonite in instrumentation applications.

Please contact me if you have any questions.

Sincerely,



G. A. Trevors
Senior Staff Advisor
Nuclear Power Group

cc: U. S. Nuclear Regulatory Commission
Regional Office, Region IV

Resident Inspector
Cooper Nuclear Station