

ILLINOIS POWER COMPANY



CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

U-600450

L30-86(02-17)-L

B51-86(02-17)-L

1A.120

February 17, 1986

Docket No. 50-461

Director of Nuclear Reactor Regulation
Attention: Dr. W. R. Butler, Director
BWR Project Directorate No. 4
Division of BWR Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Clinton Power Station
BISCO Penetration Seals

Dear Dr. Butler:

Illinois Power (IP) requests a deviation from the 325°F maximum temperature criterion recommended by Branch Technical Position CMEB 9.5-1, Section C.5.a(3)(b) on the unexposed side for penetration seal qualification fire tests. This recommendation is based upon ASTM E-119, "Standard Methods of Fire Tests of Building Construction and Materials."

Clinton Power Station uses fire rated penetration seals designed and installed by Brand Industrial Services Inc. (BISCO). BISCO Reports 748-15 and 748-64 identify some thermocouples on the unexposed side where the temperature readings exceeded 325°F. These reports provide results of fire tests performed on conduit penetration seals. Our evaluation of this condition and BISCO's review of the test results as stated in BISCO's letter of January 27, 1986 (attached), have determined that the penetration seals in question do provide an acceptable level of fire protection and meet the intent of ASTM E-119 based on the following:

- ° ASTM E-119 standard time-temperature curve and hose stream tests were satisfactorily conducted during the qualification tests performed by BISCO.
- ° The heat conducted through the metal conductors and the conduit results in documented temperatures greater than 325°F which are not truly reflective of the unexposed surface temperature.
- ° Fire tests performed on penetration seals with larger unexposed area show that the 325°F temperature limit is met by thermocouples located away from the penetrating item.

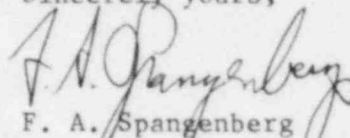
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In conclusion, it is IP's position that the described condition is an acceptable installation and does not decrease the level of fire protection in the plant. If you need further information, please advise.

Sincerely yours,



F. A. Spangenberg
Manager - Licensing and Safety

OV/DWW/ckc

Attachment

cc: B. L. Siegel, NRC Clinton Licensing Project Manager
NRC Resident Office
Regional Administrator, Region III USNRC
Illinois Department of Nuclear Safety



January 27, 1986
3285-563WJA

Illinois Power Company
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1420 renaissance drive
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(312) 298-1200
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Attention: Mr. James E. Loomis
Construction Manager

Subject: BISCO Tests 748-15 and 748-64

Reference: Clinton Power Station
Specification K-2540
Project No. 4526-05

Gentlemen:

BISCO's fire tests 748-15 and 748-64 do have several unexposed thermocouples that exceeded the temperature limits of ASTM-E-119 and NRC Reg. Guide 0800 which is predictable considering the cable fill limits the area of the unexposed surface to such a minute size that its virtually impossible to install a thermocouple without coming in contact with a cable or the conduit. Both conduct a great deal of heat resulting in documentation not truly reflective of the unexposed surface temperature as dictated by ASTM and NRC standards.

It should be noted that IEEE-634 has taken this problem into account by allowing an interface temperature not to exceed 700°F. Both tests meet the IEEE-634 criteria.

Tests 748-41 and 3001-03B with a larger unexposed surface area passed the ASTM E-119 and NRC Reg Guide 800 criteria using the same material and installed depth as used in the above mentioned tests, thus demonstrating the ability of the material to provide a 3-hour fire seal as required.

It is BISCO's position the installed seal design in BISCO Test 748-15 and 748-64 will provide the required 3-hour fire seal for conduits at Clinton.

If you should have any questions feel free to contact this office.

Respectfully Submitted,

William J. Ackerman R-R
William J. Ackerman
Construction Manager

WJA/LR/dp

cc: R. Bhat, NSED
A. Shevade
C. Peterson
W. Ackerman
L. Simms
L. Rogers