



Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

February 1, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Dresden Station Units 2 and 3
Quad Cities Station Units 1 and 2
Thirty Day Response to NRC
Environmental Qualification SERs
NRC Docket Nos. 50-237, 50-249,
50-254, and 50-265

- References (a): D. M. Crutchfield letter to L. O.
DelGeorge dated December 29, 1982.
- (b): D. B. Vassallo letter to L. O.
DelGeorge dated January 18, 1983.
- (c): T. J. Rausch letter to D. G. Eisenhut
dated October 19, 1982.

Dear Mr. Denton:

References (a) and (b) Transmitted the NRC's Safety Evaluation Report (SER) for the Environmental Qualification of Electrical Equipment Program at Dresden Units 2 and 3 and Quad Cities Units 1 and 2, respectively. This is to provide information that reaffirms our justification for continued operation regarding the items identified in the SER.

Justifications for continued operation are attached for the SCAM resistance temperature detectors (RTD's) located in the reactor water cleanup rooms. This provides further justification to supplement reference (c).

We have identified no items in NRC Categories I.B, II.A, and II.B for which justification for continued operation was not previously submitted. Resolution of aging deficiencies will be addressed in our 90 day submittal.

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H. R. Denton

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February 1, 1983

Please address any questions you may have concerning this matter to this office.

One (1) signed original and sixty (60) copies of this transmittal are provided for your use.

Very truly yours,



Thomas J. Rausch
Nuclear Licensing Administrator

lm

cc: Region III Inspector - Dresden
Region III Inspector - Quad Cities

5909N

Equipment Identification Number(s): TE-2-1291-60 A through H
Location: Reactor water cleanup room
FRC Item Number: 53 Response Report Page Number(s): 1-6
Component Description: Temperature elements

1.1 IDENTIFIED CONCERN(S)

Qualification information was inadequate and the JIO was technically deficient

1.2 LICENSEE DISCUSSION OF THE CONCERN(S)

These items are part of the RWCU system and are used for leak detection. A leak would cause the RWCU room temperature to increase and subsequently would be annunciated in the control room. The alarm setpoint is 200F and at no time during a RWCU line break would the temperature exceed the design operating range of -328 to 500F for the present devices. While the accident environment of the devices necessary for leak detection is harsh, the room temperature and radiation conditions are mild during normal operation. We have determined that the internal subcomponent most susceptible to radiation degradation has a damage threshold of 3.4×10^4 rads. The devices complete their function within 1 minute following an accident and are actually exposed to less than 1×10^4 rads.

1.3 LICENSEE CONCLUSION

The replacement components are being purchased and will be installed during the station outage presently scheduled to end on December 1, 1984.

1.4 CONTINUED OPERATION JUSTIFICATION DISCUSSION

These resistance temperature detectors are manufactured by MINCO under a contract for PANALARM (SCAM instruments), Model S51-1-103 and are designed to operate in a temperature range of -328 to +500F. Test data is not available; however, justification for continued operation is based on:

- a. The design temperature range of this instrument envelopes the accident conditions.
- b. The actual radiation exposure of the devices for accident conditions is below the radiation damage threshold of the most susceptible subcomponent.
- c. The annunciation function is complete prior to exposure to a harsh environment; subsequent failure of this equipment would not mislead the operator.

d. Alternate means of leak detection are available utilizing existing pressure, temperature, and flow instruments and alarms in the RWCU system; automatic isolation for high nonregenerative heat exchanger outlet temperature which would result if a break should occur; area radiation monitors; and reactor building sump pump operation.

Equipment Identification Number(s): TE-3-1291-60 A through H
Location: Reactor water cleanup room
FRC Item Number: 36 Response Report Page Number(s): 1-6
Component Description: Temperature elements

1.1 IDENTIFIED CONCERN(S)

Qualification information was inadequate and the JIO was technically deficient

1.2 LICENSEE DISCUSSION OF THE CONCERN(S)

These items are part of the RWCU system and are used for leak detection. A leak would cause the RWCU room temperature to increase and subsequently would be annunciated in the control room. The alarm setpoint is 200F and at no time during a RWCU line break would the temperature exceed the design operating range of -328 to 500F for the present devices. While the accident environment of the devices necessary for leak detection is harsh, the room temperature and radiation conditions are mild during normal operation. We have determined that the internal subcomponent most susceptible to radiation degradation has a damage threshold of 3.4×10^4 rads. The devices complete their function within 1 minute following an accident and are actually exposed to less than 1×10^4 rads.

1.3 LICENSEE CONCLUSION

The replacement components are being purchased and will be installed during the station outage presently scheduled to end on December 15, 1983.

1.4 CONTINUED OPERATION JUSTIFICATION DISCUSSION

These resistance temperature detectors are manufactured by MINCO under a contract for PANALARM (SCAM instruments), Model S51-1-103 and are designed to operate in a temperature range of -328 to +500F. Test data is not available; however, justification for continued operation is based on:

- a. The design temperature range of this instrument envelopes the accident conditions.
- b. The actual radiation exposure of the devices for accident conditions is below the radiation damage threshold of the most susceptible subcomponent.
- c. The annunciation function is complete prior to exposure to a harsh environment; subsequent failure of this equipment would not mislead the operator.

- d. ~~Alternate means of leak detection are available utilizing existing pressure, temperature, and flow instruments and alarms in the RWCU system; automatic isolation for high nonregenerative heat exchanger outlet temperature which would result if a break should occur; area radiation monitors; and reactor building sump pump operation.~~

Equipment Identification Number(s): TE-1-1291-60A through H
Location: Reactor water cleanup room
FRC Item Number: 1 Response Report Page Number(s): 1-6
Component Description: Temperature elements

1.1 IDENTIFIED CONCERN(S)

Qualification information was inadequate and the JIO was technically deficient

1.2 LICENSEE DISCUSSION OF THE CONCERN(S)

These items are part of the RWCU system and are used for leak detection. A leak would cause the RWCU room temperature to increase and subsequently would be annunciated in the control room. The alarm setpoint is 200F and at no time during a RWCU line break would the temperature exceed the design operating range of -328 to 500F for the present devices. While the accident environment of the devices necessary for leak detection is harsh, the room temperature and radiation conditions are mild during normal operation. We have determined that the internal subcomponent most susceptible to radiation degradation has a damage threshold of 3.4×10^4 rads. The devices complete their function within 1 minute following an accident and are actually exposed to less than 1×10^4 rads.

1.3 LICENSEE CONCLUSION

The replacement components are being purchased and will be installed during the station outage presently scheduled to end on May 10, 1984.

1.4 CONTINUED OPERATION JUSTIFICATION DISCUSSION

These resistance temperature detectors are manufactured by MINCO under a contract for PANALARM (SCAM instruments), Model S51-1-103 and are designed to operate in a temperature range of -328 to +500F. Test data is not available; however, justification for continued operation is based on:

- a. The design temperature range of this instrument envelopes the accident conditions.
- b. The actual radiation exposure of the devices for accident conditions is below the radiation damage threshold of the most susceptible subcomponent.
- c. The annunciation function is complete prior to exposure to a harsh environment; subsequent failure of this equipment would not mislead the operator.

- d. Alternate means of leak detection are available utilizing existing pressure, temperature, and flow instruments and alarms in the RWCU system; automatic isolation for high nonregenerative heat exchanger outlet temperature which would result if a break should occur; area radiation monitors; and reactor building sump pump operation.

Equipment Identification Number(s): TE-2-1291-60A through H
Location: Reactor water cleanup room
FRC Item Number: 1 Response Report Page Number(s): 1-6
Component Description: Temperature elements

1.1 IDENTIFIED CONCERN(S)

Qualification information was inadequate and the JIO was technically deficient

1.2 LICENSEE DISCUSSION OF THE CONCERN(S)

These items are part of the RWCU system and are used for leak detection. A leak would cause the RWCU room temperature to increase and subsequently would be annunciated in the control room. The alarm setpoint is 200F and at no time during a RWCU line break would the temperature exceed the design operating range of -328 to 500F for the present devices. While the accident environment of the devices necessary for leak detection is harsh, the room temperature and radiation conditions are mild during normal operation. We have determined that the internal subcomponent most susceptible to radiation degradation has a damage threshold of 3.4×10^4 rads. The devices complete their function within 1 minute following an accident and are actually exposed to less than 1×10^4 rads.

1.3 LICENSEE CONCLUSION

The replacement components are being purchased and will be installed during the station outage presently scheduled to end on November 10, 1983.

1.4 CONTINUED OPERATION JUSTIFICATION DISCUSSION

These resistance temperature detectors are manufactured by MINCO under a contract for PANALARM (SCAM instruments), Model S51-1-103 and are designed to operate in a temperature range of -328 to +500F. Test data is not available; however, justification for continued operation is based on:

- a. The design temperature range of this instrument envelopes the accident conditions.
- b. The actual radiation exposure of the devices for accident conditions is below the radiation damage threshold of the most susceptible subcomponent.
- c. The annunciation function is complete prior to exposure to a harsh environment; subsequent failure of this equipment would not mislead the operator.

d. Alternate means of leak detection are available utilizing existing pressure, temperature, and flow instruments and alarms in the RWCU system; automatic isolation for high nonregenerative heat exchanger outlet temperature which would result if a break should occur; area radiation monitors; and reactor building sump pump operation.