

NORTHEAST UTILITIES

THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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July 19, 1985

Docket No. 50-423
F0781A

Dr. Thomas E. Murley
Regional Administrator
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

- References: (1) W. G. Counsil letter to T. E. Murley, F0672A, dated February 8, 1985.
- (2) W. G. Counsil letter to T. E. Murley, F0693A, dated March 28, 1985.
- (3) J. F. Opeka letter to T. E. Murley, F0730A, dated May 16, 1985.

Dear Dr. Murley:

Millstone Nuclear Power Station, Unit No. 3
Reporting of Potential Significant Deficiencies
in Accordance with 10CFR 50.55(e)
Westinghouse 7300 Process Control Cabinets (SD-69)

In a January 11, 1985 telephone conversation between your Mr. T. Rebelowski and our Mr. G. M. Olsen, Northeast Nuclear Energy Company (NNECO) reported a potential significant deficiency in the construction of Millstone Unit No. 3 in accordance with 10CFR 50.55(e). The potential significant deficiency involved the Westinghouse 7300 process control cabinets, as described in References (1) and (2).

In Reference (3), we informed you that we would provide an update on this matter by July 18, 1985.

Based on the following Westinghouse technical justification, NUSCO engineering confirms that the safety related power supplies and the instrument buses are electrically protected from the control grade system.

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The 118VAC safety related instrument bus which supplies power to 7300 Protection Set Number 1 also inputs to relays TY-41OHX and TY-41IHX in Auxiliary Relay Rack 3. The 118VAC is de-energized upon overtemperature/overpower delta T conditions to cause a turbine runback. The cable which provides 118VAC to the relays in Auxiliary Relay Rack 3 is black (control grade).

The remaining three 7300 Protection Sets also input in an identical fashion to their respective relays in Auxiliary Relay Rack 3.

Each cable being fed over to Auxiliary Relay Rack 3 from its respective protection rack is provided with a 3 amp fuse and a 15 amp circuit breaker in series. This configuration was designed into the 118VAC power distribution system to protect the two parallel 15 amp circuit breakers that provide 118VAC safety related power to the 24VDC and 26VDC power supplies.

The 118VAC power that is being fed to Protection Set 1 is provided from a safety related distribution panel. Within the panel a 20 amp branch fuse is provided for this Protection Set for overcurrent protection. The feeder cable from the inverter is provided with a main 150 amp fuse and provides power to all the loads associated with the distribution panel.

The remaining three 7300 Protection Sets receive power from their respective inverters in the same fashion as Protection Set 1.

Since the cables feeding Auxiliary Relay Rack 3 are control grade cables coming from a Vital instrument bus, the following conditions would be required to compromise the vital instrument bus below an acceptable level.

- A fault current greater than 150 amps.
- Failure of the 15 amp circuit breaker to interrupt the fault current on the control cable.
- Failure of the 20 amp branch breaker in the distribution panel to interrupt the fault.
- Failure of the 150 amp main fuse at the distribution panel to interrupt the fault.

Since the control grade cable has a 3 amp fuse and a 15 amp breaker in series, by analysis the protection system's 118VAC supply is electrically protected from a fault being generated within the control cable of the 118VAC distribution system.

Based on this justification, we have determined that this design is not a significant deficiency for Millstone Unit No. 3.

Even though we agree with the Westinghouse justification, this configuration does not meet the criteria for separation on Millstone Unit No. 3.

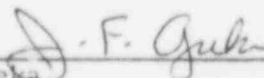
To improve this design, Westinghouse has agreed to re-design this configuration to provide 118VAC control power for the relays within Auxiliary Relay Rack #3.

We are in the process of engineering this design with Westinghouse. Once the re-design is completed, NNECO will perform the modification.

Since the original design has been determined not to be a significant deficiency and the re-design is an improvement, we consider this to be our final report for SD-69. As discussed with your Project Engineer, Mr. R. Summers, this report is being provided on July 19 rather than July 18, 1985.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



J. F. Opeka
Senior Vice President

cc: Mr. J. M. Taylor, Director
Division of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555