



Commonwealth Edison

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NJK-81-484

December 1, 1981



Mr. Edson G. Case, Deputy Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Case:

Enclosed please find a listing of those changes, tests, and experiments completed during the month of November, 1981, for Quad-Cities Station Units One and Two, DPR-29 and DPR-30. A summary of the safety evaluation is being reported in compliance with 10 CFR 50.59.

Thirty-nine copies are provided for your use.

Very truly yours,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

L. J. Hermer for
N. J. Kalivianakis
Station Superintendent

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Enclosure

cc T. J. Rausch

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s/i
Add: Edson
Case*

M-4-1/2-81-23

Temporary 4KV Bus Modification

Description

The modification allows the Unit Two Diesel Generator to feed Unit One Bus 13-1 via Unit Two Bus 24-1, in lieu of having the 1/2 Diesel Generator to feed Bus 13-1. A spare circuit breaker on Bus 24-1 was tied into a spare circuit breaker on Bus 13-1 using 3 safety-grade cables, with 3 conductors each. The trips were pulled from these breakers. The Unit Two Diesel Generator is fully operable. The large loads on Unit Two Bus 24-1 (Core Spray and RHR pumps) are not required to be operable, since Unit Two is in a refuel outage. The breakers for these pumps are out of service. The normal auto-starting circuitry for the 1/2 Diesel Generator from Unit One has been wired into the Unit Two Diesel Generator, and the normal auto-starting circuitry for the Unit Two Diesel Generator from Unit Two has been removed. Therefore, the Unit One protective circuitry for the Reactor and Bus 13-1 will auto-start the Unit Two Diesel Generator. The Unit One Diesel Generator and redundant 4KV Bus 14-1 remain unaffected by this modification. The modification was thoroughly checked for proper wiring. All auto-starts of the Diesel Generator were tested, as were all circuit breaker interlocks that were involved.

Evaluation

The Unit Two Diesel Generator being tied into Unit One Bus 13-1 is of the same high quality as is required to supply the emergency buses. The circuitry for the Unit Two Diesel Generator is wired into the protective circuitry for Bus 13-1 and the Unit One Reactor. The protective functions that require Diesel Generator auto-start and closing in to Bus 13-1 remain operable. Unit One Diesel Generator and its loads are unaffected, and remain operable. No instrumentation or protective relays are changed which could adversely affect Reactor safety.

M-4-2-79-31

Description

This modification replaced the RCIC Area Temperature Switches with a new model to improve reliability. The new switches will be able to be removed for easier and more accurate calibration. The old instruments had drift problems and this unfavorable trend necessitated replacement.

Evaluation

The only significant difference in the temperature switches lies in the sensing mechanisms. Since the new temperature switches are more reliable with less setpoint drift problems, the safety and reliability of the system is increased.

M-4-1(2)-81-3

Control Rod Drive Automatic Air Dump System

Description

This modification installed a system to automatically energize the back-up scram valve on low pressure (50 psig) in the scram air header. The purpose of the system is to prevent operation with a degraded air condition. Operating with low air pressure could allow leakage past the scram valves causing a loss of available scram discharge volume. This could prevent a complete Reactor scram if the need arose.

Evaluation

This modification is in addition to the Reactor Protection System and has been designed with the purpose of further safeguarding the free volume in the scram discharge volume necessary to scram in the event of low air pressure in the scram valve control air header. Calculations show that the header can be depressurized to 35 psig and obtain complete rod insertion before the free volume in the scram discharge volume needed to scram is lost.

M-4-1(2)-79-15

Description

This modification of the RCIC System is to provide for automatic re-start of RCIC on a low-low Reactor water level signal after it had been shut down due to a high Reactor water level signal. This is per NUREG 0737 commitment 11.K.3.13. In addition, all other Turbine protection and steam-break protection trip will now close MO-1301-61 and 60 instead of the trip throttle valve. Mechanical overspeed is the only trip signal for the trip throttle valve. This will allow Control Room reset of RCIC.

Evaluation

This modification will allow RCIC to control Reactor water level in an emergency situation without operator action. In addition, it allows for Control Room reset of a steamline or Turbine isolation trip signal which previously required a local reset.

M-4-1(2)-80-25

HPCI Steam Line Break Protection Relay

Description

This modification replaced existing high steam flow isolation relays with time delay relays. This modification satisfies the requirement of NUREG 0737, item 11.K.3.15.

Evaluation

The addition of time delay, steam break isolation relays, will prevent spurious isolation of the system. Other plants have experienced these spurious isolation conditions on system initiation.

M-4-1(2)-80-26

RCIC Steam Line Break Protection Relay

Description

This modification replaced existing high steam flow isolation relays with time delay relays. This modification satisfies the requirement of NUREG 0737, item 11.K.3.15.

Evaluation

The addition of time delay, steam break isolation relays, will prevent spurious isolation of the system. Other plants have experienced these spurious isolation conditions on system initiation.