



Commonwealth Edison

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NJK-84-207

July 5, 1984

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 June 1984, for Quad-Cities Station Units 1 and 2, 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

N. J. Kalivianakis
Station Superintendent

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Enclosure

cc: B. Rybak

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Local Breaker Control for Emergency Systems

M-4-1-79-26

Description

This modification allows local control of the Unit One Diesel Generator in the Diesel Generator room, and allows control of the 4KV breaker for the main feeds to the ESS buses. It also allows breaker control of bus ties, 480 main feed breakers at the ESS buses, RHR pumps, and RHR Service Water Pumps at the individual breakers. A fire in the Control Room, Auxiliary Electrical Equipment Room, or Cable Tunnel could cause a loss of control from the Control Room.

For each of the 4KV circuit breakers affected, a knife switch was installed to disconnect the control cables to the Control Room and enable control capabilities at the breaker. A pushbutton control switch, located near each bus, will allow for control of an individual breaker.

For the Unit One Diesel Generator, this modification includes a transfer switch in the Unit One Diesel Generator room which will give the capabilities of separating the Unit One Diesel Generator controls in the Control Room from those in the Unit One Diesel Generator room. This will allow for a local Unit One Diesel Generator start and load.

Evaluation

Installation of the local control will not hinder normal operation from the Control Room for the Diesel Generator, RHR pumps, and RHR Service Water Pumps. For the Diesel Generator, no logic for the auto-start and load functions was impaired. Also, auto-initiation of the RHR pumps was not impaired.

If a fire occurred in the Control Room, Auxiliary Electrical Equipment Room, or Cable Tunnel, local control of the Diesel Generator will ensure that the buses that feed the RHR pumps can be energized and RHR pump 4KV breakers operated.

IE 24

Core Spray Bellows Replacement

M-4-2-84-1

Description

This modification was to temporarily replace the 'B' Core Spray Penetration expansion joint, X-16B, with a single-ply bellows. The modification was initiated because the X-16B Penetration had an unacceptable Local Leak Rate Test. The Penetration could not be repaired. The original Penetration bellows was of a double-ply configuration to provide a method for Local Leak Rate Testing. To replace the bellows with a similar type, the Core Spray line would have to be cut out, fitted with the bellows, and then rewelded in place. A single-ply bellows was used as a replacement due to outage time constraints. The replacement bellows was split in half longitudinally, placed around the Penetration, and welded in place.

Evaluation

The single-ply bellows performs the same function as the double-ply bellows except there is no method to Local Leak Rate Test the Penetration. The integrity of the Containment will be maintained and the Penetration tested during the IPCLRT. The function of the 'B' Core Spray line is not affected in any way.

RCIC Local Control

M-4-1(2)-78-20

Description

Additional local instrumentation has been installed in the RCIC room to allow local startup and control of the RCIC pump. The instrumentation includes ON/OFF switches for the vacuum pump and the Condensate pump; Reactor water level and pump speed and flow indicators. These modifications were made in response to an NRC commitment for Fire Protection safe shutdown.

Evaluation

This modification enhances the RCIC System because now the Operator has more effective control of the RCIC during local operation. All instruments and switches are equivalent in design to existing installed equipment.

Installation of Manual Gate Valve
in the Reactor Water Clean-up System

M-4-2-83-20

Description

This modification involved the re-routing of a portion of the Reactor vessel drain line and the installation of a manual Gate valve into the Reactor Water Clean-up (RWCU) System.

The modification was initiated so that the RWCU line can be isolated from the Reactor vessel, allowing repairs to be performed on the system while reducing radiation exposure to personnel working in that area.

The work was accomplished by re-routing a portion of the vessel bottom drain line, 2-1265-2'A, to accommodate the new manual Gate valve (2-1201-173). The vessel drain now ties into RWCU suction line 2-1202-6'A, downstream of the new valve.

Evaluation

The addition of the new valve into the RWCU line does not change the intended operation of the system since this valve is normally open during Reactor operation. This valve allows the RWCU line to be isolated from the Reactor vessel; thus, reducing radiation exposure to personnel working in that area. The safety aspects of the RWCU System are not changed by this modification.

Diesel Generator Non-Synchronous Breaker Closure

M-4-1(2)-82-29 & M-4-1/2-82-11

Description

Before this modification, if the Unit 1 Diesel Generator were running but not loaded, it would immediately close into Bus 14-1 when the Bus 14-1 main feed tripped. There was a possibility of damage to the pump motors on Bus 14-1 and the Diesel Generator because there would have been no synchronization between the Diesel Generator and the Bus.

Now there is a time delay so that the Diesel Generator-to-Bus breaker will wait until two seconds after the Bus undervoltage relay picks-up before it will close into the Bus. The total time delay between trip of Bus main feed and closure of the Diesel Generator-to-Bus breaker is about 4.5 seconds. This is sufficient time for the Bus voltage to drop to zero, allowing the Diesel Generator to pick-up a dead Bus.

This is typical for Diesel Generators 1, 2, and 1/2 and Buses 13-1, 14-1, 23-1, and 24-1.

Evaluation

In protecting the Diesel Generators from damage caused by non-synchronous breaker closure, this modification increases their availability. There is no effect on Diesel Generator starting because the breaker delay is present only when the Diesel Generator is already running. If the delay circuit fails, preventing closure of the Diesel Generator-to-Bus breaker, it can only affect that particular Diesel Generator.