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BBS-73-93

May 15, 1973

Mr. Angelo Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Reference: Quad-Cities Nuclear Power Station
Docket Number 50-265, DPR-30,
Appendix A, Section 1.0.A.2 and 3.9.E.1

Dear Mr. Giambusso:

The purpose of this letter is to report the unavailability of the shared diesel generator with the Unit 2 reactor operating at 90% power. This abnormal occurrence was previously reported by telegram on May 7, 1973.

DESCRIPTION OF EVENT

At 8:00 a.m. on May 6, 1973, during a planned outage on Unit one the power supply to buses 13 and 13-1 was inadvertently tripped while performing routine preventive maintenance checks on bus 13 switchgear. The No. 1/2 diesel generator auto started and restored power to bus 13-1. After normal auxiliary power was restored the diesel generator was shutdown. At 9:00 a.m. when the monthly surveillance test was attempted on the 1/2 diesel generator, it would not start. The diesel generator was declared inoperable when the starting air accumulators were found to be depressurized.

INVESTIGATION

Investigation revealed that the cause of the occurrence was due to the welding together of the STR/HGA relay contacts to the governor oil booster pump D.C. motor and the air start solenoid valve when the relay was de-energized. The resultant continuous open signal to the solenoid valve caused the air start accumulators to depressurize thus disabling the diesel. The relay was

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repaired and the air start accumulators charged. Subsequent to a successful operability check, the shared diesel generator was declared operable and returned to service at 5:15 p.m. on May 6, 1973.

CONCLUSIONS AND CORRECTIVE ACTION

The shared diesel-generator was inoperable for a period of about 8 hours. Only Unit 2 was affected by the incident since Unit 1 was in the cold shutdown condition. During this period the low pressure core cooling systems and containment cooling systems required to be operable by Technical Specifications 3.9.E.1 for this condition were satisfactorily tested. In addition, all off-site 345 KV lines and the reserve auxiliary transformer were available. The demonstrated availability of power and emergency systems thus greatly reduces any safety significance of this incident.

The STR relay contacts in the air start solenoid valve circuits of the Nos. 1 and 2 diesel-generators were also inspected and showed signs that arcing had occurred in the past. It is apparent, therefore, that this occurrence was caused by the circuit design rather than an individual component failure. To correct this condition a modification to all three diesels is currently being reviewed. This modification will replace the existing HGA type relay with an HFA type of the same rating. The HFA relay, however, has the necessary number of "a" contacts to permit wiring two contacts in series in the solenoid circuit which will reduce the arcing and minimize the probability of a recurrence.

Very truly yours,

COMMONWEALTH EDISON COMPANY
Quad-Cities Nuclear Power Station

B. B. Stephenson
Plant Superintendnet

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