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December 10, 1980

Director 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
 Proposed Amendment to Licenses DPR-19,
 25, 29, and 30 and Appendix A,
 Technical Specifications, to Incorporate
 Lessons Learned Requirements
 NRC Docket Nos: 50-237/249/254/265

Reference (a): R. F. Janecek letter to Director of Nuclear
 Reactor Regulation dated September 18, 1980

Dear Sir:

During reproduction and transmittal of Reference (a), the revised Page 3.2/4.2-15 for DPR-29, Quad Cities Unit 1, was inadvertently omitted. Enclosed for your use are forty (40) copies of the omitted page for inclusion into Attachment 3 of Reference (a).

One (1) signed original and thirty-nine (39) copies of this transmittal are provided for your use.

Very truly yours,

Robert F. Janecek
 Nuclear Licensing Administrator
 Boiling Water Reactors

Enclosure

cc: RIII Inspector; Dresden
 RIII Inspector, Quad Cities

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The control rod drive scram system is designed so that all of the water which is discharged from the reactor by a scram can be accommodated in the discharge piping. A part of this piping is an instrument volume (u-tube in the piping) which accommodates in excess of 50 gallons of water and is the low point in the piping. No credit was taken for this volume in the design of the discharge piping as concerns the amount of water which must be accommodated during a scram. During normal operation the discharge volume is empty; however, should it fill with water, the water discharged to the piping from the reactor could not be accommodated which would result in slow scram times or partial or no control rod insertion. To preclude this occurrence, level switches have been provided in the instrument volume which alarm and scram the reactor when the volume of water reaches 50 gallons. As indicated above, there is sufficient volume in the piping to accommodate the scram without impairment of the scram times or amount of insertion of the control rods. This function shuts the reactor down while sufficient volume remains to accommodate the discharged water and precludes the situation in which a scram would be required but not be able to perform its function adequately.

Loss of condenser vacuum occurs when the condenser can no longer handle the heat input. Loss of condenser vacuum initiates a closure of the turbine stop valves and turbine bypass valves which eliminates the heat input to the condenser. Closure of the turbine stop and bypass valves causes a pressure transient, neutron flux rise, and an increase in surface heat flux. To prevent the clad safety limit from being exceeded if this occurs, a reactor scram occurs on turbine stop valve closure. The turbine stop valve closure scram function alone is adequate to prevent the clad safety limit from being exceeded in the event of a turbine trip transient with bypass closure. Ref. Section 4.4.3 SAR. The condenser low vacuum scram is a back-up to the

stop valve closure scram and causes a scram before the stop valves are closed and thus the resulting transient is less severe. Scram occurs at 23" Hg vacuum, stop valve closure occurs at 20" Hg vacuum and bypass closure at 7" Hg vacuum.

High radiation levels in the main steamline tunnel above that due to the normal nitrogen and oxygen radioactivity is an indication of leaking fuel. A scram is initiated whenever such radiation level exceeds ~~three~~ times normal background. The purpose of this scram is to reduce the source of such radiation to the extent necessary to prevent excessive turbine contamination. Discharge of excessive amounts of radioactivity to the site environs is prevented by the air ejector off-gas monitors which cause an isolation of the main condenser off-gas line provided the limit specified in Specification 3.8 is exceeded.

During the one month Hydrogen Addition Test, the normal background Main Steam Line Radiation Level is expected to increase by as much as 800% at the maximum Hydrogen addition rate, as indicated in note 15 to Table 3.1.1. A Scram will be initiated at three times the new normal background radiation level.

The main steamline isolation valve closure scram is set to scram when the isolation valves are 10% closed from full open. This scram anticipates the pressure and flux transient, which would occur when the valves close. By scrambling at this setting the resultant transient is insignificant.

A reactor mode switch is provided which actuates or bypasses the various scram functions appropriate to the particular plant operating status. Ref. Section 7.7.1.2 SAR.

The manual scram function is active in all modes, thus providing for a manual means of rapidly inserting control rods during all modes of reactor operation.

The IRM system provides protection against excessive power levels and short reactor periods in the start-up and intermediate power ranges. Ref.

Sections 7.4.4.2 and 7.4.4.3 SAR. A source range monitor (SRM) system is also provided to supply additional neutron level information during start-up but has no scram functions. Ref. Section 7.4.3.2 SAR. Thus, the IRM is required in the "Refuel" and "Start/Hot Standby" modes. In the power range the APRM system provides required protection. Ref. Section 7.3.5.2 SAR. Thus, the IRM system is not required in the "Run" mode. The APRM's cover only the power range, the IRM's provide adequate coverage in the start-up and intermediate range.

The high reactor pressure, high drywell pressure, reactor low water level, and scram-discharge volume high level scrams are required for Startup/Hot Standby and Run modes of plant operation. They are, therefore, required to be operational for these modes of reactor operation.

The requirement to have all scram functions except those listed in Note 8 of Table 3.1.1 operable in the Refuel mode is to assure that shifting to the Refuel mode during reactor power operation does not diminish the need for the reactor protection system.

The turbine condenser low vacuum scram is only required during power operation and must be bypassed to start up the unit. At low power conditions a turbine stop valve closure does not result in a transient which could not be handled safely by other scrams such as the APRM.

The requirement that the IRM's be inserted in the core when the APRM's read 5/125 of full scale assures that there is proper overlap in the neutron monitoring systems and thus, that adequate coverage is provided for all ranges of reactor operation.