

ATTACHMENT 1

PROPOSED AMENDMENT TO DPR-25

TECHNICAL SPECIFICATION

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3.5 LIMITING CONDITION FOR OPERATION  
(Cont'd.)

3. From and after the date that one containment cooling subsystem is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding  
\* seven days unless such subsystem is sooner made operable, provided that all active components of the other containment cooling subsystem; both core spray subsystems and both diesel generators required for operation of such components if no external source of power were available, shall be operable.  
  
\* Starting on 7/28/85, Reactor operation is permissible for the succeeding 14 days. The 14 days applies only to the inoperable 3A LPCI Heat Exchanger and expires on 8/11/85.
4. If the requirements of 3.5.B cannot be met an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown condition within 24 hours.

C. HPCI Subsystem

1. Except as specified in 3.5.C.2 below, the HPCI subsystem shall be operable whenever the reactor pressure is greater than 90 psig and irradiated fuel is in the reactor vessel.

4.5 SURVEILLANCE REQUIREMENT  
(Cont'd.)

3. When one containment cooling subsystem becomes inoperable, the operable subsystem and the diesel generators required for operation of such components shall be demonstrated to be operable immediately and the operable containment cooling subsystem daily thereafter.

C. Surveillance of HPCI Subsystem shall be performed as follows:

1. HPCI Subsystem Testing shall be as specified in 4.5.A.1.a, b, c, d, and f, except that the HPCI pump shall deliver at least 5000 gpm against a system head corresponding to a reactor vessel pressure of 1150 psig to 150 psig.

## ATTACHMENT 2

### SAFETY EVALUATION (10 CFR 50.59) AND EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

#### Description of Amendment Request

An amendment to the Dresden Unit 3 Technical Specifications is requested to extend the allowable repair period for an inoperable containment cooling loop from seven to fourteen days. The extension is needed to complete repairs on the 3A LPCI heat exchanger.

#### Safety Evaluation

The containment cooling mode of the LPCI System is used primarily for post-accident cooling of the torus water and containment (containment spray function) following a Loss of Coolant Accident (LOCA). The LPCI System contains two independent loops, each providing 100% heat removal capability for post-accident containment cooling. The LPCI heat exchangers are not required for the initial blowdown and reflood phase of a LOCA to maintain peak clad temperature and cladding oxidation within 10 CFR 50.46 requirements. With the 3A LPCI heat exchanger Out-Of-Service for repair, the redundant 3B heat exchanger remains available for post-accident cooling. To assure the redundant system's availability, current Technical Specifications require that the containment cooling mode of the redundant loop be demonstrated to be operable on a daily basis. This surveillance will be continued during any period of extended repair.

To ensure that extension of the repair period does not significantly increase the risk of unavailability of containment cooling in the event of a LOCA, we have reviewed the GE Topical Report APED 5736, "Guidelines for Determining Safe Test Intervals and Repair Times for Engineered Safeguards" - April 1969, I. M. Jacobs and P. W. Marriott, to determine the impact of the proposed 14 day repair period on risk. The report, referenced in the Technical Specification bases, describes the General Electric methodology for establishing test intervals and repair periods. The method is based on assuring that the average risk during repair is not greater than the basic risk during normal operation. Table 2.1 of the report indicates an allowable repair period of one-third the normal test interval for cases where two redundant systems are normally available. For the case of the containment cooling mode of LPCI, this yields an allowable repair period of 30 days. Therefore, using the GE methodology, the proposed 7 day extension of the current Technical Specification repair period would not increase the risk during repair beyond the basic risk inherent in the established test interval.

In order to justify Dresden's request for an extended (14-day) repair period for the 3A LPCI/CCSW Heat Exchanger, it is necessary to remember that this repair work affects the system in only one of its operating modes, and that the operable heat exchanger has been analyzed to provide 100% of the postulated heat removal capacity needed (FSAR Sections 6.2.4.1-4). In addition,

the affect(s) of losing the other LPCI/CCSW Heat Exchanger (3B) was evaluated for the following situations:

- (1) Normal Operation - The LPCI System is normally in the standby mode, with containment (suppression pool) cooling needed only when pool water temperature exceeds 90°F. If needed, the 3A heat exchanger could be returned to service within 24 hours (prior to completion of all repairs) to perform this function.
- (2) Controlled Shutdown - During normal unit shutdown, all reactor pressure control and decay heat removal is provided first via the Turbine Bypass valves to the Main Condenser, and second by the Shutdown Cooling System.
- (3) Group One Isolation, Isolation Condenser Available - This event is considered in the design basis of the Isolation Condenser System (FSAR Section 4.5) and the loss of containment cooling would have minimal effect on its performance.
- (4) Group One Isolation, Isolation Condenser NOT Available - During this event, reactor pressure control and decay heat removal would initially be provided by the ADS valves discharging to the Torus. Due to the size of the Torus, containment cooling is not initially required. Should long term cooling become necessary the 3B LPCI containment cooling system would be available or the potential for restoring the Main Condenser as a heat sink is provided by the Emergency Procedure Guidelines (Rev. 3) as approved by the NRC. Procedural guidance is available for this situation in the Draft Emergency Operating Procedures, which could be implemented promptly if required.
- (5) Loss of Coolant Accident - Coincident with a loss of Suppression Chamber Cooling System.

As stated previously the initial response to a DBA does not require containment cooling. Loss of both containment cooling systems (3A & 3B LPCI heat exchangers) could require for long term cooling the implementation of Emergency Operating Procedure Guidelines (e.g. use of the main condenser as a heat sink) or in certain situations cross tying the Unit 2 Torus to the Unit 3 Torus (i.e., utilizing the Unit 2 Torus in a cooling mode to cool the Unit 3 Torus).

#### No Significant Hazards Consideration

Based on the information above, Commonwealth Edison has determined the proposed amendment does not represent a significant hazards consideration. In accordance with 10 CFR 50.92(c), the proposed amendment will not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated because removal of the 3A LPCI heat exchanger for repairs does not increase the probability of an accident. Consequences of an accident are unchanged as the remaining 3B LPCI heat exchanger is still available and all four LPCI pumps (2 on Loop A and 2 on Loop B) are available for reactor injection and containment spray. Emergency Operating Procedure Guidelines are available for dealing with multiple system losses for long term containment cooling.
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated because the proposed Technical Specification Waiver does not allow any new modes of operation beyond that normally performed at operating BWRs.
- (3) Involve any reduction in the margin of safety because the 1969 APED report provides the basis for allowing one containment cooling subsystem Out-Of-Service for up to 30 days with safety assured. Therefore, the 7 day extension does not change the margin of safety and is still far more conservative than the 30 day time interval indicated by the APED report.

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ATTACHMENT 3

INTERIM COMPENSATORY MEASURES

Along with the Tech Spec requirement that the Redundant (3B) Containment Cooling Subsystem be demonstrated to be operable daily, the following additional items will be performed during the extended repair period;

1. During the daily operability test, the 3B LPCI/CCSW Heat Exchanger differential pressure (containment cooling service water side) will be recorded and trended to observe for possible tube plugging.
2. The CCSW Pump performance data that is taken quarterly for IST surveillances will be taken during the daily operable test to monitor for possible pump failure.
3. The CCSW Radioactivity will be checked daily and trended to observe for possible LPCI/CCSW Heat Exchanger tube leaks.

If 1., 2. or 3. above show a problem with the Redundant (3B) CCSW Subsystem such that it will become inoperable, the reactor will be shutdown in accordance with Section 3.5.B.4. of DPR-25 (U-3 Tech. Specs.). 3A CCSW Heat Exchanger will be returned to service if required. In an emergency if the heat exchanger is accessible, the inoperable 3A LPCI/CCSW Heat Exchanger will be able to be returned to service (prior to completion of all repairs) within a 24 hour period.