satisfied within an additional 48 hours, the reactor shall be placed in the cold shutdown condition.

a. One of the assigned component cooling pumps may be out of service provided a pump is restored to operable status within 24 hours.

b. Two heat exchangers which may be aligned to the operating unit may be out of service provided repairs can be completed within 48 hours.

Two Unit Operation

1. Both reactors shall not be made critical unless the following conditions are met:

   a. ~~Three~~ Four component cooling pumps are operable.

   b. Three component cooling heat exchangers are operable.

   c. All valves, interlocks and piping required for the functioning of the system during accident conditions and associated with the above components are operable.

2. During power operation, the requirements of 15.3.3.C-1 may be modified to allow one of the following conditions at any one time. If the system is not restored to meet the conditions of 15.3.3.C-1 within the time period specified, one reactor shall be placed in the hot shutdown condition. If the requirements of 15.3.3.C-1 are not satisfied within an additional 48 hours, the reactor shall be placed in the cold shutdown condition.

   a. One of the ~~three~~ four assigned component cooling pumps may be out of service provided a pump is restored to operable status within ~~24~~ 72 hours.

   b. Two heat exchangers may be out of service provided repairs can be completed within 48 hours.

D. Service Water System

1. Neither reactor shall be made or maintained critical unless the following conditions are met:

a. ~~Four~~ Six service water pumps are operable~~, two from each train~~.

b. All necessary valves, interlocks and piping required for the functioning of the Service Water System during accident conditions are also operable.

2. During power operation, the requirements of 15.3.3.D-1 may be modified to allow ~~one of~~ the following ~~components to be inoperable~~ conditions~~at any one time~~. If the system is not restored to meet the conditions of 15.3.3.D-1 within the time period specified, ~~both~~ the affected reactor(s) will be placed in the hot shutdown condition within six hours and in cold shutdown within 36 hours.

a. ~~One of the four required service water pumps may be out of service provided a pump is restored to operable status within 24 hours.~~

One of the six required service water pumps may be out of service provided a pump is restored to operable status within 7 days. A second service water pump may be out of service provided a pump is restored to operable status within 72 hours. A third service water pump may be out of service provided two pumps are restored to operable status within 72 hours.

b. ~~One of the two loop headers~~ The service water ring header continuous flowpath may be out of service for a period of ~~24 hours~~7 days. If less than four service water pumps are operable, service water system flow shall be evaluated within 24 hours of entry into this LCO.

c. ~~A~~ An automatic isolation valve ~~or other passive component~~ required during accident conditions may be out of service for up to 72 hours provided ~~repairs can be completed within 48 hours~~at least four service water pumps are operable. This LCO can be exited provided the line is isolated with a seismically qualified isolation valve or the valve is restored to operable status.

d. The containment fan cooler outlet motor operated valves may be open for up to 72 hours provided at least five service water pumps are operable. This LCO can be exited provided the valves are returned to the closed position or the flowpath is isolated.

Basis

The normal procedure for starting the reactor is, first, to heat the reactor coolant to near operating temperature, by running the reactor coolant pumps. The reactor is then made critical by withdrawing control rods and/or diluting boron in the coolant.[1] With this mode of start-up, the energy stored in the reactor coolant during the approach to criticality is substantially equal to that during power operation and therefore to be conservative most engineered safety system components and auxiliary cooling systems, shall be fully operable. During low temperature physics tests there is a negligible amount of stored energy in the reactor coolant, therefore an accident comparable in severity to the Design Basis Accident is not possible, and the engineered safety systems are not required.

and (4) long term subcriticality is maintained following a steamline break assuming ARI-1 and fuel failure is precluded.

The containment cooling function is provided by two independent systems: (a) fan coolers and (b) containment spray which, with sodium hydroxide addition, provides the iodine removal function. During normal power operation, only three of the four fan coolers are required to remove heat lost from equipment and piping within the containment.[3] In the event of a Design Basis Accident, any one of the following combinations will provide sufficient cooling to reduce containment pressure: (1) four fan coolers, (2) two containment spray pumps, (3) two fan coolers plus one containment spray pump.[4] Sodium hydroxide addition via one spray pump reduces airborne iodine activity sufficiently to limit off-site doses to acceptable values. One ~~of the four~~ or two fan coolers ~~is~~ are permitted to be inoperable for up to ~~48~~ 72 hours during power operation.

Specification 15.3.3.B.2 allows one of the following limitations (a., b., or c.) to be in effect at any one time. This is intended to preclude simultaneous inoperability of the containment accident fan cooling system and the containment spray system. It is also intended to preclude inoperability of both trains of either of these systems. It is not intended to preclude inoperability of components in the same train for either of these systems. For example, simultaneous inoperability of the Train A containment spray pump and the Train A containment spray system valves is allowed.

Specification 15.3.3.B.2.c requires valves that provide the duplicate function be operable prior to initiating repairs on an inoperable valve. For the specific case of the containment spray pump discharge (SI-860) valves, SI-860A and SI-860D provide duplicate functions. Valves SI-860B and SI-860C are not required for system operability. Hence, prior to removing valve SI-860A from service, valve SI-860D must be operable and vice versa.

The component cooling system is different from the other systems discussed above in that the components are so located in the Auxiliary Building as to be accessible for repair after a loss-of-coolant accident. The component cooling water pump together with one component cooling heat exchanger can accommodate the heat