

Docket No. 50-255

OCT 27 1972

Consumers Power Company
ATTN: Mr. R. C. Youngdahl
Senior Vice President
212 West Michigan Avenue
Jackson, Michigan 49201

Change No. 1
License No. DPR-20

Gentlemen:

Your letter dated July 14, 1972, proposed two changes in the Technical Specifications of Provisional Operating License No. DPR-20 (Amendment 4) for the Palisades Plant. These changes would permit operation of the plant with only three of four safety injection tanks operable and would change the level operating band of the tanks slightly. These proposals have been designated Change No. 1.

The proposal to operate the Palisades Plant with only three of four safety injection tanks available for service is not approved. We have concluded that a safety injection tank should not be allowed out of service for an indefinite period of time. We recognize that these tanks need to be out of service for short periods of time required for testing and believe it is acceptable to do so. In our view, the current specifications afford you adequate time for testing.

The proposal to change the safety injection tank level operating band slightly to avoid spurious high and low level alarms is approved. We have concluded that the expansion of the operating band will greatly reduce the number of spurious alarms at the plant. It should also result in the reactor operator being more responsive to subsequent level alarms since repetitive spurious alarms may result in operator inattention. We note that using the as-built dimensions of the safety injection tanks, the tank volumes are somewhat greater than previously listed in the Technical Specifications; however, this change has not affected the temperature transient of the loss-of-coolant accident.

cut

OFFICE ▶						
SURNAME ▶						
DATE ▶						

OCT 27 1972

We conclude that the approved change does not involve significant hazard considerations not described or implicit in the Final Safety Analysis Report and that there is reasonable assurance that the health and safety of the public will not be endangered. Accordingly, pursuant to Section 50.59 of 10 CFR Part 50, the Technical Specifications of Facility Operating License No. DPR-20 are hereby changed as set forth in revised pages 3-29 and 3-31 which are enclosed.

Sincerely,

Original Signed by

R. C. DeYoung

R. C. DeYoung, Assistant Director
for Pressurized Water Reactors
Directorate of Licensing

Enclosure:

Tech Spec Change No. 1

cc w/encl:

George F. Trowbridge, Esq.
Shaw, Pittman, Potts, Trowbridge
and Madden
910 Seventeenth Street, N. W.
Washington, D. C. 20006

J. L. Bacon, Esq.
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

bcc: HMueller, GMR/H
JRBuchanan, ORNL
TWLaughlin, DTIE
FWKaras, SECY

DISTRIBUTION:

AEC PDR
Local PDR
Docket
RP Reading
PWR-3 Reading
JScinto, OGC
RSBoyd, L
RO (3)
RCDeYoung, L
SHHanauer, DR
DJSkovholt, L
PCollins, L
PWR Branch Chiefs
RWKlecker, L
RVollmer, L
NDube, L
MJinks (w/4 encls)
DCrutchfield, L
VHWilson, L

OFFICE ▶	L: PWR-3 x7415:esp <i>JMC</i>	L: PWR-3 <i>KRG</i>	L: AD/PWRs <i>[Signature]</i>	<i>KTR</i>	
SURNAME ▶	DCrutchfield	KRGoller	RCDeYoung	<i>DK</i>	
DATE ▶	10/25/72	10/25/72	10/25/72	10/26/72	

3.3 EMERGENCY CORE COOLING SYSTEM

Applicability

Applies to the operating status of the emergency core cooling system.

Objective

To assure operability of equipment required to remove decay heat from the core in either emergency or normal shutdown situations.

Specifications

Safety Injection and Shutdown Cooling Systems

- 3.3.1 The reactor shall not be made critical, except for low-temperature physics tests, unless all of the following conditions are met:
- a. The SIRW tank contains not less than 250,000 gallons of water with a boron concentration of at least 1720 ppm at a temperature not less than 40°F.
 - b. All four safety injection tanks are operable and pressurized to at least 200 psig with a tank liquid level of at least 186 inches (55.5%) and a maximum level of 198 inches (59%) with a boron concentration of at least 1720 ppm.
 - c. One low-pressure safety injection pump is operable on each bus.
 - d. One high-pressure safety injection pump is operable on each bus.
 - e. Both shutdown heat exchangers and both component cooling heat exchangers are operable.
 - f. Piping and valves shall be operable to provide two flow paths from the SIRW tank to the primary coolant system.
 - g. All valves, piping and interlocks associated with the above components and required to function during accident conditions are operable.
- 3.3.2 During power operation, the requirements of 3.3.1 may be modified to allow one of the following conditions to be true at any one time. If the system is not restored to meet the requirements of 3.3.1 within the time period specified below, the reactor shall be placed in a hot shutdown condition within 12 hours. If the requirements of 3.3.1 are not met within an additional 48 hours, the reactor shall be placed in a cold shutdown condition within 24 hours.
- a. One safety injection tank may be inoperable for a period of no more than one hour.
 - b. One low-pressure safety injection pump may be inoperable provided the pump is restored to operable status within 24 hours.

EMERGENCY CORE COOLING SYSTEM (Contd)

severity to the design basis accident is not possible and the engineered safeguards' systems are not required.

The SIRW tank contains a minimum of 250,000 gallons of water containing 1720 ppm boron. This is sufficient boron concentration to provide a 5% shutdown margin with all control rods withdrawn and a new core at a temperature of 60°F.

Heating steam is provided to maintain the tank above 40°F to prevent freezing. The 1% boron (1720 ppm) solution will not precipitate out above 32°F. The source of steam during normal plant operation is extraction steam line in the turbine cycle.

The limits for the safety injection tank pressure and volume assure the required amount of water injection during an accident and are based on values used for the accident analyses. The minimum 186-inch level corresponds to a volume of 1103 ft³ and the maximum 198-inch level corresponds to a volume of 1166 ft³.

Prior to the time the reactor is brought critical, the valving of the safety injection system must be checked for correct alignment and appropriate valves locked. Since the system is used for shutdown cooling, the valving will be changed and must be properly aligned prior to start-up of the reactor.

The operable status of the various systems and components is to be demonstrated by periodic tests. A large fraction of these tests will be performed while the reactor is operating in the power range. If a component is found to be inoperable, it will be possible in most cases to effect repairs and restore the system to full operability within a relatively short time. For a single component to be inoperable does not negate the ability of the system to perform its function, but it reduces the redundancy provided in the reactor design and thereby limits the ability to tolerate additional equipment failures. To provide maximum assurance that the redundant component(s) will operate if required to do so, the redundant component(s) is to be tested prior to initiating repair of the inoperable component. If it develops that (a) the inoperable component is not repaired within the specified allowable time period; or (b) a second component in the same or related system is found to be inoperable, the reactor will initially be put in the hot shutdown