

physical form for sample analysis or instrument calibration or associated with radioactive apparatus or components:

- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility".

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR, Chapter 1: Part 20, Section 30.34 of Part 30 Section 40.41 of Part 40, Section 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensees are authorized to operate the facility at steady state reactor core power levels not in excess of 1650 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 45, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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- (3) The licensee may proceed with and is required to complete the modifications identified in Paragraphs 3.1.1, 3.1.2 and 3.1.4 through 3.1.28, of the Fire Protection Safety Evaluation Report. These modifications shall be completed by the dates specified in Table 3.1. Dates for resolution of items are specified in Table 3.2. In the event that these dates for completion cannot be met, the licensee shall submit a report explaining the circumstances and propose a revised schedule.

39

(4) Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the following Commission approved documents, including amendments and changes made pursuant to the authority of 10 CFR 50.54(p). These approved documents consist of information withheld from public disclosures pursuant to 10 CFR 2.790 (d).

- a) "Industrial Security Manual" dated May 25, 1977, January 9, 1978, December 18, 1978, January 30, 1979, March 7, 1979 and March 27, 1979.

34

- b) Kewaunee Nuclear Power Plant Safeguards Contingency Plan, as originally submitted by letter of March 27, 1979, and subsequently revised and re-submitted by letter of February 20, 1981, pursuant to 10 CFR 73.40. The Safeguards Contingency Plan shall be fully implemented, in accordance with 10 CFR 73.40(b) within 30 days of this approval by the Commission.

2.3 LIMITING SAFETY SYSTEM SETTINGS, PROTECTIVE INSTRUMENTATION

Applicability

Applies to trip settings for instruments monitoring reactor power and reactor coolant pressure, temperature, flow, pressurizer level, and permissives related to reactor protection.

Objective

To prevent the principal process variables from exceeding a safety limit.

Specification

a. Reactor trip settings shall be as follows:

1. Nuclear Flux

- A. Source Range (high set point) - within span of source range instrumentation
- B. Intermediate range (high set point) $\leq 40\%$ of rated power | 45
- C. Power range (low set point) $\leq 25\%$ of rated power
- D. Power range (high set point) $\leq 109\%$ of rated power
- E. Power range fast flux rate trip (positive) $15\% \Delta q / 5 \text{ sec}$
- F. Power range fast flux rate trip (negative) $10\% \Delta q / 5 \text{ sec}$

2. Pressurizer

- A. High pressurizer pressure $\leq 2385 \text{ psig}$
- B. Low pressurizer pressure $\geq 1875 \text{ psig}$
- C. High pressurizer water level $\leq 90\%$ of full scale

3. Reactor Coolant Temperature

- A. Overtemperature $\Delta T \leq \Delta T_o [K_1 - K_2(T-T') \left[\frac{1 + \tau_1 s}{1 + \tau_2 s} \right] + K_3 (P-P') - f(\Delta I)]$

where

ΔT_o = Indicated ΔT at rated power, $^{\circ}\text{F}$

T = Average temperature, $^{\circ}\text{F}$

T' = $567.3 \text{ }^{\circ}\text{F}$

P = Pressurizer pressure, psig

P' = 2235 psig

K_1 = 1.11

K_2 = 0.0090

K_3 = 0.000566

| 24

5. Pressurizer Power Operated Relief Valves (PORV) and PORV Block Valves.

a. Two PORV's and their associated block valves shall be operable during hot standby and operating modes.

1. If a pressurizer PORV is inoperable, the PORV shall be restored to an operable condition within one hour or the associated block valve shall be closed and maintained closed by administrative procedures to prevent inadvertent opening.
2. If a PORV block valve is inoperable, the block valve shall be restored to an operable condition within one hour or the block valve shall be closed with power removed from the valve; otherwise the unit shall be placed in the hot shutdown condition using normal operating procedures.

6. Pressurizer Heaters

A. At least one group of pressurizer heaters shall have an emergency power supply available when the average RCS temperature is greater than 350°F.

The pressurizer power operated relief valves (PORV's) operate as part of the pressurizer pressure control system. They are intended to relieve RCS pressure below the setting of the code safety valves. These relief valves have remotely operated block valves to provide a positive shutoff capability should a relief valve become inoperable.

38

Pressurizer heaters are vital elements in the operation of the pressurizer which is necessary to maintain system pressure. Loss of energy to the heaters would result in the inability to maintain system pressure via heat addition to the pressurizer. This could result in an uncontrolled depressurization due to heat loss to ambient. Hot functional tests⁽³⁾ have indicated that one group of heaters is required to overcome ambient heat losses. Placing heaters is necessary to overcome ambient heat losses on emergency power will assure the ability to maintain pressurizer pressure. Annual surveillance tests are performed to ensure heater operability.

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References:

- (1) FSAR Section 7.2.2
- (2) Order for Modification of License dated 4/20/81.
- (3) Hot functional test (PT-RC-31)

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3.4 STEAM AND POWER CONVERSION SYSTEM

Applicability

Applies to the operating status of the Steam and Power Conversion System.

Objective

To assure minimum conditions of steam-relieving capacity and auxiliary feedwater supply necessary to assure the capability of removing decay heat from the reactor, and to limit the concentrations of water activity that might be released by steam relief to the atmosphere.

Specification

- a. The reactor shall not be heated above 350°F unless the following conditions are satisfied.
1. Rated relief capacity of TEN steam system safety valves is available, except during testing.
 2. Three auxiliary feedwater pumps are operable. | 45
 3. System piping and valves directly associated with the above components are operable.
 4. A minimum of 75,000 gallons of water is available in the condensate storage tanks and the Service Water System is capable of delivering an unlimited supply from Lake Michigan.
 5. The iodine-131 activity on the secondary side of the steam generators does not exceed 1.0 µCi/cc.
- b. If, when the reactor is above 350°F, any of the conditions of Specification 3.4.a cannot be met within 48 hours, and except for the conditions of 3.4.c, the reactor shall be shutdown and cooled below 350°F using normal operating procedures. | 45

When the reactor is above 350°F, one auxiliary feedwater pump may be inoperable provided the pump is restored to operable status within 72 hours, or the reactor shall be shutdown and cooled below 350°F using normal operating procedures.

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TABLE TS 4.1-3

MINIMUM FREQUENCIES FOR EQUIPMENT TESTS
(Page 2 of 2)

<u>EQUIPMENT TEST</u>	<u>TEST</u>	<u>FREQUENCY</u>	<u>MAXIMUM TIME BETWEEN TESTS (DAYS)</u>
13. Pressurizer PORV's	Operability	Each Refueling Cycle	NA
14. Pressurizer PORV Block Valves	Operability	Quarterly*****	NA
15. Pressurizer Heaters	Operability*****	Each Refueling Cycle	NA
16. Containment Purge and Vent Isolation Valves	Operability****	Each Refueling Cycle	NA

NOTES

- * See Specification 4.1.d
- ** Tests and frequency shall be in accordance with Specifications 4.4.d and 4.12.
- *** Following maintenance on the above equipment that could affect the operation of the equipment tests should be performed to verify operability.
- **** This test shall demonstrate that the valve(s) close in less than or equal to 5 seconds.
- ***** Not required when valve is administratively closed.
- ***** Test will verify operability of heaters and availability of an emergency power supply.
- (1) This test may be waived for end of cycle operations when boron concentrations are less than 150 ppm, due to operational limitations.