

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. 49, 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.

(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.
- 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.

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d. LEAKAGE OF REACTOR COOLANT

Specification

1. Any reactor coolant system leakage indication in excess of 1 gpm shall be the subject of an investigation and evaluation initiated within 4 hours of the indication. Any indicated leak shall be considered to be a real leak until it is determined that no unsafe condition exists. If the Reactor Coolant System leakage exceeds 1 gpm and the source of leakage is not identified within 12 hours, the reactor shall be placed in the hot shutdown condition utilizing normal operating procedures. If the source of leakage exceeds 1 gpm and is not identified within 48 hours, the reactor shall be placed in the cold shutdown condition utilizing normal operating procedures.
2. Reactor Coolant-to-secondary leakage through the steam generator tubes shall be limited to 500 gallons per day through any one steam generator. With tube leakage greater than the above limit reduce the leakage rate within 4 hours or be in cold shutdown within the next 36 hours.
3. If the sources of leakage other than that in 3.1.d.2 have been identified and it is evaluated that continued operation is safe, operation of the reactor with a total Reactor Coolant System leakage rate not exceeding 10 gpm shall be permitted. If leakage exceeds 10 gpm, the reactor shall be placed in the hot shutdown condition within 12 hours utilizing normal operating procedures. If the leakage exceeds 10 gpm for 24 hours, the reactor shall be placed in the cold shutdown condition utilizing normal operating procedures.
4. If any reactor coolant leakage exists through a non-isolable fault in a reactor coolant system component (exterior wall of the reactor vessel, piping, valve body, relief valve leaks, pressurizer, steam generator head, or pump seal leakoff), the reactor shall be shut down; and cooldown to the cold shutdown condition shall be initiated within 24 hours of detection.

allowable Reactor Coolant System leak rate of 10 gpm has been established. This explained leak rate of 10 gpm is within the capacity of one charging pump as well as being equal to the capacity of the Steam Generator Blowdown Treatment System.

The provision pertaining to a non-isolable fault in a reactor coolant system component is not intended to cover steam generator tube leaks, valve bonnets, packings, instrument fittings, or similar primary system boundaries not indicative of major component exterior wall leakage.

If leakage is to the containment, it may be identified by one or more of the following methods:

- A. The containment air particulate monitor is sensitive to low leak rates. The rates of reactor coolant leakage to which the instrument is sensitive is dependent upon the presence of corrosion product activity.
- B. The containment radiogas monitor is less sensitive and is used as a backup to the air particulate monitor. The sensitivity range of the instrument is approximately 2 gpm to greater than 10 gpm.
- C. Humidity detection provides a backup to A. and B. The sensitivity range of the instrumentation is from approximately 2 gpm to 10 gpm.
- D. A leakage detection system is provided which determines leakage losses from all water and steam systems within the containment. This system collects and measures moisture condensed from the containment atmosphere by fan coils of the Containment Air Cooling System and thus provides a dependable and accurate means of measuring integrated total leakage, including leaks from the cooling coils themselves which are part of the containment boundary. The fan-coil units drain to the containment sump, and all leakage collected by the containment sump will be pumped to the waste holdup tank. Pump running time will be monitored in the control room to indicate the quantity of leakage accumulated.

If leakage is to another closed system, it will be detected by the area and process radiation monitors and/or inventory control.

References:

FSAR Sections 6.5, 11.2.3, 14.2.4 TS 3.1-13

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04/29/83

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^oF 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.
 3. System piping and valves directly associated with the above components are operable.
 4. A minimum of 30,000 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 μ Ci/cc.
- b. If, when the reactor is above 350^oF, 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^oF using normal operating procedures.

Basis

A reactor shutdown from power requires removal of core decay heat. Decay heat removal requirements are normally satisfied by the steam bypass to the condenser and by continued feedwater flow to the steam generators. Normal feedwater flow to the steam generators is provided by operation of the turbine-cycle feedwater system.

The ten main steam safety valves have a total combined rated capability of 7,765,000 lbs/hr. The maximum full-power steam flow is 7,449,000 lbs/hr; therefore, the ten main steam safety valves will be able to relieve the total steam flow if necessary.

In the unlikely event of complete loss of electrical power to the plant, continued capability of decay heat removal would be assured by the availability of either the steam-driven auxiliary feedwater pump or one of the two motor-driven auxiliary feedwater pumps, and by steam discharge to the atmosphere through the main steam safety valves. Each motor-driven pump is normally aligned with one steam generator: the discharge of the turbine-driven pump, which starts automatically, is manually valved as necessary to backup either or both motor-driven pumps, or to replace the standby function of either motor-driven pump when it is out of service. Any single auxiliary feedwater pump can supply sufficient feedwater for removal of decay heat from the reactor.

The specified minimum water supply in the condensate storage tanks is sufficient for ninety minutes of hot shutdown plus a suitable margin to prevent loss of net positive suction head prior to switching suction to the service water system. Unlimited replenishment of the condensate storage supply is available from Lake Michigan through the Service Water System.

The secondary coolant activity is based on a postulated release of the contents of one steam generator to the atmosphere. This could happen, for example, as a result of a steam break accident combined with failure of a steam line isolation valve. The limiting dose for this case results from iodine-131

4.8 AUXILIARY FEEDWATER SYSTEM

Applicability

Applies to periodic testing requirements of the turbine-driven and motor-driven auxiliary feedwater pumps.

Objective

To verify the operability of the auxiliary feedwater equipment and its ability to respond properly when required.

Specification

- a. The operability of individual auxiliary feedwater pumps as required by Specification 3.4.a.2 shall be demonstrated at least monthly during power operation and within one week after the plant is returned to power operation, if the test was not performed during plant shutdown.
- b. The valves on the discharge side of the turbine-driven pump that direct flow to either steam generator shall be tested by operator action whenever the turbine-driven pump is tested.
- c. The service water supply valves to the auxiliary feedwater pump suction shall be tested by operator action following the auxiliary feedwater pump tests.
- d. These tests shall be considered satisfactory if control board indication or visual observation of the equipment demonstrate that all components have operated properly.

Basis

Monthly testing of the auxiliary feedwater pumps will verify their operability. The discharge valves of the two motor-operated pumps are normally open, as are the suction valves from the condensate storage tanks and the two valves on a cross tie line that directs the turbine driven pump discharge to either or both steam generators. The only valve required to function upon initiation of