ATTACHMENT A

PROPOSED CHANGE TO APPENDIX A

TECHNICAL SPECIFICATIONS, FACILITY OPERATING LICENSES

NPF-37, NPF-66, NPF-70 and NPF-75

Revised Pages: Byron pgs. 3/4 4-20
3/4 4-20a

Braidwood p. 3/4 4-20

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE
LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Systems shall be OPERABLE:

a. The Containment Atmosphere Particulate Radioactivity Monitoring System,
b. The Containment Floor Drain and Reactor Cavity Flow Monitoring System, and or Sump Narrow Range Level Instruments
c. The Containment Gaseous Radioactivity Monitoring System.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With a. or c. of the above required Leakage Detection Systems inoperable, operation may continue for up to 30 days provided grab samples of the containment atmosphere are obtained and analyzed for gaseous and particulate radioactivity at least once per 24 hours when the required Gaseous or Particulate Radioactivity Monitoring System is inoperable; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With ~~b. of the above required Leakage Detection Systems~~ inoperable, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With a. and c. of the above required Leakage Detection Systems inoperable:

1) Restore either Monitoring System (a. or c.) to OPERABLE status within 72 hours and

2) Obtain and analyze a grab sample of the containment atmosphere for gaseous and particulate radioactivity at least once per 24 hours, and

3) Perform a Reactor Coolant System water inventory balance at least once per 8 hours.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

both the (1) Containment Floor Drain and Reactor Cavity Flow Monitoring System, and the (2) Sump Narrow Range Level Instruments

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection Systems shall be demonstrated OPERABLE by:

a. Containment Atmosphere Gaseous and Particulate Monitoring System-performance of CHANNEL CHECK, CHANNEL CALIBRATION, and DIGITAL CHANNEL OPERATIONAL TEST at the frequencies specified in Table 4.3-3,

SURVEILLANCE REQUIREMENTS (Continued)

b. Containment Floor Drain and Reactor Cavity Flow Monitoring System-performance of CHANNEL CALIBRATION at least once per 18 months,# ~~and~~

c. Verify the oil separator portion of the containment floor drain collection sump has been filled to the level of the overflow to the containment floor drain unidentified leakage collection weir box once per 18 months, following refueling, and prior to initial startup, and

d. Verify inventory per Specification 4.4.6.2.1b using the Sump Narrow Range Level Instruments at least once per 12 hours.

#The specified 18 month interval may be extended to 32 months for Cycle 1 only.

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE
LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Systems shall be OPERABLE:

a. The Containment Atmosphere Particulate Radioactivity Monitoring System,

b. The Containment Floor Drain and Reactor Cavity Flow Monitoring System, and or Sump Narrow Range Level Instruments

c. The Containment Gaseous Radioactivity Monitoring System.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With a. or c. of the above required Leakage Detection Systems inoperable, operation may continue for up to 30 days provided grab samples of the containment atmosphere are obtained and analyzed for gaseous and particulate radioactivity at least once per 24 hours when the required Gaseous or Particulate Radioactivity Monitoring System is inoperable; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With ~~b. of the above required Leakage Detection Systems~~ both the (1) Containment Floor Drain and Reactor Cavity Flow Monitoring System, and the (2) Sump Narrow Range Level Instruments inoperable, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With a. and c. of the above required Leakage Detection Systems inoperable:

1) Restore either Monitoring System (a. or c.) to OPERABLE status within 72 hours and

2) Obtain and analyze a grab sample of the containment atmosphere for gaseous and particulate radioactivity at least once per 24 hours, and

3) Perform a Reactor Coolant System water inventory balance at least once per 8 hours.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection Systems shall be demonstrated OPERABLE by:

a. Containment Atmosphere Gaseous and Particulate Monitoring System-performance of CHANNEL CHECK, CHANNEL CALIBRATION, and DIGITAL CHANNEL OPERATIONAL TEST at the frequencies specified in Table 4.3-3,

b. Containment Floor Drain and Reactor Cavity Flow Monitoring System-performance of CHANNEL CALIBRATION at least once per 18 months,# ~~and~~

c. Verify the oil separator portion of the containment floor drain collection sump has been filled to the level of the overflow to the containment floor drain unidentified leakage collection weir box once per 18 months, following refueling, and prior to initial startup, and

d. Verify inventory per Specification 4.4.6.2.1b using the Sump Narrow Range Level Instruments at least once per 12 hours.

#The specified 18 month interval may be extended to 32 months for cycle 1 only.

ATTACHMENT B

BACKGROUND INFORMATION

The three reactor coolant system leakage detection systems in Technical Specification 3.4.6.1 are provided to monitor and detect leakage from the reactor coolant pressure boundary. These systems are consistent with the recommendations of NRC Regulatory Guide 1.45. The current Byron Technical Specification allows a unit to continue to operate for up to 30 days when either the containment atmosphere particulate or gaseous radioactivity monitoring system is inoperable, provided grab samples are taken every 24 hours. However, if the containment floor drain and reactor cavity flow monitoring system becomes inoperable, the unit must be shutdown. This requirement to shutdown a unit when two of the three redundant leakage detection systems are still operable is overly restrictive.

This proposed amendment would add the existing containment floor drain sump narrow range level instruments to limiting condition for operation 3.4.6.1b. In addition, a new surveillance requirement would be added (4.4.6.1d) to verify sump inventory every 12 hours using the sump narrow range level instruments. This proposed technical specification will permit reactor operation to continue if the two containment atmosphere radioactivity monitoring systems are operable and either the containment floor drain and reactor cavity flow monitoring system, or the sump narrow range level instruments are operable. Alternate and diverse methods of monitoring reactor coolant system leakage will continue to be available with this proposed technical specification.

ATTACHMENT C

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Commonwealth Edison has evaluated this proposed amendment and determined that it involves no significant hazards consideration. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the amendment would not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) Involve a significant reduction in a margin of safety.

The proposed amendment would add the installed containment floor drain sump narrow range level instruments to the technical specification for leakage detection systems. Sufficient leakage detection capability will still exist under the provisions of the proposed technical specification to allow operators to detect and monitor any reactor coolant system (RCS) pressure boundary leakage and take action to prevent further degradation of the RCS pressure boundary. As a result, the probability of previously evaluated accidents will not be significantly increased by a revision to the technical specification for leakage detection systems.

The consequences of previously evaluated accidents are not affected by the availability of the RCS leakage detection systems because the RCS leakage detection systems do not function to mitigate the consequences of previously evaluated accidents. Their purpose is only to monitor and detect leakage from the RCS pressure boundary.

This proposed amendment only affects the availability of redundant and diverse RCS leakage detection systems. It does not allow any new modes of operation beyond those normally performed at operating PWR's. Additionally, this amendment does not allow any modifications to the plant. For these reasons, this proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The leakage detection systems in the technical specifications are designed to detect a one gpm leak in one hour. According to a Westinghouse leak-before-break study performed for Byron/Braidwood, the calculated leak rate through the postulated critical crack size in the primary loop piping is at least 10 times greater than the sensitivity of those leakage detection systems. This margin is not affected by the proposed amendment.

For the reasons stated above, Commonwealth Edison believes this proposed amendment involves no significant hazards consideration.

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