MAR 2 1972

Docket No. 50-155

Consumers Power Company
ATTN. Mr. Ralph B. Sewell
Nuclear Licensing Administrator
212 West Michigan Avenue
Jackson, Michigan 49201

Gentlemen.

We have reviewed the information concerning "Inservice Inspection of Nuclear Reactor Coolant Systems" presented by your letter dated September 29, 1971, and "Primary Coolant Pressure Boundary Leak Detection" presented by your letters dated September 11, 1970, and September 29, 1971.

The inservice inspection program submitted by your September 29, 1971 letter lists numerous exceptions to the ASME Boiler and Pressure Vessel Code - Section XI dated January 1, 1970, but does not list the items to be inspected, the inspection methods or the frequency of inspections in a format suitable for inclusion in the Technical Specifications for the Big Rock Point reactor. Such a list should be prepared and submitted as a proposed change to the Technical Specifications prior to April 21, 1972.

As noted in your September 29, 1971 letter, the present Technical Specifications for Big Rock Point do not include allowable leakage rates pursuant to the AEC's Interim Acceptance Criteria for Emergency Core Cooling Systems. In view of the large number of exceptions to the ASME Boiler and Pressure Vessel Code Inservice Inspection Requirements, we have concluded that leak detection capability must be assessed quantitatively and suitable limits proposed for the Technical Specifications by July 1, 1972.

The following additional information is required to assess the adequacy of the reactor coolant leak detection system technical specification changes that you are requested to submit.

1. Containment Ventilation

Provide a description of the containment ventilation system, including:

1.1 volumetric flow rates at the fresh air intake, the containment exhaust and ventilation ducts to the reactor vessel compartment, recirculation pump room, control rod drive room, and steam drum cavity,

1.2 free volumes of primary system enclosures or air transport times through the various enclosures;

1.3 temperature and humidity equipment and controls.

2. Primary Coolant Leakage Sensors

Considering air transport time, steam-particulate-air mixing, ventilation variables, location of leak, and primary coolant radioactivity:

2.1 describe the operation of the dew cell in the exhaust of the steam drum cavity and identify the overall response time and sensitivity for detecting primary coolant leakage,

2.2 describe leak confirmation procedures and leak detection sensitivity based on air particulate activity measurements of a grab sample from the steam drum cavity,

2.3 justify relocation of the dew cell described above from the exhaust of the steam drum cavity to the exhaust from the recirculation pump room,

2.4 describe the leak detection capability of the continuous air reduction monitor that is to be installed at the Big Rock Point plant to sample air being discharged from the containment,

2.5 describe the leak detection capability of the containment condensate collection system with respect to time to detect leakage and sensitivity of leak detecti-

3. Feasibility of Leak Detection Sensitivity Tests

Discuss the feasibility of performing leak detection sensitivity tests with controlled releases of primary coolant and steam at selected locations within the Big Rock Point plant to simulate small primary system coolant leaks and assess the adequacy of the leak detection capability provided at the plant.

4. Primary System Breaks Below Core

Illustrate by typical examples for a range of coolant activities the size and location of leaks that can be detected and the time to detect such leaks using the various sensors existing or to be provided at the Big Rock Point plant.

5. Normal Primary Coolant Leakage

During normal operation, limited coolant leakage from pump seals, control rods, valve packing, etc., is expected. Discuss the means for measuring this leakage and the effect of this background leakage on early detection of leaks from small primary coolant system cracks.

Sincerely,

/s/

Donald J. Skovholt
Assistant Director for
Reactor Operations
Division of Reactor Licensing

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