

Docket No. 50-245
B13350

Attachment 1
Millstone Nuclear Power Station, Unit No. 1
Proposed Revision to Technical Specifications
Condensate Demineralizer Resin

November 1989

8912060214 891128
PDR ADOCK 05000245
P FDC

LIMITING CONDITION FOR OPERATION

3.6 PRIMARY SYSTEM BOUNDARY

J. Condensate Demineralizers

1. Replacement of a condensate demineralizing resin charge shall occur before the unused capacity of the resin reaches a minimum value of 5 pounds as chloride ions.
2. When the charge is replaced, the new anion resin shall have a minimum salt-splitting capacity of 1.2 milliequivalents per milliliter in the wet, chloride form.
3. At least one condensate demineralizer influent conductivity instrument shall be operable.
4. Whenever a demineralizer is on-line, the conductivity of either its effluent or the condensate-booster pump discharge shall be continuously monitored.
5. Flow rate and/or integrating flow instrumentation shall be operable and recorded for each demineralizer.

K. Mechanical Condenser Vacuum Pump

1. The mechanical condenser vacuum pump shall be capable of being isolated and secured on a signal of high radioactivity whenever the main steam line isolation valves are open.

SURVEILLANCE REQUIREMENT

4.6 PRIMARY SYSTEM BOUNDARY

J. Condensate Demineralizers

1. The percent of the remaining ion exchange capacity of the anion resins shall be calculated and logged:
 - a. Weekly when the influent conductivity is between 0.055 and 0.3 umho/cm;
 - b. Daily when the influent conductivity is equal to or greater than 0.3 umho/cm.

SURVEILLANCE REQUIREMENT (Continued)

4.6 PRIMARY SYSTEM BOUNDARY

4.6.J.2 New samples of anion resin shall be analyzed for salt-splitting capacity as follows:

- a. At least once per year or at each replacement, whichever is longer, if resin is replaced with material of the same type.
- b. Prior to use in the condensate demineralizers if the type of anion resin changed.

K. Mechanical Condenser Vacuum Pump

At least once during each operating cycle, verify automatic securing and isolation of the mechanical condenser vacuum pump.

3.6 PRIMARY SYSTEM BOUNDARY

BASES

J. Condensate Demineralizers

The criteria of the resin monitoring program and the resin replacement program have been established to protect the reactor from high chloride level should a seawater leak occur in the main condenser. Should a seawater leak occur when a resin has 5 pounds of capacity remaining, this criteria will allow a sufficient buffer for an orderly plant shutdown. Therefore, the resin must be replaced before the calculated unused capacity of the resin reaches 5 pounds of chloride ion.

The resin depletion can be calculated using the measured salt-splitting capacity, the flow through the bed, and the average influent conductivity. Based on this result, a depletion can be calculated which will assure a 5-pound chloride ion exchange reserve. Replacement prior to this level of depletion will assure a sufficient ion exchange reserve for removal of chloride from the condensate system.

These factors form the basis for the frequency of sampling, analyzing, calculation and logging surveillance requirements. A yearly or once per replacement sampling frequency will be sufficient to verify supplier resin specifications. As conductivity increases, the calculation and logging will be increased to a weekly basis and ultimately on a daily basis when and if influent conductivity reaches 0.3 umho/cm or greater.

K. Mechanical Condenser Vacuum Pump

The purpose of selecting the mechanical condenser vacuum pump line is to limit the release of activity from the main condenser in the unlikely event of a control rod drop accident. During the postulated accident, fission products would be transported from the reactor to the main steam lines to the main condenser. The fission product radioactivity would be sensed by the main steamline radioactivity monitors and isolation would be initiated.