

Docket No. 50-423
B15146

Attachment 1

Millstone Nuclear Power Station, Unit No. 3

Proposed Revision to Technical Specifications
Demineralized Water Storage Tank
Marked Up Pages

May 1995

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PLANT SYSTEMS

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DEMINERALIZED WATER STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The demineralized water storage tank (DWST) shall be OPERABLE with a contained water volume of at least 334,000 gallons* of water.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the DWST inoperable, within 4 hours either:

- a. Restore the DWST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours, or
- b. Demonstrate the OPERABILITY of the condensate storage tank (CST) as a backup supply to the auxiliary feedwater pumps and restore the DWST to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The DWST shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water volume is within its limits when the tank is the supply source for the auxiliary feedwater pumps.

4.7.1.3.2 The condensate storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying that the combined volume of both the DWST and CST is at least 334,000 gallons of water whenever the condensate storage tank and DWST are the supply source for the auxiliary feedwater pumps.

364,000

* Includes unusable volume.

BASESSAFETY VALVES (Continued)

- 109 = Power Range Neutron Flux-High Trip Setpoint for four loop operation,
- 80 = Maximum percent of RATED THERMAL POWER permissible by P-8 Setpoint for three loop operation,
- X = Total relieving capacity of all safety valves per steam line in lbs/hour, and
- Y = Maximum relieving capacity of any one safety valve in lbs/hour

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the Auxiliary Feedwater System ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating or accident conditions coincident with a total loss-of-offsite power.

The auxiliary feedwater system is capable of delivering a total feedwater flow of 480 gpm at a pressure of 1236 psia to the entrance of at least three steam generators while allowing for (1) any spillage through the design worst-case break of the Normal feedwater line, (2) the design worst-case single failure; and (3) recirculation flow. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F at which point the Residual Heat Removal System may be placed into operation. THE AUXILIARY FEEDWATER SYSTEM MAY CONTINUE TO OPERATE IN PARALLEL WITH THE RESIDUAL HEAT REMOVAL SYSTEM FOR COOLDOWN BELOW 350°F.

3/4.7.1.3 DEMINERALIZED WATER STORAGE TANK

The OPERABILITY of the demineralized water storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions for 10 hours with steam discharge to the atmosphere concurrent with total loss-of-offsite power, and with an additional 6-hour cooldown period to reduce reactor coolant temperature to 350°F. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

3/4.7.1.4 SPECIFIC ACTIVITY

SEE ATTACHED REVISION INSERT A

The limitations on Secondary Coolant System specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR Part 100 dose guideline values in the event of a steam line rupture. This dose also includes the effects of a coincident 1 gpm primary-to-secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the safety analyses.

Insert 'A' to Page B 3/4 7-2

The OPERABILITY of the demineralized water storage tank and the volumetric requirements are based upon Safety Grade Cold Shutdown (SGCS). The water volume that is required ensures that sufficient water is available to maintain the RCS at HOT STANDBY condition for 5 hours with steam discharge to the atmosphere concurrent with total loss-of-offsite power, and with an additional 7 hour cooldown period to reduce the reactor coolant temperature to 350°F when RHR is introduced, and for the cooldown below 350°F when steaming continues in parallel with the RHR operation for approximately 18 hours until the entire heat load can be cooled by RHR. The contained water volume limit of 334,000 gallons in the DWST includes an allowance for water not usable because of the tank discharge line location, or other physical characteristics of the tank and an allowance for 30 minutes of spillage from the tank.

When combining the volume of the condensate storage tank (CST) with the DWST, an unusable CST volume of 30,000 gallons must be included. Thus the combined volume of both the CST and the DWST must be at least 364,000 gallons to satisfy the requirements of Section 4.7.1.3.2 of the Technical Specification.

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Attachment 2

Millstone Nuclear Power Station, Unit No. 3
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Demineralized Water Storage Tank
Retyped Pages

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PLANT SYSTEMS

DEMINERALIZED WATER STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The demineralized water storage tank (DWST) shall be OPERABLE with a contained water volume of at least 334,000 gallons* of water. |

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the DWST inoperable, within 4 hours either:

- a. Restore the DWST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours, or
- b. Demonstrate the OPERABILITY of the condensate storage tank (CST) as a backup supply to the auxiliary feedwater pumps and restore the DWST to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The DWST shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water volume is within its limits when the tank is the supply source for the auxiliary feedwater pumps.

4.7.1.3.2 The condensate storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying that the combined volume of both the DWST and CST is at least 364,000 gallons of water whenever the condensate storage tank and DWST are the supply source for the auxiliary feedwater pumps. |

*Includes unusable volume. |

PLANT SYSTEMS

BASES

SAFETY VALVES (Continued)

- 109 = Power Range Neutron Flux-High Trip Setpoint for four loop operation,
- 80 = Maximum percent of RATED THERMAL POWER permissible by P-8 Setpoint for three loop operation,
- X = Total relieving capacity of all safety valves per steam line in lbs/hour, and
- Y = Maximum relieving capacity of any one safety valve in lbs/hour

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the Auxiliary Feedwater System ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating or accident conditions coincident with a total loss-of-offsite power.

The auxiliary feedwater system is capable of delivering a total feedwater flow of 480 gpm at a pressure of 1236 psia to the entrance of at least three steam generators while allowing for (1) any spillage through the design worst-case break of the Normal feedwater line, (2) the design worst-case single failure; and (3) recirculation flow. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F at which point the Residual Heat Removal System may be placed into operation. The auxiliary feedwater system may continue to operate in parallel with the residual heat removal system for cooldown below 350°F.

3/4.7.1.3 DEMINERALIZED WATER STORAGE TANK

The OPERABILITY of the demineralized water storage tank and the volumetric requirements are based upon Safety Grade Cold Shutdown (SGCS). The water volume that is required ensures that sufficient water is available to maintain the RCS at HOT STANDBY condition for 5 hours with steam discharge to the atmosphere concurrent with total loss-of-offsite power, and with an additional 7 hour cooldown period to reduce the reactor coolant temperature to 350°F when RHR is introduced, and for the cooldown below 350°F when steaming continues in parallel with the RHR operation for approximately 18 hours until the entire heat load can be cooled by RHR. The contained water volume limit of 334,000 gallons in the DWST includes an allowance for water not usable because of the tank discharge line location, or other physical characteristics of the tank and an allowance for 30 minutes of spillage from the tank.

When combining the volume of the condensate storage tank (CST) with the DWST, an unusable CST volume of 30,000 gallons must be included. Thus the combined volume of both the CST and the DWST must be at least 364,000 gallons to satisfy the requirements of Section 4.7.1.3.2 of the Technical Specification.

PLANT SYSTEMS

BASES

3/4.7.1.4 SPECIFIC ACTIVITY

The limitations on Secondary Coolant System specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR Part 100 dose guideline values in the event of a steam line rupture. This dose also includes the effects of a coincident 1 gpm primary-to-secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the safety analyses.