

TABLE OF REVISIONS

<u>Revision</u>	<u>Description of Revision</u>	<u>Date Approved</u>
0	Original Issue	May 11, 1995
1	Revised last paragraph of Section 2.2.3 Part 1, per GPUN Letter No. C311-95-2361	Sept. 19, 1995

MU-P-1B is normally operating to provide make-up and seal injection. The make-up pump(s) will initially take suction from the make-up tank. Suction will be switched to the borated water storage tank for additional water inventory as the make-up tank inventory is depleted. If make-up pump MU-P-1C is the only pump available, make-up without relying on local operator actions is from the borated water storage tank.

In addition to providing inventory control, the make-up system supplies water for seal injection, the preferred method of protecting reactor coolant pump (RCP) seals. If seal injection is not available from the make-up system, another acceptable method of maintaining seal integrity is by providing pump thermal barrier cooling from the intermediate cooling system which is identified as a supporting system needed to achieve the safe shutdown functions. Seal injection or thermal barrier cooling is required when RCS temperature is $> 190^{\circ}\text{F}$, whether or not the RCPs are running, to prevent excessive leakage of reactor coolant from the seals.

The make-up pumps require a minimum recirculation flow to protect the pumps from overheating. The required minimum flow is normally provided by the motor operated recirculation valves MU-V-36 and MU-V-37. These valves must be open when make-up pumps are operating. Flow from make-up pump MU-P-1C is not normally directed through seal injection of the normal make-up path.

Recirculation flow is returned to the make-up tank. For the case where the BWST is used as a water source, the make-up tank will eventually fill from the recirculation flow. Sufficient time is available to prevent overfilling by manually returning pump suction to the make-up tank.

2. Letdown for Inventory control

The letdown capability will greatly simplify reactor inventory control. Manual control of enough components is possible to achieve and control letdown flow. Sufficient time is available to line up the necessary components. The letdown