2.10 Power Cycle Systems

The information in this section of the reference ABWR DCD, including all subsections, tables, and figures, is incorporated by reference with the following departure.

STD DEP T1 2.10-1 (Figure 2.10.2a and Figure 2.10.9)

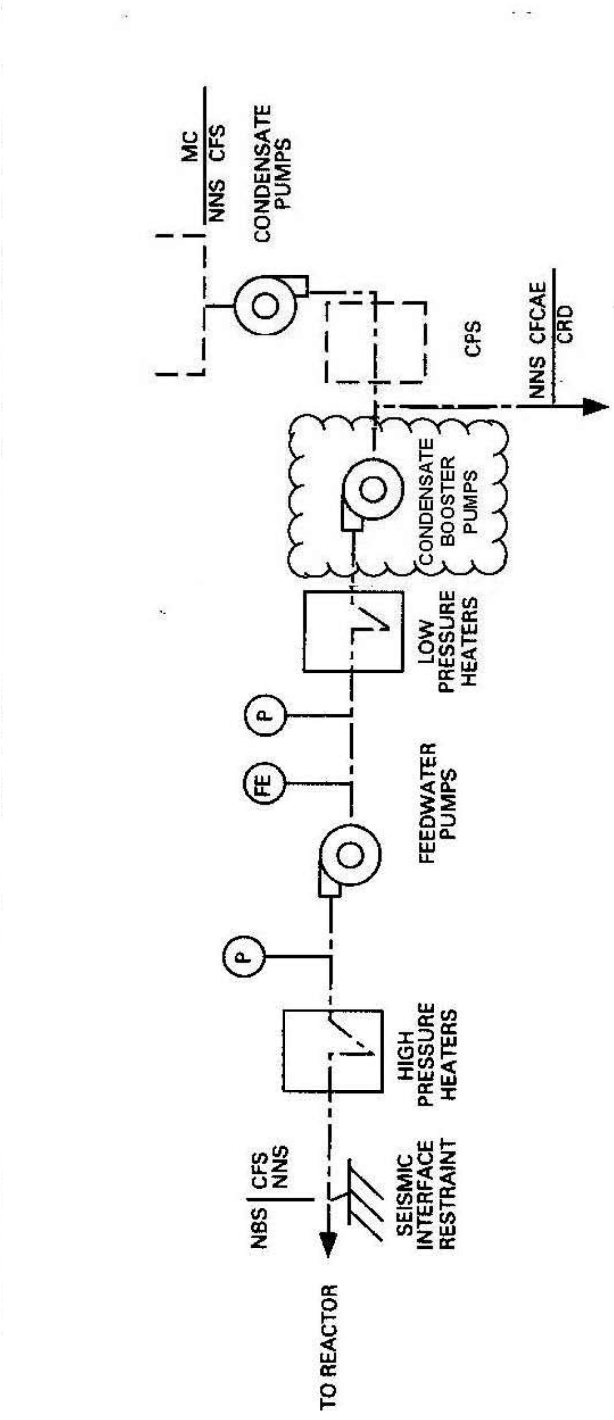
2.10.2 Condensate Feedwater and Condensate Air Extraction System

The Condensate Feedwater and Condensate Air Extraction (CFCAE) System consists of two subsystems: the Condensate and Feedwater System (CFS) and the Main Condenser Evacuation System (MCES).

Design Description

Condensate and Feedwater System

The function of the CFS is to receive condensate from the condenser hotwells, supply condensate to the Condensate Purification System (CPS), and deliver feedwater to the reactor. Condensate is pumped from the main condenser hotwell by the condensate pumps, through the CPS to the condensate booster pumps, *passes through the low pressure feedwater heaters to the feedwater pumps, and then is pumped through the high pressure heaters to the reactor. Figure 2.10.2a shows the basic system configuration. The CFS boundaries extend from the main condenser outlet to (but not including) the seismic interface restraint outside the containment.*



NOTES:
1. RELIEF VALVE DISCHARGE AND VENTS ARE CHANNELED THROUGH CLOSED SYSTEMS.
2. FEEDWATER AND CONDENSATE PUMP REDUNDANCY IS PROVIDED.

Figure 2.10-2a Condensate and Feedwater System

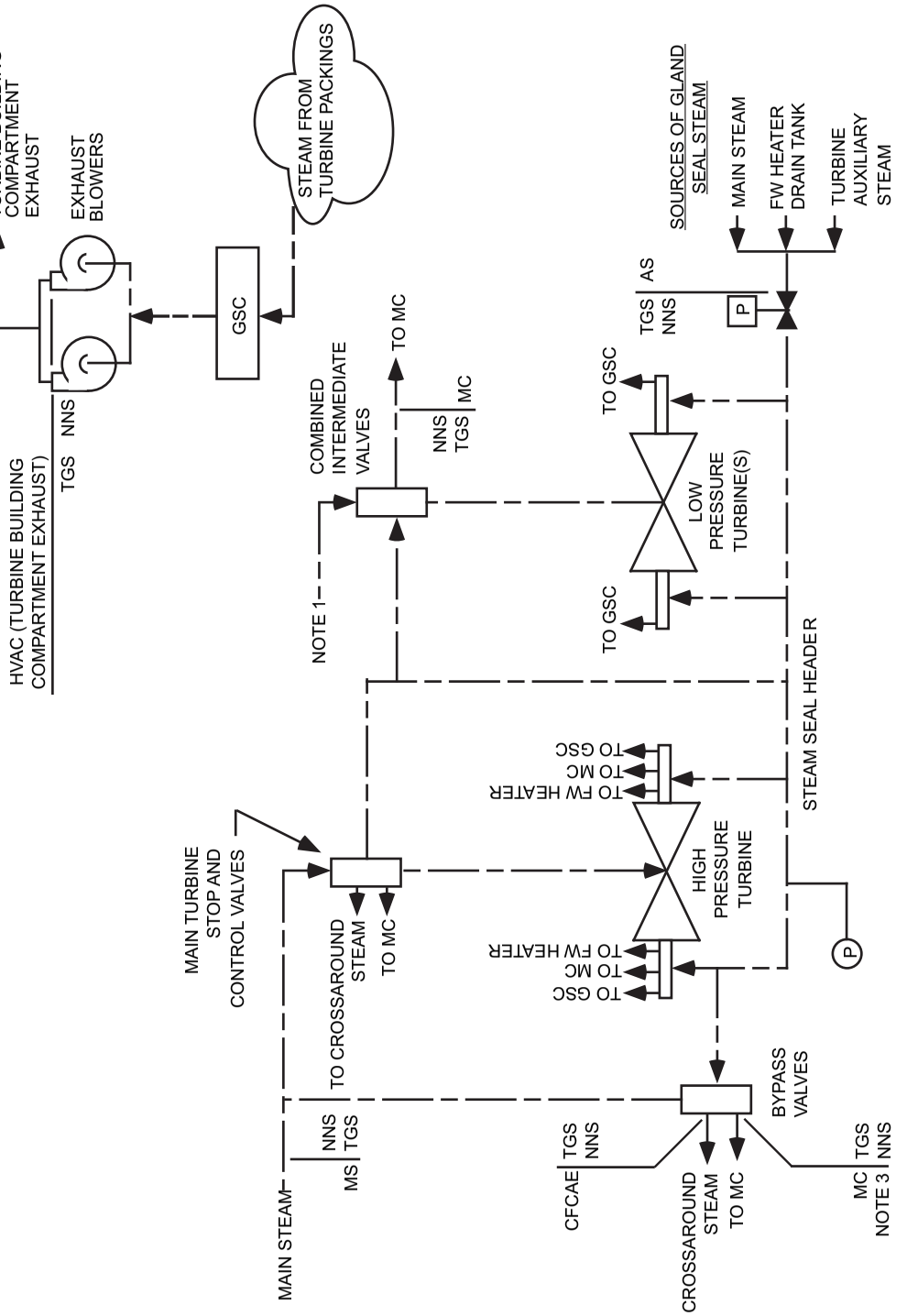


Figure 2.10.9 Turbine Gland Seal System

NOTES;
1. STEAM PATH BETWEEN HIGH AND LOW PRESSURE TURBINES.
2. DELETED
3. TYPICAL FOR INTERFACES WITH MC.