

11.0 POWER CONVERSION SYSTEMS

11.1 SUMMARY DESCRIPTION

The equipment and evaluations presented in this section are applicable to all three units.

Steam from the reactor flows directly to the steam turbine (see Figures 11.1-1a, -1b, -1c, -1d, -1e, and -1f). Condensed extraction steam is cascaded through the feedwater heaters to the main condenser where it is deaerated and collected in the condenser hotwell along with condensed steam from the turbine exhaust and miscellaneous drains from the turbine cycle. Condensate pumps, taking suction from the hotwell, pump the condensate through the air ejector condensers, steam packing exhauster condenser, off-gas condenser, and filter/demineralizers to the condensate booster pumps which increase the condensate pressure and discharge through the low-pressure heaters to the reactor feed pump suctions. The reactor feed pumps discharge through the high-pressure heaters to the reactor.

Normally, the turbine will utilize all the steam being generated by the reactor. Automatic pressure-controlled bypass valves are supplied which will discharge excess steam directly to the condenser. The capacity of the bypass valves is sufficient to allow load rejections of up to approximately 25% of rated steam flow without a turbine trip or reactor scram.