LATION SCOPE	DISPLAY PAGES	OPERATOR CONTROLS	MALFUNCTIONS
flux levels over a range of 0.001 to 110% er, 6 delayed neutron groups eat (3 groups) y feedback effects - void, xenon, fuel ture, moderator temperature flow & heat transfer y control rods control loops - Reactor Pressure Control; circulation Flow Control; Reactor Power on; Reactor Water Level Control; Turbine requency Control	• Plant Overview • BWR Reactivity & Setpoints • BWR Power /Flow Map & Controls	• Reactor power and rate of change (input to control computer) • Manual control of control rods • Reactor scram • Manual Control Rods "run-in" • Manual control of core recirculation flow rate • Manual adjustment of reactor water control level setpoint	• Increasing and decreasing core flow due to Flow Control malfunctions • Inadvertent withdrawal of one bank of control rods • Inadvertent insertion of one bank of control rods • Inadvertent reactor isolation • Power loss to 3 Reactor Internal Pumps (RIPs) • Reactor bottom break
upply to turbine and reheater eam Isolation Valve Bypass to condenser elief Valves to Suppression Pool in nent on steam to feed heating er system	• BWR Feedwater and Extraction Steam	• Reactor water level setpoint changes: computer or manual • Extraction steam to feedwater heating isolating valves controls • Deaerator main steam extraction pressure control • feed pump on/off controls	• Loss of both feedwater pumps • Loss of feedwater heating • Reactor feedwater level control valve fails open • Safety valves on one main steam line fail open • Steam line break inside Drywell • Feedwater line break inside Drywell
urbine model cal power and generator output are onal to steam flow gear and governor valve allow synchronized -synchronized operation	• BWR Turbine-Generator	• Turbine trip • Turbine run-back • Turbine run-up and synchronization • Turbine Speeder Gear control: manual or computer control • Steam Bypass Valve Computer or Manual Control	• Turbine throttle pressure transmitter fails low • Turbine trip with Bypass Valve failed closed • Increasing and decreasing steam flow due to Pressure Control System failures
namic interaction between all simulated -Following-Reactor load maneuvering unciation ontrol loops	• BWR Plant Overview • BWR Reactivity & Setpoints		