Component	Manual Scram Switch	Automatic Flux Control System	Rod Control	Fuel TC Gauges	Water TC Gauges	Area Rad Monitors	Log Channel	Linear Channel	Percent Power / Pulse Channel	Cooling Sys. Control	Conductivity Monitor	Control Rod Pos. Indicators
SAR Accident Safety Function	Initiate scram (SAR 13.2.2)	None	None	None, but initiate fuel temperature scram	None	None	10 kW pulse interlock (SAR 13.2.3)	None	None	None	None	Determine pulse reactivity (via IRW, SAR 13.2.3)
Description, Existing	Hinged bar, simultaneously depresses four individual rod magnet / solenoid power switches to drop rods	Regulating rod is moved in response to difference between % demand potentiometer and percent of scale on multirange power channel (GA NMP-1000)	Push button control to drive rods UP and DOWN, transient rod FIRE	Newport INFCT digital TC gauges with relay output to fuel temp scram	Newport INFCT digital TC gauges with relay output to water temp alarm	Thermo RMS 2 detectors with remote analog readouts in control room	GA NLW-1000	GA NMP-1000	GA NPP-1000	Pushbutton swith to energize cooling pump relays	Foxboro analytical analog conductivity gauge with alarm light	indicators reading output from 10-turn potentiometers coupled to rod drives
Description, Replacement	Red button, cuts current to all magnet / solenoid circuits	Regulating rod will be moved in response to the difference between % demand potentiometer and percent of scale on the TR 30 Log / Linear power range monitor.	No changes in function or basic layout, although exact form of shim buttons needs to be determined.	No change	No change	Thermo RMS 3 detectors with remote digital readouts in control room	GA instruments replaced with equivalent Thermo instruments (NLW-1000 --> TR-30, NMP-1000 --> TR-10-5, NPP-1000 --> Thermo pulse power channel). The display will consist of a bar graph indicator and LED readout, plus an SV-180 digital strip chart recorder. All interlocks will be identical to extant system except log and multirange linear channels will feature redundant interlocks. The digital bar graph / LED indicators are digital, not analog, but similar systems are in use at Oregron State and UC-Irvine. Fission chamber, CIC, and UIC will be replaced with new units manufactured by Thermo.			No change	Thermo Orion 2100 series Ph and conductivity analyzer with digital indicator	No change
Analog Safety Functions Changed to Digital	No	No	No	No	No	No	No	No	No	No	No	No
Analog Indicators Changed to Digital	None	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes	No
50.59 Screening Questions - Answer "Yes" or "No"												
Decrease SSC design function reliability when failure would initiate an accident	No	No	No	No	No	No	No	No	No	No	No	No
Decrease SSC design function reliability when failure would mitigate accident	No	No	No	No	No	No	No	No	No	No	No	No
Reduce redundancy, reliability or defense in depth	No	No	No	No	No	No	No	No	No	No	No	No
Add or delete an automatic or manual design function of an SSC	No	No	No	No	No	No	No	No	No	No	No	No
Convert an automatic feature to manual or vice versa	No	No	No	No	No	No	No	No	No	No	No	No
Adversely affect ability to perform required actions	No	No	No	No	No	No	No	No	No	No	No	No
Adversely affect time response of required actions	No	No	No	No	No	No	No	No	No	No	No	No
Degrade seismic or environmental qualification	No	No	No	No	No	No	No	No	No	No	No	No
Affect method of evaluation used to establish design basis or safety analysis	No	No	No	No	No	No	No	No	No	No	No	No
Introduce an unwanted or previously unreveiwed system or material interaction	No	No	No	No	No	No	No	No	No	No	No	No
(Not described in SAR) indirect effects on electrical distribution	No	No	No	No	No	No	No	No	No	No	No	No
(Not described in SAR) indirect effects structural integrity	No	No	No	No	No	No	No	No	No	No	No	No
(Not described in SAR) indirect effects on environmental conditions	No	No	No	No	No	No	No	No	No	No	No	No
(Not described in SAR) indirect effects on other SAR design functions	No	No	No	No	No	No	No	No	No	No	No	No