

BFN-16

TABLE 14.4-1

(Sheet 1)

PLANT SAFETY ANALYSIS

SUMMARY OF ABNORMAL OPERATIONAL TRANSIENTS

<u>Undesired Parameter Variation</u>	<u>Event Causing Transient</u>	<u>Scram Caused by</u>
Nuclear system pressure increase	Generator trip without bypass	Turbine control valve fast closure
Nuclear system pressure increase	Turbine trip without bypass	Turbine stop valve closure
Nuclear system pressure increase	Main steam line isolation valve closure	Main steam line isolation valve closure
Nuclear system pressure increase	Loss of Condenser vacuum	Turbine stop valve closure
Nuclear system pressure increase	Bypass valve malfunction	Reactor vessel high pressure
Nuclear system pressure increase	Pressure regulator malfunction	Reactor vessel high pressure
Reactor water temperature decrease	Shutdown cooling malfunction decrease temperature	High Neutron flux
Reactor water temperature decrease	Loss of feedwater heater*	None
Reactor Water temperature decrease	Inadvertent pump start*	None
Positive reactivity insertion	Continuous rod withdrawal during power range operation*	None
Positive reactivity insertion	Continuous rod withdrawal during reactor startup*	High neutron flux
Positive reactivity insertion	Control rod removal error during refueling	High neutron flux
Positive reactivity insertion	Fuel assembly insertion error during refueling	High neutron flux
Coolant inventory decrease	Pressure regulator failure - open**	Main steam line isolation valve closure
Coolant inventory decrease	Open main steam relief valve**	
Coolant inventory decrease	Loss of feedwater flow	Reactor vessel low water level

*This transient results in no significant change in nuclear system pressure.

**This transient results in a depressurization.

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TABLE 14.4-1

(Sheet 2)

PLANT SAFETY ANALYSIS

SUMMARY OF ABNORMAL OPERATIONAL TRANSIENTS

<u>Undesired Parameter Variation</u>	<u>Event Causing Transient</u>	<u>Scram Caused by</u>
Coolant inventory decrease	Loss of auxiliary power system	Loss of power to reactor protection
Core flow decrease	Recirculation flow control failure - decreasing flow**	None
Core flow decrease	Trip of one recirculation pump**	None
Core flow decrease	Trip of two recirculation pumps**	None
Core flow increase	Recirculation pump flow control failure increasing flow*	High neutron flux
Core flow increase	Startup of idle recirculation pump*	None
Excess of coolant inventory	Feedwater Controller failure-maximum demand	Turbine stop valve closure

*This transient results in no significant change in nuclear system pressure.

**This transient results in a depressurization.

TABLE 14.4-2

PLANT SAFETY ANALYSIS

RESULTS OF DESIGN BASIS ACCIDENTS

<u>Design Basis Accident</u>	<u>Percent of Core Reaching Cladding Temperature of 2200°F</u>	<u>Peak System Pressure</u>
Rod Drop Accident	Not applicable***	<1375 psig
Loss of Coolant Accident	0	Not applicable*
Refueling Accident	0	Not applicable**
Main Steam Line Break Accident	0	Not applicable*

*This accident results in a depressurization.

**This accident occurs with the reactor vessel head off.

***Peak fuel enthalpy is less than 280 cal/gm.