

- (2) Pursuant to the Act and 10 CFR Part 70, Georgia Power Company to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70 Georgia Power Company to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, Georgia Power Company to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, Georgia Power Company to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50-54 and 50-59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The Georgia Power Company is authorized to operate the facility at steady state reactor core power levels not in excess of 2436 megawatts thermal, *except the facility may be operated at steady state power levels not in excess of 2538 megawatts thermal for a cumulative duration of 30 days for power uprate test purposes.*

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 158 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

2.1 FUEL CLADDING INTEGRITY

The abnormal operational transients applicable to operation of the HNP-1 Unit have been analyzed throughout the spectrum of planned operating conditions. The analyses were based upon plant operation in accordance with the operating map given in Figure 3-1 of Ref. 3. In addition, 2436 MWt* is the licensed maximum power level of HNP-1, and this represents the maximum steady-state power which shall not knowingly be exceeded.

Transient analyses performed for each reload are given in Reference 1. Models and model conservatism are also described in this reference. As discussed in Reference 2, the core-wide transient analyses for single-loop operation are conservatively bounded by two-loop analyses. The flow dependent rod block and scram setpoint equations are adjusted for one-pump operation.

Steady-state operation without forced recirculation will not be permitted, except during startup testing. The analysis to support operation at various

*Except the unit may be operated at steady-state power levels not in excess of 2558 MWt for a cumulative duration of 30 days for power uprate test purposes.

1.2. REACTOR COOLANT SYSTEM INTEGRITYApplicability

The Safety Limit, established to preserve the reactor coolant system integrity, applies to the limit on the reactor vessel steam dome pressure.

Objective

The objective of the Safety Limit (associated with preserving the reactor coolant system integrity) is to establish a pressure limit below which the integrity of the reactor coolant system is not threatened due to any overpressure condition.

SpecificationsA. Reactor Vessel Steam Dome Pressure1. When Irradiated Fuel is in the Reactor

The reactor vessel steam dome pressure shall not exceed 1325 psig at any time when irradiated fuel is present in the reactor vessel.

2.2. REACTOR COOLANT SYSTEM INTEGRITYApplicability

The Limiting Safety System Settings apply to trip settings of the instruments and devices which are provided to prevent the reactor vessel steam dome pressure Safety Limit from being exceeded.

Objective

The objective of the Limiting Safety System Settings is to define the level of the process variables at which automatic protective action is initiated to prevent the reactor vessel steam dome pressure Safety Limit from being exceeded.

SpecificationsA. Nuclear System Pressure1. When Irradiated Fuel is in the Reactor

When irradiated fuel is present in the reactor vessel, and the head is bolted to the vessel, the limiting safety system settings shall be as specified below:

<u>Protective Action</u>	<u>Limiting Safety System Settings (psig)</u>
a. Scram on high reactor pressure (reactor vessel steam dome pressure)	$\leq 1054^*$
b. Nuclear system relief valves open on nuclear system pressure	4 valves at 1080 4 valves at 1090 3 valves at 1100

*The unit may operate with a setpoint ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes.

Table 3.1-1

REACTOR PROTECTION SYSTEM (RPS) INSTRUMENTATION REQUIREMENTS

When the reactor is subcritical and the reactor water temperature is less than 212°F, only the following sources of scram trip signals need to be operable:

Mode Switch in SHUTDOWN
Manual Scram
IRM High High Flux
Scram Discharge Volume High High Level

Scram Number (a)	Source of Scram Trip Signal	Operable Channels Required Per Trip System (b)	Scram Trip Setting	Source of Scram Signal is Required to be Operable Except as Indicated Below
1	Mode Switch in SHUTDOWN	1	Mode Switch in SHUTDOWN	Automatically bypassed two seconds after the Mode Switch is placed in the SHUTDOWN position.
2	Manual Scram	1	Depression of Manual Scram Button	
3	IRM High High Flux	3	$\leq 120/125$ of full scale Tech Spec 2.1.A.1.a.	IRMs are automatically bypassed when APRMs are on scale and the Mode Switch is in the Run position.
	Inoperative	3	Not Applicable	IRMs are automatically bypassed when APRMs are on scale and the Mode Switch is in the RUN position.
4	Reactor Vessel Steam Dome Pressure - High	2	≤ 1054 psig* Tech Spec 2.2.A.1.	Not required when reactor head is not bolted to the vessel.

* The unit may operate with a setpoint ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes.

Table 3.2-7 (Continued)

Ref. No. (a)	Instrument	Trip Condition Nomenclature	Required Operable Channels per Trip System	Trip Setting	Remarks
3.	APRM	Downscale	2(b)(e)	$\geq 3/125$ of full scale	Not required while performing low power physics test at atmospheric pressure during or after refueling at power levels not to exceed 5 MWt.
		12% Flux	2(b)(e)	$\leq 12/125$ of full scale	This function is bypassed when the Mode Switch is placed in the RUN position.
		Upscale	2(b)(e)	$\leq 0.58 W + 50\% - 0.58 \Delta W^*$	See Specification 2.1.A.1.c(1) for definitions of W and ΔW . Trip level setting is in percent of rated power. Not required while performing low power physics tests at atmospheric pressure during or after refueling at power levels not to exceed 5 MWt.
4.	RBM	Inoperative	1(e)(f)	Not applicable	Inoperative trip produced by switch not in operate, circuit boards not in circuit, fails to null, less than required number of LPRM inputs for rod selected.
		Downscale	1(e)(f)	$\geq 94/125$ of full scale	

* The unit may operate with a setpoint of $\leq 0.58W + 53\% - 0.58\Delta W$ for a cumulative duration of 35 days for power uprate test purposes.

Table 3.2-14

INSTRUMENTATION WHICH ARMS LOW LOW SET S/RV SYSTEM

Ref No. ^(a)	Instrument	Trip Condition Nomenclature	Required Operable Channels per Trip System	Trip Setting	Remarks
1.	Reactor Vessel Steam Dome Pressure	High	2 ^(b)	≤ 1054 psig*	
2.	Relief/Safety Valve Tailpipe Pressure	High	2/valve	85, +15, -5 psig	The limiting condition of operation of these switches is provided in Specification 3.6.H.1.

Notes for Table 3.2-14

- * The unit may operate with a setpoint of ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes.
- a. The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between items in table 3.2-14 and items in table 4.2-14.
- b.1. With the requirements for the minimum number of OPERABLE channels not satisfied for one trip system, place the inoperable channel in the tripped condition or declare the associated system inoperable within one hour. With the requirements for the minimum number of OPERABLE channels not satisfied for both trip systems, declare the associated system inoperable within one hour.
- b.2. One instrument channel may be inoperable for up to 6 hours to perform required surveillances prior to entering other applicable actions.

4.6.H.1. Relief/Safety Valves (Continued)

e. Operability of Tail Pipe Pressure Switches

1. Functional Test:

- b. At each scheduled outage greater than 72 hours during which entry is made into the primary containment, if not performed within the previous 92 days.
- 2. Calibration and verifying the setpoint to be 85, +15, -5 psig at least once per 18 months.

3.6.H.2. Relief/Safety Valves Low Low Set Function

During power operation startup, and hot standby, the relief valve function and the low low set function of the following reactor coolant system safety/relief valves shall be OPERABLE with the following low low set function lift settings:

Low Low Set Valve Function	Allowable Value (psig)*	
	Open	Close
Low	≤ 1005	≤ 857
Medium	≤ 1020	≤ 872
Medium High	≤ 1035	≤ 887
High	≤ 1045	≤ 897

- a. With the relief valve function and/or the low low set function of one of the above required reactor coolant system safety/relief valves inoperable, restore the relief valve function and the low low set function to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours.

4.6.H.2. Relief/Safety Valves Low Low Set Function

The low low set relief valve function and the low low set function pressure actuation instrumentation shall be demonstrated OPERABLE*** by performance of a:

- a. CHANNEL FUNCTIONAL TEST, including calibration of the trip unit and the dedicated high steam dome pressure channels**, at least once per quarter.
- b. CHANNEL CALIBRATION, Logic System Function Test, and simulated automatic operation of the entire system at least once per 18 months.

*The lift setting pressure shall correspond to ambient conditions of the valves at nominal operating temperatures and pressures.

**The setpoint for dedicated high steam dome pressure channels is ≤ 1054 psig, except that the unit may operate with a setpoint ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes.

***One instrument channel may be inoperable for up to 6 hours to perform required surveillances prior to entering other applicable actions.

(1) Maximum Power Level

Georgia Power Company is authorized to operate the facility at steady state reactor core power levels not in excess of 2436 megawatts thermal in accordance with the conditions specified herein and in Attachment 2 to this license. Attachment 2 is an integral part of this license.

except the facility may be operated at steady state power levels not in excess of 2558 megawatts thermal for a cumulative duration of 30 days for power uprate test purposes

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 96, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Additional Conditions

The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following the issuance of the license or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the license supported by a favorable evaluation by the Commission.

~~(a) Fuel Performance~~

~~Georgia Power Company shall, prior to startup for that cycle of operation in which burnups greater than 20,000 megawatt days per ton of uranium are expected to be attained, provide for Commission review and obtain Commission approval of MC&E III calculations and other affected analyses utilizing fissile gas release calculational methodology approved for burnups greater than 20,000 megawatt days per ton of uranium.~~

TABLE 2.2.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
1. Intermediate Range Monitor, Neutron Flux-High (2C51-K601 A,B,C,D,E,F,G,H)	$\leq 120/125$ divisions of full scale	$\leq 120/125$ divisions of full scale
2. Average Power Range Monitor: (2C51-K605 A,B,C,D,E,F)		
a. Neutron Flux-Upscale, 15%	$\leq 15/125$ divisions of full scale	$\leq 20/125$ divisions of full scale
b. Flow Referenced Simulated Thermal Power-Upscale	$\leq (0.58 W + 59\% - 0.58\Delta W)**$ with a maximum $\leq 113.5\%$ of RATED THERMAL POWER	$\leq (0.58 W + 62\% - 0.58\Delta W)**$ with a maximum $\leq 115.5\%$ of RATED THERMAL POWER
c. Fixed Neutron Flux-Upscale, 118%	$\leq 118\%$ of RATED THERMAL POWER	$\leq 120\%$ of RATED THERMAL POWER
3. Reactor Vessel Steam Dome Pressure - High (2B21-N678 A,B,C,D)	≤ 1054 psig***	≤ 1054 psig***
4. Reactor Vessel Water Level - Low (Level 3) (2B21-N680 A,B,C,D)	≥ 0 inches above instrument zero*	≥ 0 inches above instrument zero*
5. Main Steam Line Isolation Valve - Closure (NA)	$\leq 10\%$ closed	$\leq 10\%$ closed
6. (Deleted)		
7. Drywell Pressure - High (2C71-N650A,B,C,D)	≤ 1.92 psig	≤ 1.92 psig

* See Bases Figure B 3/4 3-1.

** W = Total loop recirculation flow rate in percent of rated. Rated loop recirculation flow is equal to 34.2 MLB/hr.

ΔW = Maximum measured difference between two-loop and single-loop drive flow for the same core flow in percent of rated recirculation flow for single-loop operation. The value is zero for two-loop operation.

*** The unit may operate with a setpoint of ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes.

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
<u>3. HIGH PRESSURE COOLANT INJECTION SYSTEM</u>		
a. Reactor Vessel Water Level - Low Low (Level 2)	≥ -47 inches*	≥ -47 inches*
b. Drywell Pressure-High	≤ 1.92 psig	≤ 1.92 psig
c. Condensate Storage Tank Level - Low	≥ 0 inches**	≥ 0 inches**
d. Suppression Chamber Water Level - High	≤ 154.2 inches***	≤ 154.2 inches***
e. Logic Power Monitor	NA	NA
f. Reactor Vessel Water Level-High (Level 8)*	≤ 56.5 inches	≤ 56.5 inches
<u>4. AUTOMATIC DEPRESSURIZATION SYSTEM</u>		
a. Drywell Pressure-High	≤ 1.92 psig	≤ 1.92 psig
b. Reactor Vessel Water Level - Low Low Low (Level 1)	≥ -113 inches*	≥ -113 inches*
c. ADS Timer	≤ 120 seconds	≤ 120 seconds
d. ADS Low Water Level Actuation Timer	≤ 13 minutes	≤ 13 minutes
e. Reactor Vessel Water Level - Low (Level 3)	≥ 0 inches*	≥ 0 inches*
f. Core Spray Pump Discharge Pressure - High	≥ 137 psig	≥ 137 psig
g. RHR (LPCI MODE) Pump Discharge Pressure - High	≥ 112 psig	≥ 112 psig
h. Control Power Monitor	NA	NA
<u>5. LOW LOW SET S/RV SYSTEM</u>		
a. Reactor Steam Dome Pressure - High	≤ 1054 psig****	≤ 1054 psig****

* See Bases Figure B 3/4 3-1.

** Equivalent to 10,000 gallons of water in the CST.

*** Measured above torus invert.

**** The unit may operate with a setpoint ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes.

TABLE 3.3.5-2

CONTROL ROD WITHDRAWAL BLOCK INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
1. <u>APRM</u>		
a. Flow Referenced Simulated Thermal Power - Upscale	$\leq (0.58 W + 50\% - 0.58 \Delta W)^{(a)*}$	$\leq (0.58 W + 50\% - 0.58 \Delta W)^{(a)*}$
b. Inoperative	NA	NA
c. Downscale	$\geq 3/125$ of full scale	$\geq 3/125$ of full scale
d. Neutron Flux - High, 12%	$\leq 12/125$ of full scale	$\leq 12/125$ of full scale
2. <u>ROD BLOCK MONITOR</u>		
a. Upscale ^(b)		
1) Low Trip Setpoint (LTSP)	$\leq 115.1/125$ of full scale	$\leq 115.5/125$ of full scale
2) Intermediate Trip Setpoint (ITSP)	$\leq 109.3/125$ of full scale	$\leq 109.7/125$ of full scale
3) High Trip Setpoint (HTSP)	$\leq 105.5/125$ of full scale	$\leq 105.9/125$ of full scale
b. Inoperative	NA	NA
c. Downscale	$\geq 94/125$ of full scale	$\geq 93/125$ of full scale
d. Power Range Setpoint ^(c)		
1) Low Power Setpoint (LPSP)	$\leq 27\%$ of RATED THERMAL POWER	$\leq 29\%$ of RATED THERMAL POWER
2) Intermediate Power Setpoint (IPSP)	$\leq 62\%$ of RATED THERMAL POWER	$\leq 64\%$ of RATED THERMAL POWER
3) High Power Setpoint (HPSP)	$\leq 82\%$ of RATED THERMAL POWER	$\leq 84\%$ of RATED THERMAL POWER
e. RBM Bypass Time Delay (td) ₂ ^(d)	≤ 2.0 sec	≤ 2.0 sec
3. <u>SOURCE RANGE MONITORS</u>		
a. Detector not full in	NA	NA
b. Upscale	$\leq 1 \times 10^5$ cps	$\leq 1 \times 10^5$ cps
c. Inoperative	NA	NA
d. Downscale	≥ 3 cps	≥ 3 cps

* The unit may operate with a setpoint $\leq 0.58W + 53\% - 0.58\Delta W$ for a cumulative duration of 35 days for power uprate test purposes.

REACTOR COOLANT SYSTEM

SAFETY/RELIEF VALVES LOW-LOW SET FUNCTION

LIMITING CONDITION FOR OPERATION

3.4.2.2 The relief valve function and the low-low set function of the following reactor coolant system safety/relief valves shall be OPERABLE with the following low-low set function lift settings:

<u>Low Low Set Valve Function</u>	<u>Allowable Value (psig)*</u>	
	<u>Open</u>	<u>Close</u>
Low	≤ 1010	≤ 860
Medium Low	≤ 1025	≤ 875
Medium High	≤ 1040	≤ 890
High	≤ 1050	≤ 900

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3

ACTION:

- With the relief valve function and/or the low-low set function of one of the above required reactor coolant system safety/relief valves inoperable, restore the inoperable relief valve function and low-low set function to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- With the relief valve function and/or the low-low set function of more than one of the above required reactor coolant system safety/relief valves inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- One instrument channel may be inoperable for up to 6 hours to perform required surveillances prior to entering other applicable ACTIONS.

SURVEILLANCE REQUIREMENTS

4.4.2.2 The low-low set relief valve function and the low-low set function pressure actuation instrumentation shall be demonstrated OPERABLE by performance of a:

- CHANNEL FUNCTIONAL TEST, including calibration of the trip unit and the dedicated high steam dome pressure channels**, at least once per quarter.
- CHANNEL CALIBRATION, LOGIC SYSTEM FUNCTIONAL TEST and simulated automatic operation of the entire system at least once per refueling outage.

*The lift setting pressure of the valves is defined in subsection 3/4 3.4.2.1. The accuracy of the low-low set setpoints is defined to be the accuracy of the instrumentation controlling the setpoints of the low-low set valves.

**The setpoint for dedicated high steam dome pressure channels is less than or equal to 1054 psig, except that the unit may operate with a setpoint ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes.

- (2) Pursuant to the Act and 10 CFR Part 70, Georgia Power Company to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70 Georgia Power Company to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, Georgia Power Company to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, Georgia Power Company to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50-54 and 50-59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The Georgia Power Company is authorized to operate the facility at steady state reactor core power levels not in excess of 2436 megawatts thermal, *except the facility may be operated at steady state power levels not in excess of 2558 megawatts thermal for a cumulative duration of 30 days for power uprate*

(2) Technical Specifications *test purposes.*

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 158 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

2.1 FUEL CLADDING INTEGRITY

The abnormal operational transients applicable to operation of the HNP-1 Unit have been analyzed throughout the spectrum of planned operating conditions. The analyses were based upon plant operation in accordance with the operating map given in Figure 3-1 of Ref. 3. In addition, 2436[#]MWt is the licensed maximum power level of HNP-1, and this represents the maximum steady-state power which shall not knowingly be exceeded.

Transient analyses performed for each reload are given in Reference 1. Models and model conservatism are also described in this reference. As discussed in Reference 2, the core-wide transient analyses for single-loop operation are conservatively bounded by two-loop analyses. The flow dependent rod block and scram setpoint equations are adjusted for one-pump operation.

Steady-state operation without forced recirculation will not be permitted, except during startup testing. The analysis to support operation at various

* Except the unit may be operated at steady state power levels not in excess of 2558 MWt for a cumulative duration of 30 days for power uprate test purposes.

HATCH - UNIT 1

1.1-10 Amendment No. 27, 38, 42, 105, 130, 141

SAFETY LIMITS

LIMITING SAFETY SYSTEM SETTINGS

1.2. REACTOR COOLANT SYSTEM INTEGRITY

2.2. REACTOR COOLANT SYSTEM INTEGRITY

Applicability

The Safety Limit, established to preserve the reactor coolant system integrity, applies to the limit on the reactor vessel steam dome pressure.

Applicability

The Limiting Safety System Settings apply to trip settings of the instruments and devices which are provided to prevent the reactor vessel steam dome pressure Safety Limit from being exceeded.

Objective

The objective of the Safety Limit (associated with preserving the reactor coolant system integrity) is to establish a pressure limit below which the integrity of the reactor coolant system is not threatened due to any overpressure condition.

Objective

The objective of the Limiting Safety System Settings is to define the level of the process variables at which automatic protective action is initiated to prevent the reactor vessel steam dome pressure Safety Limit from being exceeded.

Specifications

Specifications

A. Reactor Vessel Steam Dome Pressure

A. Nuclear System Pressure

1. When Irradiated Fuel is in the Reactor

1. When Irradiated Fuel is in the Reactor

The reactor vessel steam dome pressure shall not exceed 1325 psig at any time when irradiated fuel is present in the reactor vessel.

When irradiated fuel is present in the reactor vessel, and the head is bolted to the vessel, the limiting safety system settings shall be as specified below:

<u>Protective Action</u>	<u>Limiting Safety System Settings (psig)</u>
a. Scram on high reactor pressure (reactor vessel steam dome pressure)	≤ 1054 *
b. Nuclear system relief valves open on nuclear system pressure	4 valves at 1080 4 valves at 1090 3 valves at 1100

* The unit may operate with a setpoint ≤ ~~1054~~¹⁰⁶⁵ psig for a cumulative duration of 35 days for power uprate test purposes.

Table 3.1-1

REACTOR PROTECTION SYSTEM (RPS) INSTRUMENTATION REQUIREMENTS

When the reactor is subcritical and the reactor water temperature is less than 212°F, only the following sources of scram trip signals need to be operable:

Mode Switch in SHUTDOWN
Manual Scram
IRM High High Flux
Scram Discharge Volume High High Level

Scram Number (a)	Source of Scram Trip Signal	Operable Channels Required Per Trip System (b)	Scram Trip Setting	Source of Scram Signal is Required to be Operable Except as Indicated Below
1	Mode Switch in SHUTDOWN	1	Mode Switch in SHUTDOWN	Automatically bypassed two seconds after the Mode Switch is placed in the SHUTDOWN position.
2	Manual Scram	1	Depression of Manual Scram Button	
3	IRM High High Flux	3	≤120/125 of full scale Tech Spec 2.1.A.1.a.	IRMs are automatically bypassed when APRMs are on scale and the Mode Switch is in the Run position.
	Inoperative	3	Not Applicable	IRMs are automatically bypassed when APRMs are on scale and the Mode Switch is in the RUN position.
4	Reactor Vessel Steam Dome Pressure - High	2	≤1054 psig * Tech Spec 2.2.A.1.	Not required when reactor head is not bolted to the vessel.

* The unit may operate with a setpoint ≤ ¹⁰⁶⁵~~1070~~ psig for a cumulative duration of 35 days for power uprate test purposes.

HATCH - UNIT 1

3.1-3

Amendment No. 20, 103

Table 3.2-7 (Continued)

HATCH - UNIT	Ref. No. (a)	Instrument	Trip Condition Nomenclature	Required Operable Channels per Trip System	Trip Setting	Remarks
3.2-16	3.	APRM	Downscale	2(b)(e)	$\geq 3/125$ of full scale	Not required while performing low power physics test at atmospheric pressure during or after refueling at power levels not to exceed 5 MWt.
			12% Flux	2(b)(e)	$\leq 12/125$ of full scale	This function is bypassed when the Mode Switch is placed in the RUN position.
			Upscale	2(b)(e)	$\leq 0.58 W + 50\% - 0.58 \Delta W$ *	See Specification 2.1.A.1.c(1) for definitions of W and ΔW . Trip level setting is in percent of rated power. Not required while performing low power physics tests at atmospheric pressure during or after refueling at power levels not to exceed 5 MWt.
3.2-16	4.	RBM	Inoperative	1(e)(f)	Not applicable	Inoperative trip produced by switch not in operate, circuit boards not in circuit, fails to null, less than required number of LPRM inputs for rod selected.
			Downscale	1(e)(f)	$\geq 94/125$ of full scale	

* The unit may operate with a setpoint of $\leq 0.58W + 53\% - 0.58 \Delta W$ for a commulative duration of 35 days for power uprate test purposes.

Table 3.2-14

INSTRUMENTATION WHICH ARMS LOW LOW SET S/RV SYSTEM

Ref No. (a)	Instrument	Trip Condition Nomenclature	Required Operable Channels per Trip System	Trip Setting	Remarks
1.	Reactor Vessel Steam Dome Pressure	High	2 ^{ch}	≤ 1054 psig →	
2.	Relief/Safety Valve Tailpipe Pressure	High	2/valve	85, +15, -5 psig	The limiting condition of operation of these switches is provided in Specification 3.6.H.1.

* The unit may operate with a setpoint of ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes.

- e. The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between items in table 3.2-14 and items in table 4.2-14.
- b.1. With the requirements for the minimum number of OPERABLE channels not satisfied for one trip system, place the inoperable channel in the tripped condition or declare the associated system inoperable within one hour. With the requirements for the minimum number of OPERABLE channels not satisfied for both trip systems, declare the associated system inoperable within one hour.
- b.2. One instrument channel may be inoperable for up to 6 hours to perform required surveillances prior to entering other applicable actions.

HATCH - UNIT 1

Clarification for 3.2-14
 0-0113-01
 3.2-14

3.2-23d

Amendment No. 103, 108, 185

4.6.H.1. Relief/Safety Valves (Continued)

e. Operability of Tail Pipe Pressure Switches

1. Functional Test:

b. At each scheduled outage greater than 72 hours during which entry is made into the primary containment, if not performed within the previous 92 days.

2. Calibration and verifying the setpoint to be 85, +15, -5 psig at least once per 18 months.

3.6.H.2. Relief/Safety Valves Low Low Set Function

During power operation startup, and hot standby, the relief valve function and the low low set function of the following reactor coolant system safety/relief valves shall be OPERABLE with the following low low set function lift settings:

Low Low Set Valve Function	Allowable Value (psig)*	
	Open	Close
Low	≤ 1005	≤ 857
Medium	≤ 1020	≤ 872
Medium High	≤ 1035	≤ 887
High	≤ 1045	≤ 897

a. With the relief valve function and/or the low low set function of one of the above required reactor coolant system safety/relief valves inoperable, restore the relief valve function and the low low set function to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours.

4.6.H.2. Relief/Safety Valves Low Low Set Function

The low low set relief valve function and the low low set function pressure actuation instrumentation shall be demonstrated OPERABLE*** by performance of a:

- a. CHANNEL FUNCTIONAL TEST, including calibration of the trip unit and the dedicated high steam dome pressure channels**, at least once per quarter.
- b. CHANNEL CALIBRATION, Logic System Function Test, and simulated automatic operation of the entire system at least once per 18 months.

*The lift setting pressure shall correspond to ambient conditions of the valves at nominal operating temperatures and pressures.

**The setpoint for dedicated high steam dome pressure channels is ≤ 1054 psig, except that the unit may operate with a setpoint ≤ 1065 psig for a cumulative duration of 35 days for power operate test purposes.

***One instrument channel may be inoperable for up to 6 hours to perform required surveillances prior to entering other applicable actions.

1065

(1) Maximum Power Level

Georgia Power Company is authorized to operate the facility at steady state reactor core power levels not in excess of 2436 megawatts thermal in accordance with the conditions specified herein and in Attachment 2 to this license. Attachment 2 is an integral part of this license.

except the facility may be operated at steady state power levels not in excess of 2558 megawatts thermal for a cumulative duration of 30 days for power uprate test purposes

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 96, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Additional Conditions

The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following the issuance of the license or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the license supported by a favorable evaluation by the Commission.

~~(a) Fuel Performance~~

~~Georgia Power Company shall, prior to startup for that cycle of operation in which burnups greater than 20,000 megawatt days per ton of uranium are expected to be obtained, provide for Commission review and obtain Commission approval of GICAP III calculations and other affected analyses utilizing fission gas release calculational methodology approved for burnups greater than 20,000 megawatt days per ton of uranium.~~

TABLE 2.2.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
1. Intermediate Range Monitor, Neutron Flux-High (2C51-K601 A,B,C,D,E,F,G,H)	$\leq 120/125$ divisions of full scale	$\leq 120/125$ divisions of full scale
2. Average Power Range Monitor: (2C51-K605 A,B,C,D,E,F)		
a. Neutron Flux-Upscale, 15%	$\leq 15/125$ divisions of full scale	$\leq 20/125$ divisions of full scale
b. Flow Referenced Simulated Thermal Power-Upscale	$\leq (0.58 W + 59\% \cdot 0.58 \Delta W)^{**}$ with a maximum $\leq 113.5\%$ of RATED THERMAL POWER	$\leq (0.58 W + 82\% \cdot 0.58 \Delta W)^{**}$ with a maximum $\leq 115.5\%$ of RATED THERMAL POWER
c. Fixed Neutron Flux-Upscale, 118%	$\leq 118\%$ of RATED THERMAL POWER	$\leq 120\%$ of RATED THERMAL POWER
3. Reactor Vessel Steam Dome Pressure - High (2B21-N678 A,B,C,D)	≤ 1054 psig [†]	≤ 1054 psig [†]
4. Reactor Vessel Water Level - Low (Level 3) (2B21-N680 A,B,C,D)	≥ 0 inches above instrument zero*	≥ 0 inches above instrument zero*
5. Main Steam Line Isolation Valve - Closure (NA)	$\leq 10\%$ closed	$\leq 10\%$ closed
6. (Deleted)		
7. Drywell Pressure - High (2C71-N650A,B,C,D)	≤ 1.92 psig	≤ 1.92 psig

*See Bases Figure B 3/4 3-1.

** W = Total loop recirculation flow rate in percent of rated. Rated loop recirculation flow is equal to 34.2 MLB/hr.

ΔW = Maximum measured difference between two-loop and single-loop drive flow for the same core flow in percent of rated recirculation flow for single-loop operation. The value is zero for two-loop operation.

*The unit may operate with a setpoint of ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes.

MATCH - UNIT 2

2-4

Amendment No. 14, 39, 67, 77, 88,
113, 127

TABLE 3.3.2-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
3. HIGH PRESSURE COOLANT INJECTION SYSTEM		
a. Reactor Vessel Water Level - Low Low (Level 2)	≥ -47 inches*	≥ -47 inches*
b. Drywell Pressure-High	≤ 1.92 psig	≤ 1.92 psig
c. Condensate Storage Tank Level - Low	≥ 0 inches**	≥ 0 inches**
d. Suppression Chamber Water Level - High	≤ 154.2 inches***	≤ 154.2 inches***
e. Logic Power Monitor	NA	NA
f. Reactor Vessel Water Level-High (Level 8)*	≤ 56.5 inches	≤ 56.5 inches
4. AUTOMATIC DEPRESSURIZATION SYSTEM		
a. Drywell Pressure-High	≤ 1.92 psig	≤ 1.92 psig
b. Reactor Vessel Water Level - Low Low Low (Level 1)	≥ -113 inches*	≥ -113 inches*
c. ADS Timer	≤ 120 seconds	≤ 120 seconds
d. ADS Low Water Level Actuation Timer	≤ 13 minutes	≤ 13 minutes
e. Reactor Vessel Water Level - Low (Level 3)	≥ 0 inches*	≥ 0 inches*
f. Core Spray Pump Discharge Pressure - High	≥ 137 psig	≥ 137 psig
g. RHR (LPCI MODE) Pump Discharge Pressure - High	≥ 112 psig	≥ 112 psig
h. Control Power Monitor	NA	NA
5. LOW LOW SET S/RV SYSTEM		
a. Reactor Steam Dome Pressure - High	≤ 1054 psig ***	≤ 1054 psig ***

* See Bases Figure B 3/4 3-1.

** Equivalent to 10,000 gallons of water in the CST.

*** Measured above torus invert.

**** The unit may operate with a setpoint ± 1065 psig for a cumulative duration of 30 days for power uprate test purposes.

TABLE 3.3.5-2

CONTROL ROD WITHDRAWAL BLOCK INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. <u>APRM</u>		
a. Flow Referenced Simulated Thermal Power - Upscale	$\leq (0.58 W + 50\% - 0.58 \Delta W)^{(a)}$	$\leq (0.58 W + 50\% - 0.58 \Delta W)^{(a)}$
b. Inoperative	NA	NA
c. Downscale	$\geq 3/125$ of full scale	$\geq 3/125$ of full scale
d. Neutron Flux - High, 12%	$\leq 12/125$ of full scale	$\leq 12/125$ of full scale
2. <u>ROD BLOCK MONITOR</u>		
a. Upscale ^(a)		
1) Low Trip Setpoint (LTSP)	$\leq 115.1/125$ of full scale	$\leq 115.5/125$ of full scale
2) Intermediate Trip Setpoint (ITSP)	$\leq 109.3/125$ of full scale	$\leq 109.7/125$ of full scale
3) High Trip Setpoint (HTSP)	$\leq 105.5/125$ of full scale	$\leq 105.9/125$ of full scale
b. Inoperative	NA	NA
c. Downscale	$\geq 94/125$ of full scale	$\geq 93/125$ of full scale
d. Power range Setpoint ^(c)		
1) Low Power Setpoint (LPSP)	$\leq 27\%$ of RATED THERMAL POWER	$\leq 29\%$ of RATED THERMAL POWER
2) Intermediate Power Setpoint (IPSP)	$\leq 62\%$ of RATED THERMAL POWER	$\leq 64\%$ of RATED THERMAL POWER
3) High Power Setpoint (HPSP)	$\leq 82\%$ of RATED THERMAL POWER	$\leq 84\%$ of RATED THERMAL POWER
e. RBM Bypass Time Delay (td _z) ^(a)	≤ 2.0 sec	≤ 2.0 sec
3. <u>SOURCE RANGE MONITORS</u>		
a. Detector not full in	NA	NA
b. Upscale	$\leq 1 \times 10^5$ cps	$\leq 1 \times 10^5$ cps
c. Inoperative	NA	NA
d. Downscale	≥ 3 cps	≥ 3 cps

* The unit may operate with a setpoint $\pm 0.58 W + 53\% - 0.58 \Delta W$ for a cumulative duration of 35 days for power uprate test purposes.

REACTOR COOLANT SYSTEM

SAFETY/RELIEF VALVES LOW-LOW SET FUNCTION

LIMITING CONDITION FOR OPERATION

3.4.2.2 The relief valve function and the low-low set function of the following reactor coolant system safety/relief valves shall be OPERABLE with the following low-low set function lift settings:

<u>Low Low Set Valve Function</u>	<u>Allowable Value (psig)*</u>	
	<u>Open</u>	<u>Close</u>
Low	≤ 1010	≤ 860
Medium Low	≤ 1025	≤ 875
Medium High	≤ 1040	≤ 890
High	≤ 1050	≤ 900

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3

ACTION:

- With the relief valve function and/or the low-low set function of one of the above required reactor coolant system safety/relief valves inoperable, restore the inoperable relief valve function and low-low set function to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- With the relief valve function and/or the low-low set function of more than one of the above required reactor coolant system safety/relief valves inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- One instrument channel may be inoperable for up to 6 hours to perform required surveillances prior to entering other applicable ACTIONS.

SURVEILLANCE REQUIREMENTS

4.4.2.2 The low-low set relief valve function and the low-low set function pressure actuation instrumentation shall be demonstrated OPERABLE by performance of a:

- CHANNEL FUNCTIONAL TEST, including calibration of the trip unit and the dedicated high steam dome pressure channels**, at least once per quarter.
- CHANNEL CALIBRATION, LOGIC SYSTEM FUNCTIONAL TEST and simulated automatic operation of the entire system at least once per refueling outage.

*The lift setting pressure of the valves is defined in subsection 3/4 3.4.2.1. The accuracy of the low-low set setpoints is defined to be the accuracy of the instrumentation controlling the setpoints of the low-low set valves.

**The setpoint for dedicated high steam dome pressure channels is less than or equal to 1054 psig, **except that the unit may operate with a setpoint ~~1054~~ ≤ 1065 psig for a cumulative duration of 35 days for power uprate test purposes*