

TABLE 4.1-1

INSTRUMENT SURVEILLANCE REQUIREMENTS

	<u>CHANNEL DESCRIPTION</u>	<u>CHECK</u>	<u>TEST</u>	<u>CALIBRATE</u>	<u>REMARKS</u>
1.	Protection Channel Coincidence Logic	NA	M	NA	
2.	Control Rod Drive Trip	NA	M	NA	(1) Includes independent testing of shunt Breaker and Regulating trip and undervoltage trip features. Rod Power SCRs
3.	Power Range Amplifier	D(1)	N	(2)	(1) When reactor power is greater than 15%. (2) When above 15% reactor power run a heat balance check once per shift. Heat balance calibration shall be performed whenever heat balance exceeds indicated neutron power by more than two percent.
4.	Power Range Channel	S	M	M(1)(2)	(1) When reactor power is greater than 60% verify imbalance using incore instrumentation. (2) When above 15% reactor power calculate axial offset upper and lower chambers after each startup if not done within the previous seven days.
5.	Intermediate Range Channel	S(1)	PS/U	NA	(1) When in service.
6.	Source Range Channel	S(1)	PS/U	NA	(1) When in service.
7.	Reactor Coolant Temperature Channel	S	M	R	

TABLE 4.1-1 (Continued)

	<u>CHANNEL DESCRIPTION</u>	<u>CHECK</u>	<u>TEST</u>	<u>CALIBRATE</u>	<u>REMARKS</u>
19.	Reactor Building Emergency Cooling and Isolation System Analog Channels				
a.	Reactor Building 4 psig Channels	S(1)	M(1)	R	(1) When CONTAINMENT INTEGRITY is required.
b.	RCS Pressure 1600 psig	S(1)	M(1)	NA	(1) When RCS Pressure > 1800 psig.
c.	Deleted				
d.	Reactor Bldg. 30 psig pressure switches	S(1)	M(1)	R	(1) When CONTAINMENT INTEGRITY is required.
e.	Reactor Bldg. Purge Line High Radiation (AH-V-1A/D)	W(1)	M(1)	F	(1) When CONTAINMENT INTEGRITY is required.
f.	Line Break Isolation Signal (ICCW & NSCCW)	W(1)	M(1)	R	(1) When CONTAINMENT INTEGRITY is required.
20.	Reactor Building Spray System Logic Channel	NA	Q	NA	
21.	Reactor Building Spray 30 psig pressure switches	NA	M	R	
22.	Pressurizer Temperature Channels	S	NA	R	
23.	Control Rod Absolute Position	S(1)	NA	R	(1) Check with Relative Position Indicator.
24.	Control Rod Relative Position	S(1)	NA	R	(1) Check with Absolute Position Indicator.
25.	Core Flooding Tanks				
a.	Pressure Channels	S(1)	NA	R	(1) When Reactor Coolant system pressure is greater than 700 psig.
b.	Level Channels	S(1)	NA	R	
26.	Pressurizer Level Channels	S	NA	R	

TABLE 4.1-1 (Continued)

	<u>CHANNEL DESCRIPTION</u>	<u>CHECK</u>	<u>TEST</u>	<u>CALIBRATE</u>	<u>REMARKS</u>
30.	Borated Water Storage Tank Level Indicator	W	NA	R	
31.	Boric Acid Mix Tank:	DELETED			
32.	Reclaimed Boric Acid Storage Tank:	DELETED			
33.	Containment Temperature	NA	NA	F	
34.	Incore Neutron Detectors	M(1)	NA	NA	(1) Check functioning; including functioning of computer readout or recorder readout when reactor power is greater than 15%.
35.	Emergency Plant Radiation Instruments	M(1)	NA	F	(1) Battery check.
36.	Strong Motion Accelerometer	Q(1)	NA	Q	(1) Battery check.
37.	Reactor Building Sump Level	NA	NA	R	

TABLE 4.1-1 (Continued)

	<u>CHANNEL DESCRIPTION</u>	<u>CHECK</u>	<u>TEST</u>	<u>CALIBRATE</u>	<u>REMARKS</u>
38.	OTSG Full Range Level	W	NA	R	
39.	Turbine Overspeed Trip	NA	R	NA	
40.	BWST/NaOH Differential Pressure Indicator	NA	NA	F	
41.	Sodium Hydroxide Tank Level Indicator	NA	NA	F	
42.	Diesel Generator Protective Relaying	NA	NA	R	
43.	4 KV ES Bus Undervoltage Relays (Diesel Start)				
	a. Degraded Grid	NA	M(1)	R	(1) Relay operation will be checked by local test pushbuttons.
	b. Loss of Voltage	NA	M(1)	R	(1) Relay operation will be checked by local test pushbuttons.
44.	Reactor Coolant Pressure DH Valve Interlock Bistable	S(1)	M	R	(1) When reactor coolant system is pressurized above 300 psig or T_{ave} is greater than 200°F.
45.	Loss of Feedwater Reactor Trip	S(1)	M(1)	R	(1) When reactor power exceeds 7% power.
46.	Turbine Trip/Reactor Trip	S(1)	M(1)	F	(1) When reactor power exceeds 45% power.
47.	a. Pressurizer Code Safety Valve and PORV Tailpipe Flow Monitors	S(1)	NA	R	(1) When T_{ave} is greater than 525°F.
	b. PORV - Acoustic/Flow	NA	M(1)	R	(1) When T_{ave} is greater than 525°F.
48.	PORV Setpoints	NA	M(1)	R	(1) Per Specification 3.1.12 excluding valve operation.

TABLE 4.1-3 Cont'd

<u>Item</u>	<u>Check</u>	<u>Frequency</u>
4. Spent Fuel Pool Water Sample	Boron concentration greater than or equal to 600 ppmb	Monthly and after each makeup.
5. Secondary Coolant System Activity	Isotopic analysis for DOSE EQUIVALENT I-131 concentration	At least once per 72 hours when reactor coolant system pressure is greater than 300 psig or Tav is greater than 200°F.
6. Deleted		
7. Deleted		
8. Deleted		
9. Deleted		
10. Sodium Hydroxide Tank	Concentration	Semi-Annually and after each makeup.
11. Deleted		
12. Deleted		

Until the specific activity of the primary coolant system is restored within its limits.

* Sample to be taken after a minimum of 2 EFPD and 20 days of POWER OPERATION have elapsed since the reactor was last subcritical for 48 hours or longer.

TABLE 4.1-4

POST ACCIDENT MONITORING INSTRUMENTATION

<u>FUNCTION</u>	<u>INSTRUMENTS</u>	<u>CHECK</u>	<u>TEST</u>	<u>CALIBRATE</u>	<u>REMARKS</u>
1. Noble Gas Effluent					
a.	Condenser Vacuum Pump Exhaust (RM-A5-Hi)	W	M	F	(1) Using the installed check source when background is less than twice the expected increase in cpm which would result from the check source alone. Background readings greater than this value are sufficient in themselves to show that this monitor is functioning.
b.	Condenser Vacuum Pump Exhaust (RM-G25)	W(1)	M	F	
c.	Auxiliary and Fuel Handling Building Exhaust (RM-A8-Hi)	W	M	F	
d.	Reactor Building Purge Exhaust (RM-A9-Hi)	W	M	F	
e.	Reactor Building Purge Exhaust (RM-G24)	W(1)	M	F	
f.	Main Steam Lines Radiation (RM-G26/RM-G27)	W(1)	M	F	
2.	Containment High Range Radiation (RM-G22/G23)	W	M	R	
3.	Containment Pressure	W	N/A	R	
4.	Containment Water Level	W	N/A	R	
5.	Containment Hydrogen	W	M	F	
6.	Wide Range Neutron Flux	W	N/A	F	

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CERTIFICATE OF SERVICE

IN THE MATTER OF
GPU NUCLEAR CORPORATION

DOCKET NO. 50-289
LICENSE NO. DPR 50

This is to certify that a copy of Technical Specification Change Request No. 243 to Appendix A of the Operating License for Three Mile Island Nuclear Station Unit 1, has, on the date given below, been filed with executives of Londonderry Township, Dauphin County, Pennsylvania; Dauphin County, Pennsylvania; and the Pennsylvania Department of Environmental Resources, Bureau of Radiation Protection, by deposit in the United States mail, addressed as follows:

Mr. Darryl LeHew, Chairman
Board of Supervisors
Londonderry Township
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Middletown, PA 17057

Mr. Russell L. Sheaffer, Chairman
of Board of County Commissioners
of Dauphin County
Dauphin County Courthouse
Harrisburg, PA 17120

Director, Bureau of Radiation Protection
PA. Dept of Environmental Resources
Rachael Carson State Office Building, 13th Floor
P.O. Box 8469
Harrisburg, PA 17105-8469
Att: Mr. Stanley P. Maingi

GPU NUCLEAR CORPORATION

BY: *WJL* for
Vice President and Director, TMI

DATE: 5/24/96