

TABLE OF CONTENTS

Section 1	Definitions	Page
1.1	Operable - Operability	1.0-1
1.2	Operating	1.0-1
1.3	Power Operation	1.0-1
1.4	Startup Mode	1.0-1
1.5	Run Mode	1.0-1
1.6	Shutdown Condition	1.0-1
1.7	Cold Shutdown	1.0-2
1.8	Place in Shutdown Condition	1.0-2
1.9	Place in Cold Shutdown Condition	1.0-2
1.10	Place in Isolation Condition	1.0-2
1.11	Refueling Mode	1.0-2
1.12	Refueling Outage	1.0-2
1.13	Primary Containment Integrity	1.0-2
1.14	Secondary Containment Integrity	1.0-2
1.15	Deleted	1.0-3
1.16	Rated Flux	1.0-3
1.17	Reactor Thermal Power-To-Water	1.0-3
1.18	Protective Instrumentation Logic Definitions	1.0-3
1.19	Instrumentation Surveillance Definitions	1.0-4
1.20	FDSAR	1.0-4
1.21	Core Alteration	1.0-4
1.22	Critical Power Ratio	1.0-4
1.23	Staggered Test Basis	1.0-4
1.24	Surveillance Requirements	1.0-5
1.25	Deleted	1.0-5
1.26	Fraction of Limiting Power Density (FLPD)	1.0-5
1.27	Maximum fraction of Limiting Power Density (MFLPD)	1.0-5
1.28	Fraction of Rated Power (FRP)	1.0-5
1.29	Top of Active Fuel (TAF)	1.0-5
1.30	Reportable Event	1.0-5
1.31	Identified Leakage	1.0-6
1.32	Unidentified Leakage	1.0-6
1.33	Process Control Plan	1.0-6
1.34	Augmented Offgas System (AOG)	1.0-6
1.35	Member of the Public	1.0-6
1.36	Offsite Dose Calculation Manual	1.0-6
1.37	Purge	1.0-6
1.38	Exclusion Area	1.0-6
1.39	Reactor Vessel Pressure Testing	1.0-7
1.40	Substantive Changes	1.0-7
1.41	Dose Equivalent I-131	1.0-7
1.42	Average Planar Linear Heat Generation Rate	1.0-7
1.43	Core Operating Limits Report	1.0-8
1.44	Local Linear Heat Generation Rate	1.0-8
Section 2	Safety Limits and Limiting Safety System Settings	<u>Page</u>
2.1	Safety Limit - Fuel Cladding Integrity	2.1-1
2.2	Safety Limit - Reactor Coolant System Pressure	2.2-1
2.3	Limiting Safety System Settings	2.2-3

TABLE OF CONTENTS (cont.)

Section 3	Limiting Conditions for Operation	Page
3.0	Limiting Conditions for Operation (General)	3.0-1
3.1	Protective Instrumentation	3.1-1
3.2	Reactivity Control	3.2-1
3.3	Reactor Coolant	3.3-1
3.4	Emergency Cooling	3.4-1
3.5	Containment	3.5-1
3.6	Radioactive Effluents	3.6-1
3.7	Auxiliary Electrical Power	3.7-1
3.8	Isolation Condenser	3.8-1
3.9	Refueling	3.9-1
3.10	Core Limits	3.10-1
3.11	(Not Used)	3.11-1
3.12	Alternate Shutdown Monitoring Instrumentation	3.12-1
3.13	Accident Monitoring Instrumentation	3.13-1
3.14	Solid Radioactive Waste	3.14-1
3.15	Radioactive Effluent Monitoring Instrumentation	3.15-1
3.16	(Not Used)	3.16-1
3.17	Control Room Heating, Ventilating and Air Conditioning System	3.17-1
Section 4	Surveillance Requirements	
4.1	Protective Instrumentation	4.1-1
4.2	Reactivity Control	4.2-1
4.3	Reactor Coolant	4.3-1
4.4	Emergency Cooling	4.4-1
4.5	Containment	4.5-1
4.6	Radioactive Effluents	4.6-1
4.7	Auxiliary Electrical Power	4.7-1
4.8	Isolation Condenser	4.8-1
4.9	Refueling	4.9-1
4.10	ECCS Related Core Limits	4.10-1
4.11	Sealed Source Contamination	4.11-1
4.12	Alternate Shutdown Monitoring instrumentation	4.12-1
4.13	Accident Monitoring Instrumentation	4.13-1
4.14	Solid Radioactive Waste	4.14-1
4.15	Radioactive Effluent Monitoring Instrumentation	4.15-1
4.16	Radiological Environmental Surveillance	4.16-1
4.17	Control Room Heating, Ventilating and Air Conditioning System	4.17-1

B. The testing of one system, subsystem, train or other designated component at the beginning of each subinterval.

1.24 SURVEILLANCE REQUIREMENTS

Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within the safety limits, and that the limiting conditions of operation will be met. Each surveillance requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the surveillance interval.*

Surveillance requirements for systems and components are applicable only during the modes of operation for which the system or components are required to be operable, unless otherwise stated in the specification.

This definition established the limit for which the specified time interval for Surveillance Requirements may be extended. It permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance, e.g., transient conditions or other ongoing surveillance or maintenance activities. It also provides flexibility to accommodate the length of a fuel cycle for surveillances that are performed at each refueling outage and are specified with a fuel cycle length surveillance interval. It is not intended that this provision be used repeatedly as a convenience to extend surveillance intervals beyond that specified for the surveillance that are not performed during refueling outages. The limitation of this definition is based on engineering judgement and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. This provision is sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance interval.

1.25 (DELETED)

1.26 FRACTION OF LIMITING POWER DENSITY (FLPD)

The fraction of limiting power density is the ratio of the linear heat generation rate (LHGR) existing at a given location to the design LHGR for that bundle type.

1.27 MAXIMUM FRACTION OF LIMITING POWER DENSITY (MFLPD)

The maximum fraction of limiting power density is the highest value existing in the core of the fraction of limiting power density (FLPD).

* Not applicable to containment leak rate test.

3.12 Alternate Shutdown Monitoring Instrumentation

Applicability: Applies to the operating status of alternate shutdown monitoring instrumentation.

Objective: To assure the operability of the alternate shutdown monitoring instrumentation.

Specification:

- A. The alternate shutdown monitoring instruments listed in Table 3.12-1 shall be operable during reactor power operations and when reactor coolant temperature exceeds 212 F.
- B. With less than the minimum number of operable channels specified in Table 3.12-1, either restore the inoperable channel to operable status within 30 days, or be in at least hot shutdown within the next 12 hours and in cold shutdown within the following 24 hours.

Basis:

The operability of the alternate shutdown monitoring instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of hot shutdown of the plant from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with Appendix R and General Design Criteria 19 of 10 CFR 50.

TABLE 3.12-1 ALTERNATE SHUTDOWN
MONITORING INSTRUMENTATION

<u>Functional Unit</u>	<u>Readout Location</u>	<u>Min. Channels Operable</u>
Reactor Pressure	RSP	1
Reactor Water Level (fuel zone)	RSP	1
Condensate Storage Tank Level	Local	1
Service Water Pump Discharge Pressure	Local	1
Control Rod Drive System Flowmeter	Rx 23' near V-15-30	1
Shutdown Cooling System Flowmeter	Local	1
Isolation Condenser "B" Shell Water Level	RSP	1
Reactor Building Closed Cooling Water Pump Discharge Pressure	Local	1

RSP - Remote Shutdown Panel

4.12 Alternate Shutdown Monitoring Instrumentation

Applicability: Applies to the surveillance requirements of the alternate shutdown monitoring instrumentation.

Objective: To specify the minimum frequency and type of surveillance to be applied to the alternate shutdown monitoring instrumentation.

Specification:

Each of the alternate shutdown monitoring channels shall be demonstrated operable by performance of the channel check and channel calibration operations at the frequencies shown in Table 4.12-1.

Basis:

The operability of the alternate shutdown monitoring instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of hot shutdown of the plant from locations outside of the control room. The type and frequency of surveillances required in Table 4.12-1 are consistent with or more conservative than the BWR Standard Technical Specifications.

TABLE 4.12-1 ALTERNATE SHUTDOWN

MONITORING INSTRUMENTATION

<u>Functional Unit</u>	<u>Channel Check</u>	<u>Channel Calibration</u>
Reactor Pressure	M	Q
Reactor Water Level (fuel zone)	n/a	Q
Condensate Storage Tank Level	M	R
Service Water Pump Discharge Pressure	M	R
Control Rod Drive System Flowmeter	M	R
Shutdown Cooling System Flowmeter	n/a	R
Isolation Condenser "B" Shell Water Level	M	R
Reactor Building Closed Cooling Water Pump Discharge Pressure	M	R

M - Monthly

Q - Quarterly

R - Refueling Outage

- d. At least two licensed reactor operators shall be in the control room during all reactor startups, shutdowns, and other periods involving planned control rod manipulations.
- e. All CORE ALTERATIONS shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
- f. An individual qualified in radiation protection measures shall be on site when fuel is in the reactor.
- g. (deleted)
- h. Each on duty shift shall include a Shift Technical Advisor except that the Shift Technical Advisors position need not be filled if the reactor is in the refuel or shutdown mode and the reactor is less than 212 F.
- i. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety related functions.

In the event that unforeseen problems require substantial amounts of overtime to be used or during extended periods of shutdown for refueling, major maintenance or major plant modifications, on a temporary basis, the following guidelines shall be followed:

- a. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
- b. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any seven-day period, all excluding shift turnover time.
- c. A break of at least eight hours should be allowed between work period, including shift turnover time.
- d. In a, b, and c above, the time required to complete shift turnover is to be counted as break time and is not to be counted as work time.
- e. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Any deviation from the above guidelines shall be authorized by the Department Managers, or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation.

6.4 TRAINING

6.4.1 A retaining program for operators shall be maintained under the direction of the Manager responsible for plant training and shall meet the requirements and recommendation of 10 CFR Part 55. Replacement training programs, the content of which shall meet the requirements of 10 CFR Part 55, shall be conducted under the direction of the Manager responsible for plant training for licensed operators and Senior Reactor Operators.

6.5 REVIEW AND AUDIT

6.5.1 TECHNICAL REVIEW AND CONTROL

The Vice President of each division within GPU Nuclear Corporation shall be responsible for ensuring the preparation, review, and approval of documents required by the activities described in 6.5.1.1 through 6.5.1.5 within his functional area of responsibility as assigned in the GPUN Review and Approval Matrix. Implementing approvals shall be performed at the cognizant manager level or above.

ACTIVITIES

6.5.1.1 Each procedure required by Technical Specification 6.8 and other procedures which affect nuclear safety, and substantive changes thereto, shall be prepared by a designated individual(s)/group knowledgeable in the area affected by the procedure. Each such procedure, and substantive change thereto, shall be reviewed for adequacy by an individual(s)/group other than the preparer, but who may be from the same division as the individual who prepared the procedure or change.

6.5.3 AUDITS

6.5.3.1 Audits of facility activities shall be performed under the cognizance of the Vice President - responsible for Quality Assurance. These audits shall encompass:

- a. The conformance of facility operations to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.
- b. The performance, training and qualifications of the facility staff at least once per 12 months.
- c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems or method of operation that affect nuclear safety at least once per six months.
- d. The Facility Emergency Plan and implementing procedures at least once per 12 months.
- e. The Facility Security Plan and implementing procedures at least once per 12 months.
- f. The Fire Protection Program and implementing procedures at least once per 24 months.
- g. The performance of activities required by the Operational Quality Assurance Plan to meet the criteria of Appendix 'B', 10 CFR 50, at least once per 24 months.
- h. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- i. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- j. The PROCESS CONTROL PROGRAM and implementing procedures for radioactive wastes at least once per 24 months.
- k. Any other area of facility operation considered appropriate by the IOSRG or the Office of the President-GPUNC.

6.5.3.2 Audits of the following shall be performed under the cognizance of the Vice President - responsible for technical support.

- a. An independent fire protection and loss prevention program inspection and audit shall be performed annually utilizing either qualified licensee personnel or an outside fire protection firm.
- b. An inspection and audit of the fire protection and loss prevention program, by an outside qualified fire consultant at intervals no greater than 3 years.

6.8 PROCEDURES

6.8.1 Written procedures shall be established, implemented, and maintained that meet or exceed the requirements of the Nuclear Regulatory Commission's Regulatory Guide 1.33 (the applicable revision is identified in the GPU Nuclear Operational Quality Assurance Plan) and as provided in 6.8.2 and 6.8.3 below.

Written procedures shall be adopted and maintained to implement the:

Process Control Plan
Offsite Dose Calculation Manual
Fire Protection Program

6.8.2 Each procedure and administrative policy of 6.8.1 above, and substantive changes thereto, shall be reviewed as described in 6.5.1.1 and approved as described in 6.5.1 prior to implementation and periodically as specified in the Administrative Procedures.

6.8.3 Temporary changes to procedures 6.8.1 above may be made provided:

- a. The intent of the original is not altered.
- b. The change is approved by two members of GPUNC Management Staff authorized under Section 6.5.1.12 and knowledgeable in the area affected by the procedure. For changes which may affect the operational status of facility systems or equipment, at least one of these individuals shall be a member of facility management or supervision holding a Senior Reactor Operator's License on the facility.
- c. The change is documented, subsequently reviewed and approved as described in 6.8.2 within 14 days of implementation.

6.9 REPORTING REQUIREMENTS

In addition to the applicable reporting requirements of 10 CFR, the following identified reports shall be submitted to the Administrator of the NRC Region I office unless otherwise noted.

6.9.1 ROUTINE REPORTS

- a. Startup Report. A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant. The report shall address each of the tests identified in the FSAR and shall in general include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specified details required in license conditions based on other commitments shall be included in this report.

6.9.3 UNIQUE REPORTING REQUIREMENTS

Special reports shall be submitted to the appropriate NRC office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification.

- a. Materials Radiation Surveillance Specimen Reports (4.3A)
- b. Integrated Primary Containment Leakage Tests (4.5)
- c. Results of required leak tests performed on sealed sources if the tests reveal the presence of 0.005 microcuries or more of removable contamination.
- d. (deleted)
- e. Core Spray Sparger Inservice Inspection (Table 4.3.1-9)

Prior to startup of each cycle, a special report presenting the results of the inservice inspection of the Core Spray Spargers during each refueling outage shall be submitted to the Commission for review.

- f. Liquid radwaste batch discharge exceeding Specification 3.6.B.1.
- g. Main condenser offgas discharge without treatment per Specification 3.6.D.1.
- h. Dose due to radioactive liquid effluent exceeding Specification 3.6.J.1.
- i. Air dose due to radioactive noble gas in gaseous effluent exceeding Specification 3.6.L.1.
- j. Air dose due to radiiodine and particulates exceeding Specification 3.6.M.1.
- k. Annual total dose due to radioactive effluents exceeding Specification 3.6.N.1.
- l. Records of results of analyses required by the Radiological Environmental Monitoring Program.
- m. Failures and challenges to Relief and Safety Valves

Failures and challenges to Relief and Safety Valves which do not constitute an LER will be the subject of a special report submitted to the Commission within 60 days of the occurrence. A challenge is defined as any automatic actuation (other than during surveillance or testing) of Safety or Relief Valves.
- n. Plans for compliance with standby liquid control Specifications 3.2.C.3(b) and 3.2.C.3(e)(1) or plans to obtain enrichment test results per Specification 4.2.E.5
- o. Inoperable high range radioactive noble gas effluent monitor (3.13.H)