

4. The reactor thermal power level shall not exceed 118% of rated power.
- B. In the event the Safety Limit is violated, the facility shall be placed in at least HOT SHUTDOWN within 1 hour. The safety limit is exceeded if the combination of Reactor Coolant System average temperature and thermal power level is at any time above the appropriate pressure line in TS Figures 2.1-1, 2.1-2 or 2.1-3; or the core thermal power exceeds 118% of the rated power.

Basis

To maintain the integrity of the fuel cladding and prevent fission product release, it is necessary to prevent overheating of the cladding under all operating conditions. This is accomplished by operating within the nucleate boiling regime of heat transfer, wherein the heat transfer coefficient is very large and the clad surface temperature is only a few degrees Fahrenheit above the reactor coolant saturation temperature. The upper boundary of the nucleate boiling regime is termed Departure From Nucleate Boiling (DNB) and at this point there is a sharp reduction of the heat transfer coefficient, which would result in high clad temperatures and the possibility of clad failure. DNB is not, however, an observable parameter during reactor operation. Therefore, DNB has been correlated to thermal power, reactor coolant temperature and reactor coolant pressure which are observable parameters. This correlation has been developed to predict the DNB flux and the location of DNB for axially

2.2 SAFETY LIMIT, REACTOR COOLANT SYSTEM PRESSURE

Applicability

Applies to the maximum limit on Reactor Coolant System pressure.

Objective

To maintain the integrity of the Reactor Coolant System.

Specification

- A. The Reactor Coolant System pressure shall not exceed 2735 psig with fuel assemblies installed in the reactor vessel.
- B. In the event the Safety Limit is violated, the facility shall be placed in at least HOT SHUTDOWN within 1 hour.

Basis

The Reactor Coolant System⁽¹⁾ serves as a barrier which prevents radionuclides contained in the reactor coolant from reaching the environment. In the event of a fuel cladding failure the Reactor Coolant System is the primary barrier against the release of fission products. The maximum transient pressure allowable in the Reactor Coolant System pressure vessel under the ASME Code, Section III is 110% of design pressure. The maximum transient pressure allowable in the Reactor Coolant System piping, valves and fittings under USAS Section B31.1 is 120% of design pressure. Thus, the safety limit of 2735 psig (110% of design pressure) has been established.⁽²⁾

6.0 ADMINISTRATIVE CONTROLS

6.1 Responsibility, Organization and Qualifications

6.1.1 Responsibility

1. The plant manager shall be responsible for the overall unit operation. During his absence, the plant manager will delegate in writing the succession to this responsibility.
2. The Shift Manager shall be responsible for the control room command function.

6.1.2 Organization

1. Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the QA Program. The plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications shall be maintained in appropriate administrative documents.
- b. The plant manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
- c. A specified corporate officer shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support to the plant to ensure nuclear safety.
- d. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure independence from operating pressures.

2. Unit Staff

The unit staff organization shall include the following:

- a. Each on-duty shift shall be composed of at least the minimum shift crew composition for each unit as shown in Table 6.1-1.
- b. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the position.
- c. All core alterations shall be observed and 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.
- d. The operations manager shall hold (or have previously held) a Senior Reactor Operator License for Surry Power Station or a similar design Pressurized Water Reactor plant. The Supervisor Nuclear Shift Operations shall hold an active Senior Reactor Operator License for Surry Power Station.
- e. Procedures will be established to insure that NRC policy statement guidelines regarding working hours established for employees are followed. In addition, procedures will provide for documentation of authorized deviations from those guidelines and that the documentation is available for NRC review.

6.1.3 Unit Staff Qualifications

1. Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI 3.1 (12/79 Draft) for comparable positions. Exceptions to this requirement are specified in the QA Program. Incumbents in the positions of Shift Manager, Unit Supervisor (SRO), Control Room Operator (RO), and the individual providing advisory technical support to the unit operations shift crew, shall meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4).
2. For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator and a licensed Reactor Operator are those individuals who, in addition to meeting the requirements of TS 6.1.3.1 perform the functions described in 10 CFR 50.54(m).

TABLE 6.1-1
MINIMUM SHIFT CREW COMPOSITION

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION		
	ONE UNIT OPERATING	TWO UNITS OPERATING	TWO UNITS IN COLD SHUTDOWN OR REFUELING
SM	1	1	1
SRO	1	1	None
RO	3	3	2
AO	4	4	4
STA	1	1	None

SM - Shift Manager with a Senior Reactor Operators License.

SRO - Individual with a Senior Reactor Operators License.

RO - Individual with a Reactors Operators License.

AO - Auxiliary Operator

STA - Individual providing advisory technical support to the unit operations shift crew.

Except for the Shift Manager, the Shift Crew Composition may be one less than the minimum requirements of Table 6.1-1 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the Shift Crew Composition to within the minimum requirements of Table 6.1-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Manager from the Control Room while the unit is in operation, an individual (other than the technical advisor) with a valid SRO license shall be designated to assume the Control Room command function. During any absence of the Shift Manager from the Control Room while the unit is shutdown or refueling, an individual with a valid SRO or RO license (other than the technical advisor) shall be designated to assume the Control Room command functions.

6.2 GENERAL NOTIFICATION AND REPORTING REQUIREMENTS

Specification

A. The following action shall be taken for Reportable Events:

A report shall be submitted pursuant to the requirements of Section 50.73 to 10 CFR.

B. Immediate notifications shall be made in accordance with Section 50.72 to 10 CFR.

C. CORE OPERATING LIMITS REPORT

Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT before each reload cycle or any remaining part of a reload cycle. Parameter limits for the following Technical Specifications are defined in the CORE OPERATING LIMITS REPORT:

1. TS 3.1.E and TS 5.3.A.6.b - Moderator Temperature Coefficient
2. TS 3.12.A.2 and TS 3.12.A.3 - Control Bank Insertion Limits
3. TS 3.12.B.1 and TS 3.12.B.2 - Power Distribution Limits

Section 6.3, "Action to Be Taken if a Safety Limit Is Exceeded," has been relocated, in part, to Section 2.1 and Section 2.2. Specific reporting requirements have been removed from TS.

2. The requirements of 6.4.B.1 above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr, but less than 500 rads/hr at one meter from a radiation source or any surface through which radiation penetrates. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Manager on duty and/or the senior station individual assigned the responsibility for health physics and radiation protection.
3. Written procedures shall be established, implemented, and maintained covering the activities referenced below:
 - a. Process Control Program implementation.
 - b. Offsite Dose Calculation Manual implementation.

- D. All procedures described in Specifications 6.4.A and 6.4.B shall be followed.
- E. The facility Fire Protection Program and implementing procedures which have been established for the station shall be implemented and maintained.
- F. Deleted
- G. Deleted

6.8 PROCESS CONTROL PROGRAM AND OFFSITE DOSE CALCULATION MANUAL**A. Process Control Program (PCP)****Changes to the PCP:**

1. Shall be documented and records of reviews performed shall be retained as required by the Operational Quality Assurance Program Topical Report. This documentation shall contain:
 - a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
 - b. A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
2. Shall require the approval of the plant manager prior to implementation.

B. Offsite Dose Calculation Manual (ODCM)**Changes to the ODCM:**

1. Shall be documented and records of reviews performed shall be retained as required by the Operational Quality Assurance Program Topical Report. This documentation shall contain:
 - a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and

- b. A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
2. Shall require the approval of the plant manager prior to implementation.
3. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.