

ATTACHMENT B

Marked Up Copy of R.E. Ginna Nuclear Power Plant
Technical Specification 6.0

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3.1.4 Maximum Coolant Activity

Specifications

- 3.1.4.1 Whenever the reactor is critical or the reactor coolant average temperature is greater than 500°F:
- a. The total specific activity of the reactor coolant shall not exceed $84/\bar{E}$ $\mu\text{Ci/gm}$, where \bar{E} is the average beta and gamma energies per disintegration in Mev.
 - b. The I-131 equivalent of the iodine activity in the reactor coolant shall not exceed 0.2 $\mu\text{Ci/gm}$.
 - c. The I-131 equivalent of the iodine activity on the secondary side of a steam generator shall not exceed 0.1 $\mu\text{Ci/gm}$.
- 3.1.4.2 If the limit of 3.1.4.1.a is exceeded, then be subcritical with reactor coolant average temperature less than 500°F within 8 hours.
- 3.1.4.3 a. If the I-131 equivalent activity in the reactor coolant exceeds the limit of 3.1.4.1.b but is less than the allowable limit shown on Figure 3.1.4-1, operation may continue for up to 168 hours. If the I-131 equivalent activity in the reactor coolant exceeds the limit of 3.1.4.1.b for more than 500 hours in any consecutive 6-month period, then prepare and submit a report to the Commission pursuant to Specification 6.9.2.

3.5.5.2 If the setpoint for a radioactive effluent monitor alarm and/or trip is found to be higher than required, one of the following three measures shall be taken immediately:

- (i) the setpoint shall be immediately corrected without declaring the channels inoperable; or
- (ii) immediately suspend the release of effluents monitored by the effected channel; or.
- (iii) declare the channel inoperable.

3.5.5.3 If the number of channels which are operable is found to be less than required, take the action shown in Table 3.5-5. Exert best efforts to return the instruments to OPERABLE status within 31 days and, if unsuccessful, explain in the next Semiannual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.

3.5.6 Control Room HVAC Detection Systems

3.5.6.1 During all modes of plant operation, detection systems for chlorine gas, ammonia gas and radioactivity in the control room HVAC intake shall be operable with setpoints to isolate air intake adjusted as follows:

Basis:

The reactor coolant system conditions of cold shutdown assure that no steam will be formed and hence there would be no pressure buildup in the containment if the reactor coolant system ruptures.

The shutdown margins are selected based on the type of activities that are being carried out. The (2000 ppm) boron concentration provides shutdown margin which precludes criticality under any circumstances. When the reactor head is not to be removed, a cold shutdown margin of $1\Delta k/k$ precludes criticality in any occurrence.

Regarding internal pressure limitations, the containment design pressure of 60 psig would not be exceeded if the internal pressure before a major steam break accident were as much as 1 psig.⁽¹⁾ The containment is designed to withstand an internal vacuum of 2.5 psig.⁽²⁾ The 2.0 psig vacuum is specified as an operating limit to avoid any difficulties with motor cooling.

In order to minimize containment leakage during a design basis accident involving a significant fission product release, penetrations not required for accident mitigation are provided with isolation boundaries. These isolation boundaries consist of either passive devices or active automatic valves and are listed in a procedure under the control of Technical Specification 6.8. Closed manual valves, deactivated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges and closed systems are considered passive devices. Automatic isolation valves designed to close following an accident without operator action, are considered active devices. Two isolation devices are provided for each mechanical penetration, such that no single credible failure or malfunction of an active component can cause a loss of isolation, or result in a leakage rate that exceeds limits assumed in the safety analyses⁽³⁾.

In the event that one isolation boundary is inoperable, the affected penetration must be isolated with at least one boundary that is not affected by a single active failure. Isolation boundaries that meet this criterion are a closed and deactivated automatic containment isolation valve, a closed manual valve, or a blind flange.

The opening of closed containment isolation valves on an intermittent basis under administrative control includes the following considerations: (1) stationing an individual qualified in accordance with station procedures, who is in constant communication with the control room, at the valve controls, (2) instructing this individual to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to isolate the boundary and that this action will prevent the release of radioactivity outside the containment.

the Quality Assurance Program



Overpressure Protection SystemApplicability

Applies whenever the temperature of one or more of the RCS cold legs is $\leq 330^{\circ}\text{F}$, or the Residual Heat Removal System is in operation.

Objective

To prevent overpressurization of the reactor coolant system and the residual heat removal system.

Specification

- 3.15.1 Except during secondary side hydrostatic tests in which RCS pressure is to be raised above the PORV setpoint, at least one of the following over-pressure protection systems shall be operable:
- a. Two pressurizer power operated relief valves (PORVs) with a lift setting of ≤ 424 psig, or
 - b. A reactor coolant system vent of ≥ 1.1 square inches.
- 3.15.1.1 With one PORV inoperable, either restore the inoperable PORV to operable status within 7 days or depressurize and vent the RCS through a 1.1 square inch vent(s) within the next 8 hours; maintain the RCS in a vented condition until both PORVs have been restored to operable status.
- 3.15.1.2 With both PORVs inoperable, depressurize and vent the RCS through a 1.1 square inch vent(s) within 8 hours; maintain the RCS in a vented condition until both PORVs have been restored to operable status.
- 3.15.1.3 Use of the overpressure protection system to mitigate an RCS or RHRS pressure transient shall be reported in accordance with 6.9.2, Specification 6.6.4

Basis

An RCS vent opening of greater than 1.1 square inches ensures that the RCS will be protected from pressure transients which could exceed the limits of Appendix G to 10 CFR Part 50 when one or more of the RCS cold legs are $\leq 330^{\circ}\text{F}$ ⁽¹⁾. This relief capacity will

3.16

Radiological Environmental Monitoring

Applicability

Applies to routine testing of the plant environs.

Objective

To establish a program which will assure recognition of changes in radioactivity or exposure pathways in the environs.

Specification

3.16.1 Monitoring Program

- 3.16.1.1 The radiological environmental monitoring program shall be conducted as specified in Table 3.16-1 at the locations given in the ODCM.
- 3.16.1.2 If the radiological environmental monitoring program is not conducted as specified in Table 3.16-1, prepare and submit to the Commission, in the Annual Radiological Environmental Operating Report, a description of the reasons for not conducting the program as required and the plans for preventing a recurrence. (Deviations are permitted from the required sampling schedule if specimens are unobtainable due to hazardous conditions, seasonal availability, or to malfunction of automatic sampling equipment. If the latter, efforts shall be made to complete corrective action prior to the end of the next sampling period.)
- 3.16.1.3 If the level of radioactivity in an environmental sampling medium at one or more of the locations specified in the ODCM exceeds the reporting levels ~~of Table~~

provided in the
ODCM

~~6.9-2~~ when averaged over any calendar quarter, a Special Report shall be submitted to the Commission within thirty days which includes an evaluation of any release conditions, environmental factors or other aspects which caused the reporting levels ~~of Table~~ ~~6.9-2~~ to be exceeded. ^{specified in the ODCM}

When more than one of the radionuclides ~~in Table 6.9-2~~ are detected in the sampling medium, this report shall be submitted if:

$$\frac{\text{concentration (1)}}{\text{limit level (1)}} + \frac{\text{concentration (2)}}{\text{limit level (2)}} + \dots \geq 1.0$$

When radionuclides other than those ~~in Table 6.9-2~~ are detected and are the result of plant effluents, this report shall be submitted if the potential annual dose to an individual is greater than the calendar year limit of Specifications 3.9.1.2.a or 3.9.2.2.b. This report is not required if the measured level of radioactivity was not the result of plant effluents; however, in such an event, the condition shall be reported and described in the Annual Radiological Environmental Operating Report.

- 3.16.1.4 If milk or fresh leafy vegetable samples are unavailable for more than one sample period from one or more of the sampling locations indicated by the ODCM, a discussion shall be included in the ~~Semiannual~~ ^{Release} Radioactive Effluent Report which identifies the cause of the unavailability of samples and identifies locations for



6.0

~~ADMINISTRATIVE CONTROLS~~ ADMINISTRATIVE CONTROLS

6.1

~~RESPONSIBILITY~~ Responsibility

6.1.1

The Plant Manager, ~~Ginna Station~~^{unit} shall be responsible for overall ~~on-site Ginna Station~~ operation and shall delegate in writing the succession to this responsibility during his absence.

The Plant Manager or his designee shall approve, prior to implementation, each proposed test, experiment or modification to structures, systems or components that affect nuclear safety.

6.1.2

The Shift Supervisor (SS) shall be responsible for the control room command function. During any absence of the SS from the control room while the unit is above Cold Shutdown, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room function. During any absence of the SS from the control room while the unit is in Cold Shutdown or Refueling, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.



$\frac{1}{2} \log \left(\frac{(n+1)^2 - 1}{n^2 - 1} \right) = \frac{1}{2} \log \left(\frac{n^2 + 2n}{n^2 - 1} \right)$

6.0 ADMINISTRATIVE CONTROLS

6.2 ~~ORGANIZATION~~ Organization

6.2.1 Onsite and Offsite Organizations

~~An~~ ^Oonsite and ~~an~~ offsite organization^s shall be established ^{, respectively} for unit operation and corporate management. The onsite and offsite organization^s shall include the positions for activities affecting the safety of the nuclear power plant.

a. Lines of authority, responsibility and communication shall be ^{and} established and ^{throughout} defined from the highest management levels, through intermediate levels, to and ^{operating organization} including all ~~Plant management~~ positions. ^a Those relationships shall be documented and updated, as appropriate, in the form of organization charts. These organization charts ^{shall} ~~will~~ be documented in the UFSAR, and ~~updated in accordance with 10CFR50.71.~~

b. The Senior Vice President, Production and Engineering, shall have corporate responsibility for overall Plant nuclear safety, and shall take any measures needed to assure acceptable performance of the staff in operating, maintaining, and providing technical support in the Plant so that continued nuclear safety is assured.

c. The Plant Manager, Ginna Station shall have responsibility for overall unit operation and shall have control over those resources necessary for safe operation and maintenance of the Plant.

functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation.

~~d. The persons responsible for the training, health physics and quality assurance functions may report to an appropriate manager onsite, but shall have direct access to responsible corporate management at a level where action appropriate to the mitigation of training, health physics and quality assurance concerns can be accomplished.~~

6.2.2 ^{Unit} ~~Facility~~ Staff

^{unit staff} The ~~Facility~~ organization shall ^{include} ~~be subject to~~ the following:

a. ~~Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.~~

Insert ① →

~~b. At least one licensed Operator shall be in the control room when fuel is in the reactor.~~

~~c. At least two licensed Operators shall be present in the control room during reactor start-up, scheduled reactor shutdown and during recover from reactor trips caused by transients or emergencies.~~

~~d. 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.~~

~~c. e.~~ An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor. ←

A non-licensed operator shall be assigned to the shift crew with fuel in the reactor. An additional licensed operator shall be assigned to the shift crew above Cold Shutdown

Amendment No. 28a

6.2-2a

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 required position.



Insert ①

- b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and Specifications 6.2.2.a and 6.2.2.e 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 shift crew composition to within the minimum requirement.

f. (DELETED)

g. Adequate shift coverage shall be maintained without routine heavy use of overtime. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions including senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel. Changes to the guidelines for the administrative procedures shall be submitted to the NRC for review.

d. The amount of overtime worked by unit staff members performing safety related functions shall be limited and controlled in accordance with a NRC approved program.

e. The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor (SS) in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. The STA shall be assigned to the shift crew above cold shutdown and shall meet the qualifications specified within a NRC approved STA training program.

Table 6.2-1

MINIMUM SHIFT CREW COMPOSITION

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	RCS Above Cold Shutdown	Cold Shutdown & Refueling
SS	1	1
SRO	1	None
RO	2	1
AO	2	1
STA	1	None

SS - Shift Supervisor with a Senior Reactor Operators License
 SRO - Individual with a Senior Reactor Operators License
 RO - Individual with a Reactor Operators License
 AO - Auxiliary Operator
 STA - Shift Technical Advisor

Except for the Shift Supervisor, the Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 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 6.2-1. 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 Supervisor from the Control Room while the unit is above Cold Shutdown, an individual (other than the Shift Technical Advisor) with a valid SRO license shall be designated to assume the Control Room command function. During any absence of the Shift Supervisor from the Control Room while the unit is in Cold Shutdown or Refueling, an individual with a valid SRO or RO license shall be designated to assume the Control Room command function.

6.0

ADMINISTRATIVE CONTROLS

6.3

~~STATION STAFF QUALIFICATIONS~~ Unit Staff Qualifications

6.3.1

Each member of the Unit staff ~~facility~~ shall meet or exceed the minimum qualifications of ANSI Standard N18.1-1971, ~~"Selection and Training of Nuclear Power Plant Personnel"~~, as supplemented by Regulatory Guide 1.8, ^{Revision 1,} September 1975, for comparable positions, ~~except for the Shift Technical Advisor.~~¹

References

1

~~Ltr. J. Maier (RG&E) to D. Crutchfield (NRC), dated December 30, 1980.~~

6.4

TRAINING

- 6.4.1 A retraining and replacement training program for the facility staff shall be maintained under the direction of the Division Training Manager and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and Appendix A of 10 CFR Part 55.
- 6.4.2 The training program shall meet or exceed NFPA No. 27, 1975 Section 40, except that (1) training for salvage operations need not be provided and (2) the Fire Brigade training sessions shall be held at least quarterly. Drills are considered to be training sessions.

6.5

REVIEW AND AUDIT

Three separate organizational units shall be established for the purpose of review and audit of plant operations and safety-related matters. One of these will be an on-site operations review group, the Plant Operations Review Committee (PORC). A second is the Quality Assurance (Q.A.) group, responsible for the audit of safety-related activities associated with plant operations. A third is the independent audit and review group, the Nuclear Safety Audit and Review Board (NSARB). This group is responsible for the periodic review of the activities of the Plant Operations Review Committee, for directing audits and evaluating their results, and for the management evaluation of the status and adequacy of the Quality Assurance program.

6.5.1

PLANT OPERATIONS REVIEW COMMITTEE (PORC) FUNCTION

6.5.1.1

The Plant Operations Review Committee shall function to advise the Plant Manager, Ginna Station on all matters related to nuclear safety and for referral of appropriate matters to the Nuclear Safety Audit and Review Board.

COMPOSITION

6.5.1.2 The PORC shall be composed of the;

Chairman: Superintendent, Ginna Production

Vice Chairman/Member: Superintendent, Ginna Support Services

Vice Chairman/Member: Operations Manager

Member: Maintenance Manager

Member: Maintenance Planning/Scheduling Manager

Member: Instrument & Control Supervisor

Member: Technical Manager

Member: Results and Test Supervisor

Member: Reactor Engineer

Member: Health Physics and Chemistry Manager

Member: Nuclear Assurance Manager

Member: Quality Control Engineer

ALTERNATES

6.5.1.3 Alternate members shall be designated by name, in writing by the Chairman.

MEETING FREQUENCY

6.5.1.4 The PORC shall meet at least once per calendar month and as convened by the PORC Chairman.

QUORUM

6.5.1.5 A quorum of the PORC shall consist of the Chairman or Vice Chairman and four members including alternates. No more than two shall be alternates.



RESPONSIBILITIES

6.5.1.6 The PORC shall be responsible for:

- a. Review of 1) all procedures required by Specification 6.8 and changes thereto, 2) any other proposed procedures or changes thereto as determined by the Plant Manager, Ginna Station to affect nuclear safety.
- b. Review of all proposed tests and experiments that affect nuclear safety.
- c. Review of all proposed changes to the Technical Specifications.
- d. Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety.
- e. Investigation of all violations of the Technical Specifications and shall prepare and forward a report covering evaluation and recommendations to prevent recurrence to the Senior Vice President, Production and Engineering, and to the Chairman of the Nuclear Safety Audit and Review Board.
- f. Review of facility operations to detect potential safety hazards.
- g. Performance of special reviews and investigations and reports thereon as requested by the Chairman of the Nuclear Safety Audit and Review Board.



RESPONSIBILITIES (Continued)

- h. Review of the Plant Security Plan and shall submit recommended changes to the Chairman of the Nuclear Safety Audit and Review Board.
- i. Review of the Radiation Emergency Plan and shall submit recommended changes to the Chairman of the Nuclear Safety Audit and Review Board.
- j. Review of implementing procedures for the Plant Security Plan and the Radiation Emergency Plan and proposed changes thereto.
- k. Review of all Reportable Events.
- l. Review of the Fire Protection Program and Implementing Procedures and submittal of recommended Program changes to the Chairman of the Nuclear Safety Audit and Review Board (NSARB).

AUTHORITY

6.5.1.7 The PORC shall:

- a. Recommend in writing to the Plant Manager, Ginna Station approval or disapproval of items considered under 6.5.1.6(a) through (d) and (1) above.
- b. Render determinations in writing with regard to whether or not each item considered under 6.5.1.6(a) through (d) and (1) above constitutes an unreviewed safety question as defined in 10 CFR Section 50.59.



- c. Provide immediate written notification to the Senior Vice President, Production and Engineering, and the Nuclear Safety Audit and Review Board of disagreement between the PORC and the Plant Manager, Ginna Station; however, the Plant Manager, Ginna Station shall have responsibility for resolution of such disagreements pursuant to 6.1.1 above.

RECORDS

6.5.1.8

The PORC shall maintain written minutes of each meeting and copies shall be provided to the Senior Vice President, Production and Engineering, the Chairman of the Nuclear Safety Audit and Review Board, and such others as the Chairman may designate.



6.5.2 NUCLEAR SAFETY AUDIT AND REVIEW BOARD (NSARB)

FUNCTION:

6.5.2.1 The NSARB shall function to provide independent review and audit of designated activities in the areas of:

- a. nuclear power plant operations
- b. nuclear engineering
- c. chemistry and radiochemistry
- d. metallurgy
- e. instrumentation and control
- f. radiological safety
- g. mechanical and electrical engineering
- h. quality assurance practices

COMPOSITION

6.5.2.2 The composition of the NSARB shall be established as follows:

- a. Chairman and Vice Chairman appointed by name by the Chairman of the Board and Chief Executive Officer of the Corporation or officer of his designation.
- b. At least four technically qualified persons who are not members of the plant staff to provide expertise in the functional areas described in 6.5.2.1.

COMPOSITION (Continued)

- c. At least one qualified non-company affiliated technical consultant and others as required. Duly appointed consultant members shall have equal vote with company affiliated members of the Board.
- d. Three members from the staff of the R.E. Ginna Nuclear Power Plant.
- e. Members in (b) and (d) above to be designated by the Chairman of the Board and Chief Executive Officer.

ALTERNATES

6.5.2.3 Alternate members shall be appointed in writing by the NSARB Chairman to serve on a temporary basis; however, no more than two alternates shall participate in NSARB activities at any one time.

QUALIFICATIONS

6.5.2.4 The minimum qualifications of the Nuclear Safety Audit and Review Board with regard to the individual members shall be maintained at a level equal to or higher than the following:

- a. Reactor Engineering
Engineering graduate or equivalent with over eight years experience in the nuclear power field and over four years responsible engineering management.



QUALIFICATIONS (Continued)

(b) Utility Operations

Engineering graduate or equivalent with over eight years experience in utility operations and with over four years responsible engineering management.

(c) Reactor Physics

Physics graduate or equivalent with over five years experience in reactor physics work.

(d) Heat and Fluid Flow

Engineering or Physics graduate or equivalent with four years experience in heat and fluid flow analysis.

(e) Environmental Analysis

Engineering graduate or equivalent with over five years experience in environmental hazard analysis.

(f) Reactor Control and Instrumentation

Engineering graduate or equivalent with over five years experience in nuclear engineering.

(g) Power Plant Operations

Engineering graduate or equivalent with over five years experience in power plant operations.

(h) Safety Analysis

Engineering graduate or equivalent with over five years experience in nuclear engineering.

(i) Chemistry and Radiochemistry

Engineering graduate or equivalent with over five years experience in nuclear engineering

(j) Radiological Safety

Engineer graduate or equivalent with over five years experience in health physics and/or radiological safety.

MEETING FREQUENCY

- 6.5.2.5 At least semi-annually and as required on call of the Chairman.

QUORUM

- 6.5.2.6 A quorum shall consist of a majority of the principals and will include the Chairman or Vice Chairman. At least one of the quorum shall be a non-company affiliated technical consultant and no more than a minority of the quorum shall be members of the Plant staff.

REVIEW

- 6.5.2.7 The NSARB shall review:
- a. The safety evaluations for 1) changes to procedures, equipment or systems as described in the safety analysis report and 2) tests or experiments completed under the provision of 10CFR Section 50.59 to verify that such actions did not constitute an unreviewed safety question.
 - b. Proposed changes to procedures, equipment or systems which have been determined by the PORC to involve an unreviewed safety question as defined in 10CFR Section 50.59.
 - c. Proposed tests or experiments which have been determined by the PORC to involve an unreviewed safety question as defined in 10CFR Section 50.59.
 - d. Proposed changes in Technical Specifications or licenses.



- e. Violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
- f. Significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- g. All Reportable Events.

REVIEW (Continued)

- h. Any indication of an unanticipated deficiency in some aspect of design or operation of safety related structures, systems, or components.
- i. Reports and meeting minutes of the Plant Operations Review Committee.

AUDITS

- 6.5.2.8 The NSARB shall direct the establishment of an audit program and evaluate audits performed to ensure safe facility operation. Audits shall encompass:
- a. The conformance of facility operation to all provisions contained within the Technical Specifications and applicable license conditions at least once per year.
 - b. The performance, training and qualifications of the operating and technical staff at least once a year.
 - c. The results of all 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 performance of all activities required by the Quality Assurance Program for R. E. Ginna Nuclear Power Plant to meet the criteria of Appendix B, 10 CFR 50, at least once per 24 months.
 - e. The Radiation Emergency Plan and implementing procedures at least at the frequency required by 10 CFR 50.54(t).
 - f. The Station Security Plan and implementing procedures at least at the frequency required by 10 CFR 73.40(d).

AUDITS (Continued)

- g. The Facility Fire Protection Program and implementing procedures at least once per two years.
- h. An independent fire protection and loss prevention program inspection and audit performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.
- i. An inspection and audit of the fire protection and loss prevention program performed by non-licensee personnel at least once per 36 months. The personnel may be representatives of ANI, an insurance brokerage firm, or other qualified individuals.
- j. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- k. The Offsite Dose Calculation Manual and implementing procedures at least once per 24 months.
- l. The Process Control Program and implementing procedures at least once per 24 months.
- m. Any other area of facility operation considered appropriate by the NSARB or the Senior Vice President, Production and Engineering.



AUTHORITY

- 6.5.2.9 a. The Chairman of the Nuclear Safety Audit and Review Board is responsible to the President on all activities for which the Review Board is responsible.
- b. The NSARB shall report to and advise the Senior Vice President, Production and Engineering, on those areas of responsibility specified in Sections 6.5.2.7 and 6.5.2.8.

RECORDS

- 6.5.2.10 Records of NSARB activities shall be prepared, approved, and distributed as indicated below:
- a. Minutes shall be recorded of all meetings of this Board. Copies of the minutes shall be forwarded within 14 days following each meeting to the Corporate Chairman of the Board, Senior Vice President, Production and Engineering and such others as the Chairman of the NSARB may designate.
- b. Reports of reviews encompassed by Section 6.5.2.7 e,f,g and h above, shall be prepared, approved and forwarded to the Senior Vice President, Production and Engineering within 14 days following completion of the review.
- c. Audit reports encompassed by Section 6.5.2.8 above, shall be forwarded to the Senior Vice President, Production and Engineering and to the management positions responsible for the areas audited within 30 days after completion of the audit.



PROCEDURES

6.5.2.11 Written administrative procedures for committee operation shall be prepared and maintained describing the method of submission and the content of presentations to the committee, provisions for use of subcommittees, review and approval by members of written committee evaluations and recommendations, distribution of minutes, and such other matters as may be appropriate.

6.5.3 QUALITY ASSURANCE GROUP

6.5.3.1 The organization, qualifications, responsibilities and training of quality assurance personnel for audits of safety related activities are described in the Quality Assurance Program.



6.6

REPORTABLE EVENT ACTION

6.6.1

The following actions shall be taken for Reportable Events:

- a. The Commission shall be notified and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each Reportable Event shall be reviewed by the PORC and the results of this review shall be submitted to the NSARB and the Senior Vice President, Production and Engineering.



6.0

ADMINISTRATIVE CONTROLS

6.7^e 8

~~SAFETY LIMIT VIOLATION~~ Safety Limit Violation

6.7.1⁸

The following actions shall be taken in the event a Safety Limit is violated:

(A)

a. The provisions of 10 CFR Section 50.36(c)(1)(i) shall be complied with immediately.

b. The Safety Limit violation shall be reported to the

~~Senior Vice President, Production and Engineering,~~ to the
offsite review function
~~NSARB~~ and to the Commission immediately.
NRC

c. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the ^{onsite review function} ~~PERC~~. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems or structures, and (3) corrective action taken to prevent recurrence.

d. The Safety Limit Violation Report shall be submitted to ^{NRC} the Commission, ^{offsite review function} the ~~NSARB~~, and the ~~Senior Vice President,~~

~~Production and Engineering~~ within two weeks of the violation.

Corporate executive responsible for overall plant nuclear safety

6.0

ADMINISTRATIVE CONTROLS

6.4 ~~6.8~~

PROCEDURES Procedures

6.4.1 ~~6.8.1~~

Written procedures shall be established, implemented, and maintained covering the ^{following} activities: ~~referenced below.~~

a. The applicable procedures recommended in ~~Appendix "A"~~
~~of Regulatory Guide 1.33, November 1972.~~

Insert ② →

~~b. Refueling operations.~~

Revision 2. Appendix A,
February 1978.

~~c. Surveillance and test activities of safety related
equipment.~~

~~d. Security Plan implementation.~~

~~e. Emergency Plan implementation.~~

~~f. Fire Protection Program implementation.~~

~~g. The radiological environmental monitoring program.~~

~~h. Offsite Dose Calculation Manual implementation.~~

~~i. Process Control Program implementation.~~

~~6.8.2~~

~~Each procedure and administrative policy of 6.8.1 above,
the changes thereto, shall be reviewed by the PORC and
approved by the Plant Manager, Ginna Station prior to
implementation and reviewed periodically as set forth in
the applicable procedures.~~

6.8.3

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

a. The intent of the original procedures is not altered.

b. The change is approved by two members of the plant
management staff, at least one of whom is the Shift
Supervisor who holds a Senior Reactor Operator's
License.



Insert ② b. The emergency operating procedures required to
implement the requirements of NUREG-0737 and
NUREG-0737, Supplement 1 as stated in Generic
Letter 82-33; and

c. All programs specified in Specification 6.5.

c. The change is documented, reviewed by the PORC, and approved by the Plant Manager, Ginna Station within 10 days of implementation.

[illegible]

6.0 ADMINISTRATIVE CONTROLS

6.5 Programs and Manuals

The following programs shall be established, implemented, and maintained.

6.5.1 Offsite Dose Calculation Manual (ODCM)

- a. The ODCM shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and
- b. The ODCM shall also contain the radioactive effluent controls and radiological environmental monitoring activities and descriptions of the information that should be included in the Annual Radiological Environmental Operating and Radioactive Effluent Release Reports required by Specification 6.6.2 and Specification 6.6.3.

Licensee initiated changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 1. sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s),
 2. a determination that the change(s) maintain the levels of radioactive effluent control required by 10 CFR 20.106, 40 CFR 190, 10 CFR 50.36a, and 10 CFR 50, Appendix I, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations;
- b. Shall become effective after review and acceptance by the onsite review function and the approval of the Plant Manager; and

Insert ② continued

6.5.1 Offsite Dose Calculation Manual (ODCM) (continued)

- c. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in 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 (i.e., month and year) the change was implemented.

6.5.2 Post Accident Sampling

This program provides controls that ensure the capability to obtain and analyze reactor coolant, radioactive gases, and particulates in plant gaseous effluents and containment atmosphere samples under accident conditions. The program shall include the following:

- a. Training of personnel;
- b. Procedures for sampling and analysis; and
- c. Provisions for maintenance of sampling and analysis equipment.



6.0 ADMINISTRATIVE CONTROLS

6.9 ~~Reporting Requirements~~ Reporting Requirements

In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following identified reports shall be submitted to the Regional Administrator of the USNRC, Region 1, unless otherwise noted.

~~6.9.1 Routine Reports~~

6.9.1.1 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 performed 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 specific details required in license conditions based on other commitments shall be included in this report.

The following reports shall be submitted in accordance with 10 CFR 50.4

Startup reports shall be submitted within (1) 90 days following completion of the startup test program, or (2) 90 days following resumption of commercial power operation, whichever is earliest. If the Startup Report does not cover both events (i.e., completion of startup test program, and resumption of commercial power operation), supplementary reports shall be submitted at least every three months until both events have been completed.

6.6.4

6.9.1.2

including documentation of all challenges to the pressurizer power operated relief valves or the pressurizer safety valves,

Monthly Operating Report. Routine reports of operating statistics and shutdown experience shall be submitted; ~~in accordance with 10 CFR 50.4~~ on a monthly basis to the Director, Office of Management Information and Program Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 by the fifteenth of each month following the calendar month covered by the report. The monthly report shall include a narrative summary of operating experience describing the operation of the facility, including major safety related maintenance for the monthly period, except that safety related maintenance performed during the refueling outage may be reported in the monthly report for the month following the end of the outage rather than each month during the outage.

on a monthly basis no later than the 15th

6.6.2

6.9.1.3

Annual Radiological Environmental Operating Report

The Annual

A radiological environmental operating report covering the operation of the unit during the previous calendar year shall be submitted ^{by} prior to May 1st of each year.

The annual radiological environmental report shall include summaries, interpretations, and analysis^e of trends of the results of the radiological environmental ^{monitoring} ~~surveillance~~ activities for the report^{ing} period, including a comparison with background (control) samples and previous environmental surveillance reports and an assessment of the observed impacts of the plant operation on the environment. The reports shall also include the results of land use censuses as required.

The material provided shall be consistent with the objectives outlined in the Office Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C

The annual radiological environmental operating report shall include ~~summarized and tabulated~~ ^{the} results ^{of analyses} ~~in the~~ format of Table 6.9-1 of all radiological environmental samples ^{Insert ④} taken during the report period. In the event that some ^{individual} results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted ^{in a supplementary report} as soon as possible. ~~in a supplementary report.~~ In addition, the annual report

shall include a discussion which identifies the circumstances which prevent any required detection limits for environmental sample analyses from being met, and a discussion of all deviations from the sample schedule of Table 3.16-1. The report shall also include the following: a summary description of the radiological environmental monitoring program including a map of all sampling locations keyed to a table giving distances

Insert ④ and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the ODCM, as well as summarized and tabulated results of these analyses and measurements in the format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979.

~~and directions from the reactor, and the results of the participation in an interlaboratory comparison program.~~

~~6.9.1.4~~ ~~Semiannual Radioactive Effluent Release Report~~
~~G.G.3~~

~~The~~
~~Routine~~ ~~radioactive effluent release reports~~ covering the operation of the unit ~~during the previous six~~ ^(in accordance with 10 CFR 50.36) ~~months of operation~~ shall be submitted ~~within 60 days~~ ^{after January 1 and July 1 of each year.} This report shall include a summary, ~~on a quarterly basis,~~ of the quantities of radioactive liquid and gaseous effluents and solid waste released ^{from the unit. ← Insert ⑤} ~~as outlined in Regulatory Guide 1.21, Revision 1.~~

~~The radioactive effluent release report submitted within 60 days of January 1 shall include an assessment of radiation doses from the radioactive liquid and gaseous effluents released from the unit during each of the previous four calendar quarters as outlined in Regulatory Guide 1.21, Revision 1. In addition, the site boundary maximum noble gas gamma air and beta air doses shall be evaluated. The assessment of radiation doses shall be performed in accordance with the ODCM. This same report shall include an annual summary of hourly meteorological data collected over the previous calendar year. Alternatively, the licensee has the option of retaining this summary on site in a file that shall be provided to the NRC upon request.~~

~~Also, the semiannual report shall include any new location(s) identified by the land use census which~~

Insert ⑤ The material provided shall be consistent with the objectives outlined in the ODCM and in conformance with 10 CFR 50.36a and 10 CFR 50, Appendix T, Section IV. B. 1.

yield a calculated dose or dose commitment greater than those forming the basis of Specifications 4.12.2.2 or 3.16.1. The report shall also contain a discussion which identifies the causes of the unavailability of milk or leafy vegetable samples and identifies locations for obtaining replacement samples in accordance with Specification 3.16.1.4.

The radioactive effluent release report shall include a discussion which identifies the circumstances which prevent any required detection limits for effluent sample analyses from being met.

The radioactive effluent release reports shall include any changes made during the reporting period to the ODCM as specified in Section 6.15, and to the Process Control Program as specified in Section 6.16. The radioactive effluent release reports shall also include a discussion of any major changes to radioactive waste treatment systems in accordance with Specification 6.17.2.1.

6.9.1.5 Pressurizer Relief and Safety Valve Challenges

Challenges to the pressurizer power operated relief valves or safety valves shall be reported no less frequently than on an annual basis.

~~6.9.2 Unique Reporting Requirements~~

~~6.9.2.1 Annually: Results of required leak test performed on sources if the tests reveal the presence of 0.005~~

~~microcurie or more of removable contamination~~

G.G.1

~~6.9.2.2~~

~~Occupational Radiation Exposure Report~~

~~Annually. A tabulation on an annual basis of the number of station, utility and other personnel (including contractors) receiving exposures greater than [>]100 mrem/yr and their associated man-rem exposure according to work and job functions, (e.g., reactor operations and surveillance, in-service inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). The dose assignments to various duty functions may be estimated^{de} based on pocket dosimeter, ^(+thermoluminescent dosimeter) (TLD), or film badge measurements. Small exposures totalling less than [<]20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources shall be assigned to specific~~

~~major work functions. (NOTE: This tabulation supplements the requirements of Section 20.220^{20.220(-)(b)}(-)(b) of 10CFR Part 20.)~~

The report shall be submitted on or before April 30 of each year.

~~6.9.2.3 Annually: The results of specific activity analysis in which the primary coolant exceeded the limits of Specification 3.1.4.1.a and b. The following information shall be included: (1) Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded; (2) Results of the last isotopic analysis for radioiodine performed prior to exceeding the limit,~~

~~6.9-6a~~

results of analyses while the limit was exceeded and results of one analysis after the radioiodine activity was reduced to less than the limit. Each result should include the date and time of sampling and the radioiodine concentrations; (3) Clean-up system flow history starting 48 hours prior to the first sample in which the limit was exceeded; (4) Graph of the I-131 concentration and one other radioiodine isotope concentration as a function of time for the duration of the specific activity above the steady-state level; and (5) The time duration when the specific activity of the primary coolant exceeded the radioiodine limit.

6.9.2.4 Reactor Overpressure Protection System Operation

In the event either the PORVs or the RCS vent(s) are used to mitigate a RCS pressure transient, a Special Report shall be prepared and submitted to the Commission within thirty days. The report shall describe the circumstances initiating the transient, the effect of the PORVs or vent(s) on the transient and any other corrective action necessary to prevent recurrence.

6.9.2.5 Special reports shall be submitted ^{in accordance} ~~to the Director of the NRC~~ with 10 CFR 50.4 ~~Regional Office listed in Appendix D, 10CFR Part 20, with a copy to the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555~~ within the time period specified for each report.



TABLE 6.9-1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY

Name of Facility R. E. Ginna Nuclear Power Plant Docket No. 50-244

Location of Facility Wayne County, New York Reporting Period _____

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection ^a (LLD)	All Indicator Locations Mean (1) ^b Range	Locations with Highest Annual Mean Name Distance and Direction	Annual Mean Mean(1) ^b Range	Control Location Mean(1) ^b Range
<div style="position: relative; width: 100%; height: 100%;"> <div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; background: linear-gradient(to top right, transparent 49%, black 49%, black 51%, transparent 51%); background-size: 100% 100%;"></div> </div>						

^a Nominal Lower Limit of Detection (LLD) as defined in Table Notation a. of Table 4.12-1.

^b Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses (1).

TABLE 6.9-2

REPORTING LEVELS FOR RADIOACTIVITY CONCENTRATIONS IN ENVIRONMENTAL SAMPLES

Reporting Levels

Analysis	Water (pCi/l)	Airborne Particulate or Gases (pCi/m ³)	Fish (pCi/Kg, wet)	Milk (pCi/l)	Broad Leaf Vegetables (pCi/Kg, wet)
H-3	2×10^4				
Mn-54	1000		3×10^4		
Fe-59	400		1×10^4		
Co-58	1000		3×10^4		
Co-60	300		1×10^4		
Zn-65	300		2×10^4		
Zr-Nb-95	400 ^(a)				
I-131	2	0.9		3	1×10^2
Cs-134	30	10	1×10^3	60	1×10^3
Cs-137	50	20	2×10^3	70	2×10^3
Ba-La-140	200 ^(a)			300	

(a) Total for parent and daughter

6.10

RECORD RETENTION

In accordance with Rochester Gas and Electric Corporation policy, operating charts for the first year's operation will be permanently stored.

6.10.1

The following records shall be retained for at least five years:

- a. Records and logs of facility operation, including power levels and periods of operation at each power level.
- b. Records and logs of principal maintenance activities, including inspection, repair, substitution or replacement of principal items of equipment pertaining to nuclear safety.
- c. Reportable Event Reports.
- d. Records of surveillance activities, inspections, and calibrations required by these Technical Specifications.
- e. Records of reactor tests or experiments.
- f. Records of changes made in the Operating Procedures.
- g. Records of sealed source leak tests and results.
- h. Records of annual physical inventory of all sealed source material of record.

6.10.2

The following records shall be retained for the duration of the Facility Operating License:

- a. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report;



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changes shall also be periodically incorporated into the as-built file.

- b. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories.
- c. Records of plant radiation and contamination surveys.
- d. Records of off-site environmental monitoring surveys.
- e. Records of radiation exposure of all plant personnel, including all contractors and visitors to the plant who enter radiation control areas.
- f. Records of radioactivity in liquid and gaseous material released to the environmental and radioactive waste shipments.
- g. Records of transient or operational cycles for those facility components designed for limited number of transients or cycles.
- h. Records of training and qualification for current station technical and operations staff members.
- i. Records of in-service inspections performed pursuant to these Technical Specifications.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR Section 50.59.
- k. Records of meetings of the PORC and the NSARB.
- l. Records of Quality Assurance activities as required by the QA Manual not listed in 6.10.1.



Handwritten scribbles and marks at the bottom left of the page.

m. Records of the service lives of all hydraulic and mechanical snubbers listed in the Inservice Inspection Program including the date at which the service life commences and associated installation and maintenance records.



6.11 RADIATION PROTECTION PROGRAM

Radiation control procedures shall be prepared and made available to all station personnel or other persons who may be subject to radiation exposure at the station. These procedures shall show permissible radiation exposure, and shall be consistent with the requirements of 10 CFR Part 20. The radiation protection program shall be organized and maintained to meet the requirements of 10 CFR Part 20, with exceptions set forth in Section 6.13 of these Technical Specifications. The program shall be adhered to for all operations involving personnel radiation exposure.

~~6.12 (Deleted)~~

~~(Intentionally Left Blank)~~



3-1-73

6.0 ADMINISTRATIVE CONTROLS

⁷ ~~6.13~~ HIGH RADIATION AREA

~~6.13.1~~

Insert (6) → In lieu of the "control device" or "alarm signal" required by paragraph 20.203 (c) (2) of 10 CFR Part 20:

- a. Each High Radiation Area in which the intensity of radiation is 1000 mrem/hr or less shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Health Physics Work Permit. ~~Any~~ ^{if}

individual or group of individuals permitted to enter such areas shall be provided with one or more of the following:

- ^{a.}
~~(1)~~ A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- ^{b.}
~~(2)~~ A radiation monitoring device ^{that} ~~which~~ continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel ~~have been made~~ ^{are aware of} knowledgeable of them.
- ^{c.}
~~(3)~~ ^{individual} ~~A qualified health physicist (i.e.,~~ ^{qualified} in radiation protection procedures) ~~with~~

* Health Physics personnel shall be exempt from the HPWP issuance requirement during the performance of their assigned radiation protection duties, providing they are following plant radiation protection procedures for entry into high radiation areas.



Insert ⑥:

20.1601(a)

6.7.1

20.1601(c)

Pursuant to 10 CFR 20, } paragraph ~~20.203(c)(5)~~, in lieu of the
requirements of 10 CFR ~~20.203(c)~~, each high radiation area, as
defined in 10 CFR 20, in which the intensity of radiation is
> 100 mrem/hr but < 1000 mrem/hr, shall be barricaded and
conspicuously posted as a high radiation area and entrance thereto
shall be controlled by requiring issuance of a Radiation Work
Permit (RWP). Individuals ^{Radiation Protection} qualified in radiation protection
procedures (e.g., ~~Health Physics Technicians~~) or personnel
continuously escorted by such individuals may be exempt from the
RWP issuance requirement during the performance of their assigned
duties in high radiation areas with exposure rates \leq 1000 mrem/hr,
provided they are otherwise following plant radiation protection
procedures for entry into such high radiation areas.

a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and ^{shall} ~~who will~~ perform periodic radiation surveillance at the frequency specified in the ^{RWP} ~~HPWP~~. ~~The surveillance frequency will be established by a plant Health Physicist.~~

b. Each High Radiation Area in which the intensity of radiation is greater than 1000 mrem/hr shall be subject to the provisions of 6.13.1 a. above, and in addition locked doors shall be provided to prevent unauthorized entry into these areas and the keys to unlock these locked doors shall be maintained under the administrative control of the Shift Supervisor on duty.

Insert ⑦

Insert ⑦

4.7.2
5.11.2e

Supervisor

In addition to the requirements of Specification 5.11.1, areas with radiation levels ≥ 1000 mrem/hr shall be provided with locked or continuously guarded doors to prevent unauthorized entry and the keys shall be maintained under the administrative control of the Shift Foreman on duty or ^{radiation protection} health physics supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP that shall specify the dose rate levels in the immediate work areas and the maximum allowable stay times for individuals in those areas. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

4.7.3
5.11.3e

For individual high radiation areas with radiation levels of ≥ 1000 mrem/hr, accessible to personnel, that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, or that cannot be continuously guarded, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded and conspicuously posted, and a flashing light shall be activated as a warning device.

~~6.14 (Deleted)~~

~~Intentionally Left Blank~~

~~6.14-1~~

~~Amendment No. 4~~



6.15 Offsite Dose Calculation Manual (ODCM)

6.15.1 Any changes to the ODCM shall be made by the following method:

6.15.1.a Licensee initiated changes shall be submitted to the Commission with the Semi-annual Radioactive Effluent Release Report for the period in which the change(s) was made and shall contain:

- (i) sufficiently detailed information to support the rationale for the change.
- (ii) a determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations; and
- (iii) documentation of the fact that the change has been reviewed and found acceptable by the PORC.

6.15.1.b Licensee initiated changes shall become effective after review and acceptance by the PORC on a date specified by the licensee.

6.16 Process Control Program (PCP)

6.16.1 Any changes to the PCP shall be made by the following method:

6.16.1.a Licensee initiated changes shall be submitted to the Commission with the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made and shall contain:

- (i) sufficiently detailed information to support the rationale for the change;
- (ii) a determination that the change will not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes; and
- (iii) documentation of the fact that the change has been reviewed and found acceptable by the PORC.

6.16.1.b Licensee initiated changes shall become effective after review and acceptance by the PORC on a date specified by the licensee.



2000

6.17 Major Changes to Radioactive Waste Treatment Systems
(Liquid, Gaseous and Solid)

FUNCTION

6.17.1 The radioactive waste treatment systems (liquid, gaseous and solid) are those systems defined in Technical Specification 5.5.

6.17.2 Major changes to the radioactive waste systems (liquid and gaseous) shall be reported by the following method. For the purpose of this specification, "major changes" is defined in Specification 6.17.3 below.

- 6.17.2.1 The Commission shall be informed of all major changes by the inclusion of a suitable discussion or by reference to a suitable discussion of each change in the Semiannual Radioactive Effluent Release Report for the period in which the changes were made. The discussion of each change shall contain:
- a) a summary of the evaluation that led to the determination that the change could be made (in accordance with 10 CFR 50.59);
 - b) sufficient detailed information to support the reason for the change;
 - c) a detailed description of the equipment, components and processes involved and the interfaces with other plant systems;

- d) an evaluation of the change which shows the predicted releases of radioactive materials in liquid and gaseous effluents from those previously predicted;
- e) an evaluation of the change which shows the expected maximum exposures to individual in the unrestricted area and to the general population from those previously estimated;
- f) documentation of the fact that the change was reviewed and found acceptable by the PORC.

6.17.3 "Major Changes" to radioactive waste systems (liquid, gaseous and solid) shall include the following:

- a) Major changes in process equipment, components, and structures from those in use (e.g., deletion of evaporators and installation of demineralizers);
- b) Major changes in the design of radwaste treatment systems (liquid, gaseous and solid) that could significantly alter the characteristics and/or quantities of effluents released;
- c) Changes in system design which may invalidate the accident analysis (e.g., changes in tank capacity that would alter the curies released).

ATTACHMENT C

Proposed Revised R.E. Ginna Nuclear Power Plant Technical Specification 6.0

Revise the pages as follows:

<u>Remove</u>	<u>Insert</u>
ii	ii
3.1-21	3.1-21
3.5-2a	3.5-2a
3.6-3	3.6-3
3.15-1	3.15-1
3.16-1	3.16-1
3.16-2	3.16-2
Entire Section 6.0	6.0-1
---	6.0-2
---	6.0-3
---	6.0-4
---	6.0-5
---	6.0-6
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---	6.0-9
---	6.0-10
---	6.0-11
---	6.0-12

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3.1.4 Maximum Coolant Activity
Specifications

3.1.4.1 Whenever the reactor is critical or the reactor coolant average temperature is greater than 500°F:

- a. The total specific activity of the reactor coolant shall not exceed $84/\bar{E}$ $\mu\text{Ci/gm}$, where \bar{E} is the average beta and gamma energies per disintegration in Mev.
- b. The I-131 equivalent of the iodine activity in the reactor coolant shall not exceed 0.2 $\mu\text{Ci/gm}$.
- c. The I-131 equivalent of the iodine activity on the secondary side of a steam generator shall not exceed 0.1 $\mu\text{Ci/gm}$.

3.1.4.2 If the limit of 3.1.4.1.a is exceeded, then be subcritical with reactor coolant average temperature less than 500°F within 8 hours.

3.1.4.3 a. If the I-131 equivalent activity in the reactor coolant exceeds the limit of 3.1.4.1.b but is less than the allowable limit shown on Figure 3.1.4-1, operation may continue for up to 168 hours.



3.5.5.2 If the setpoint for a radioactive effluent monitor alarm and/or trip is found to be higher than required, one of the following three measures shall be taken immediately:

- (i) the setpoint shall be immediately corrected without declaring the channels inoperable; or
- (ii) immediately suspend the release of effluents monitored by the effected channel; or
- (iii) declare the channel inoperable.

3.5.5.3 If the number of channels which are operable is found to be less than required, take the action shown in Table 3.5-5. Exert best efforts to return the instruments to OPERABLE status within 31 days and, if unsuccessful, explain in the next Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.

3.5.6 Control Room HVAC Detection Systems

3.5.6.1 During all modes of plant operation, detection systems for chlorine gas, ammonia gas and radioactivity in the control room HVAC intake shall be operable with setpoints to isolate air intake adjusted as follows:

Basis:

The reactor coolant system conditions of cold shutdown assure that no steam will be formed and hence there would be no pressure buildup in the containment if the reactor coolant system ruptures.

The shutdown margins are selected based on the type of activities that are being carried out. The (2000 ppm) boron concentration provides shutdown margin which precludes criticality under any circumstances. When the reactor head is not to be removed, a cold shutdown margin of $1\Delta k/k$ precludes criticality in any occurrence.

Regarding internal pressure limitations, the containment design pressure of 60 psig would not be exceeded if the internal pressure before a major steam break accident were as much as 1 psig.⁽¹⁾ The containment is designed to withstand an internal vacuum of 2.5 psig.⁽²⁾ The 2.0 psig vacuum is specified as an operating limit to avoid any difficulties with motor cooling.

In order to minimize containment leakage during a design basis accident involving a significant fission product release, penetrations not required for accident mitigation are provided with isolation boundaries. These isolation boundaries consist of either passive devices or active automatic valves and are listed in a procedure under the control of the Quality Assurance Program. Closed manual valves, deactivated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges and closed systems are considered passive devices. Automatic isolation valves designed to close following an accident without operator action, are considered active devices. Two isolation devices are provided for each mechanical penetration, such that no single credible failure or malfunction of an active component can cause a loss of isolation, or result in a leakage rate that exceeds limits assumed in the safety analyses⁽³⁾.

In the event that one isolation boundary is inoperable, the affected penetration must be isolated with at least one boundary that is not affected by a single active failure. Isolation boundaries that meet this criterion are a closed and deactivated automatic containment isolation valve, a closed manual valve, or a blind flange.

The opening of closed containment isolation valves on an intermittent basis under administrative control includes the following considerations: (1) stationing an individual qualified in accordance with station procedures, who is in constant communication with the control room, at the valve controls, (2) instructing this individual to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to isolate the boundary and that this action will prevent the release of radioactivity outside the containment.

3.15 Overpressure Protection System

Applicability

Applies whenever the temperature of one or more of the RCS cold legs is $\leq 330^{\circ}\text{F}$, or the Residual Heat Removal System is in operation.

Objective

To prevent overpressurization of the reactor coolant system and the residual heat removal system.

Specification

- 3.15.1 Except during secondary side hydrostatic tests in which RCS pressure is to be raised above the PORV setpoint, at least one of the following overpressure protection systems shall be operable:
- a. Two pressurizer power operated relief valves (PORVs) with a lift setting of ≤ 424 psig, or
 - b. A reactor coolant system vent of ≥ 1.1 square inches.
- 3.15.1.1 With one PORV inoperable, either restore the inoperable PORV to operable status within 7 days or depressurize and vent the RCS through a 1.1 square inch vent(s) within the next 8 hours; maintain the RCS in a vented condition until both PORVs have been restored to operable status.
- 3.15.1.2 With both PORVs inoperable, depressurize and vent the RCS through a 1.1 square inch vent(s) within 8 hours; maintain the RCS in a vented condition until both PORVs have been restored to operable status.
- 3.15.1.3 Use of the overpressure protection system to mitigate an RCS or RHRS pressure transient shall be reported in accordance with Specification 6.6.4.

Basis

An RCS vent opening of greater than 1.1 square inches ensures that the RCS will be protected from pressure transients which could exceed the limits of Appendix G to 10 CFR Part 50 when one or more of the RCS cold legs are $\leq 330^{\circ}\text{F}^{(1)}$. This relief capacity will



3.16 Radiological Environmental Monitoring

Applicability

Applies to routine testing of the plant environs.

Objective

To establish a program which will assure recognition of changes in radioactivity or exposure pathways in the environs.

Specification

3.16.1 Monitoring Program

3.16.1.1 The radiological environmental monitoring program shall be conducted as specified in Table 3.16-1 at the locations given in the ODCM.

3.16.1.2 If the radiological environmental monitoring program is not conducted as specified in Table 3.16-1, prepare and submit to the Commission, in the Annual Radiological Environmental Operating Report, a description of the reasons for not conducting the program as required and the plans for preventing a recurrence. (Deviations are permitted from the required sampling schedule if specimens are unobtainable due to hazardous conditions, seasonal availability, or to malfunction of automatic sampling equipment. If the latter, efforts shall be made to complete corrective action prior to the end of the next sampling period.)

3.16.1.3 If the level of radioactivity in an environmental sampling medium at one or more of the locations specified in the ODCM exceeds the reporting levels provided in the

ODCM when averaged over any calendar quarter, a Special Report shall be submitted to the Commission within thirty days which includes an evaluation of any release conditions, environmental factors or other aspects which caused the reporting levels to be exceeded.

When more than one of the radionuclides specified in the ODCM are detected in the sampling medium, this report shall be submitted if:

$$\frac{\text{concentration (1)}}{\text{limit level (1)}} + \frac{\text{concentration (2)}}{\text{limit level (2)}} + \dots \geq 1.0$$

When radionuclides other than those specified in the ODCM are detected and are the result of plant effluents, this report shall be submitted if the potential annual dose to an individual is greater than the calendar year limit of Specifications 3.9.1.2.a or 3.9.2.2.b. This report is not required if the measured level of radioactivity was not the result of plant effluents; however, in such an event, the condition shall be reported and described in the Annual Radiological Environmental Operating Report.

- 3.16.1.4 If milk or fresh leafy vegetable samples are unavailable for more than one sample period from one or more of the sampling locations indicated by the ODCM, a discussion shall be included in the Radioactive Effluent Release Report which identifies the cause of the unavailability of samples and identifies locations for



6.0 ADMINISTRATIVE CONTROLS

6.1 Responsibility

- 6.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

The Plant Manager or his designee shall approve, prior to implementation, each proposed test, experiment or modification to structures, systems or components that affect nuclear safety.

- 6.1.2 The Shift Supervisor (SS) shall be responsible for the control room command function. During any absence of the SS from the control room while the unit is above Cold Shutdown, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the SS from the control room while the unit is in Cold Shutdown or Refueling, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.
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6.0 ADMINISTRATIVE CONTROLS

6.2 Organization

6.2.1 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 defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in 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 UFSAR;

6.2.2 Unit Staff

The unit staff organization shall include the following:

- a. A non-licensed operator shall be assigned to the shift crew with fuel in the reactor. An additional non-licensed operator shall be assigned to the shift crew above Cold Shutdown.
- b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54 (m) (2) (i) and Specifications 6.2.2.a and 6.2.2.e 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 requirement.
- c. An individual qualified in radiation protection procedures 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 required position.

(continued)

6.2 Organization

6.2.2 Unit Staff (continued)

- d. The amount of overtime worked by unit staff members performing safety related functions shall be limited and controlled in accordance with a NRC approved program.
 - e. The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor (SS) in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. The STA shall be assigned to the shift crew above Cold Shutdown and shall meet the qualifications specified within a NRC approved STA training program.
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6.0 ADMINISTRATIVE CONTROLS

6.3 Unit Staff Qualifications

- 6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI Standard N18.1-1971, as supplemented by Regulatory Guide 1.8, Revision 1, September 1975, for comparable positions.
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6.0 ADMINISTRATIVE CONTROLS

6.4 Procedures

- 6.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:
- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;
 - b. The emergency operating procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33; and
 - c. All programs specified in Specification 6.5.
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6.0 ADMINISTRATIVE CONTROLS

6.5 Programs and Manuals

The following programs shall be established, implemented, and maintained.

6.5.1 Offsite Dose Calculation Manual (ODCM)

- a. The ODCM shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and
- b. The ODCM shall also contain the radioactive effluent controls and radiological environmental monitoring activities and descriptions of the information that should be included in the Annual Radiological Environmental Operating and Radioactive Effluent Release Reports required by Specification 6.6.2 and Specification 6.6.3.

Licensee initiated changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 1. sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s),
 2. a determination that the change(s) maintain the levels of radioactive effluent control required by 10 CFR 20.106, 40 CFR 190, 10 CFR 50.36a, and 10 CFR 50, Appendix I, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations;
- b. Shall become effective after review and acceptance by the onsite review function and the approval of the Plant Manager; and

(continued)

6.5 Programs and Manuals

6.5.1 Offsite Dose Calculation Manual (ODCM) (continued)

- c. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in 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 (i.e., month and year) the change was implemented.

6.5.2 Post Accident Sampling Program

This program provides controls that ensure the capability to obtain and analyze reactor coolant, radioactive gases, and particulates in plant gaseous effluents and containment atmosphere samples under accident conditions. The program shall include the following:

- a. Training of personnel;
 - b. Procedures for sampling and analysis; and
 - c. Provisions for maintenance of sampling and analysis equipment.
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(continued)

6.0 ADMINISTRATIVE CONTROLS

6.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

6.6.1 Occupational Radiation Exposure Report

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors) receiving exposures > 100 mrem/yr and their associated man rem exposure according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). This tabulation supplements the requirements of 10 CFR 20.2206(7)(b). The dose assignments to various duty functions may be estimated based on pocket dosimeter, thermoluminescent dosimeter (TLD), or film badge measurements. Small exposures totalling < 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources should be assigned to specific major work functions. The report shall be submitted on or before April 30 of each year.

6.6.2 Annual Radiological Environmental Operating Report

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the radiological environmental monitoring activities for the reporting period. The material provided shall be consistent with the objectives outlined in the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

(continued)

6.6 Reporting Requirements

6.6.2 Annual Radiological Environmental Operating Report (continued)

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the ODCM, as well as summarized and tabulated results of these analyses and measurements in the format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in a supplementary report as soon as possible.

6.6.3 Radioactive Effluent Release Report

The Radioactive Effluent Release Report covering the operation of the unit shall be submitted in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the ODCM and in conformance with 10 CFR 50.36a and 10 CFR 50, Appendix I, Section IV.B.1.

6.6.4 Monthly Operating Reports

Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the pressurizer power operated relief valves or pressurizer safety valves, shall be submitted on a monthly basis no later than the 15th of each month following the calendar month covered by the report.

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6.0 ADMINISTRATIVE CONTROLS

6.7 High Radiation Area

- 6.7.1 Pursuant to 10 CFR 20, paragraph 20.1601(c), in lieu of the requirements of 10 CFR 20.1601(a), each high radiation area, as defined in 10 CFR 20, in which the intensity of radiation is > 100 mrem/hr but < 1000 mrem/hr, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP). Individuals qualified in radiation protection procedures (e.g., Radiation Protection Technicians) or personnel continuously escorted by such individuals may be exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas with exposure rates ≤ 1000 mrem/hr, provided they are otherwise following plant radiation protection procedures for entry into such high radiation areas.

Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device that continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device that continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel are aware of them.
- c. An individual qualified in radiation protection procedures with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified in the RWP.

- 6.7.2 In addition to the requirements of Specification 5.11.1, areas with radiation levels ≥ 1000 mrem/hr shall be provided with locked or continuously guarded doors to prevent unauthorized entry and the keys shall be maintained under the administrative control of the Shift Supervisor on duty or radiation protection supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP that shall specify the dose rate

(continued)

6.7 High Radiation Area

6.7 (continued)

levels in the immediate work areas and the maximum allowable stay times for individuals in those areas. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

- 6.7.3 For individual high radiation areas with radiation levels of ≥ 1000 mrem/hr, accessible to personnel, that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, or that cannot be continuously guarded, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded and conspicuously posted, and a flashing light shall be activated as a warning device.
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6.0 ADMINISTRATIVE CONTROLS

6.8 Safety Limit Violation

6.8.1 The following actions shall be taken in the event a Safety Limit is violated:

- a. The provisions of 10 CFR 50.36(c)(1)(i)(A) shall be complied with immediately;
 - b. The Safety Limit violation shall be reported to the corporate executive responsible for overall plant nuclear safety, to the offsite review function and the NRC immediately;
 - c. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the onsite review function. This report shall describe: (1) applicable circumstances preceding the violation, (2) effects of the violation upon the facility components, systems or structures, and (3) corrective action taken to prevent recurrence; and
 - d. The Safety Limit Violation Report shall be submitted to the NRC, the offsite review function, and the corporate executive responsible for overall nuclear plant safety within two weeks of the violation.
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ATTACHMENT D

Marked Up Copy of Improved Technical Specifications (NUREG-1431)
Technical Specification 5.0

Included pages:

5.0-1
5.0-2
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5.0-4
5.0-5
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8.0 ADMINISTRATIVE CONTROLS

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8.1 Responsibility

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8.1.1 The ^{Manager}~~Plant Superintendent~~ shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

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The ^{Manager}~~Plant Superintendent~~, or his designee, ~~in accordance with approved administrative procedures~~, shall approve, prior to implementation, each proposed test, ^{components} or experiment and proposed ^{structures,} or changes and modifications to unit systems or equipment that affect nuclear safety.

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8.1.2 The ~~Shift Supervisor (SS)~~ shall be responsible for the control room command function. ~~A management directive to this effect signed by the [highest level of corporate or site management]~~

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~~shall be issued annually to all station personnel. During any absence of the [SS] from the control room while the unit is in~~ ^{above cold shutdown} ~~MODE 1, 2, 3, or 4, an individual with a valid Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the [SS] from the control room while the unit is in MODE 5 or 6, an individual with~~

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an active

~~a valid SRO license or Reactor Operator license shall be designated to assume the control room command function.~~

Cold Shutdown or Refueling

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 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 defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in 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 [FSAR];

UFSAR.

- b. The [Plant Superintendent] shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant;

- c. The [a specified corporate executive position] 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; and

- 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 their independence from operating pressures.

5.2.2 Unit Staff

include the following:

The unit staff organization shall ~~be as follows:~~

- a. ~~Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 5.2.2-1.~~

A non-licensed operator shall be assigned to the shift crew with fuel in the reactor. An additional non-licensed operator shall be assigned to the shift crew above cold shutdown

(continued)

5.2 Organization

5.2.2

Unit Staff (continued)

Insert ① →

C.2.4

- b. ~~At least one licensed Reactor Operator (RO) shall be present in the control room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, 3, or 4, at least one licensed Senior Reactor Operator (SRO) shall be present in the control room.~~

~~An individual qualified in radiation protection procedures~~

- c. ~~A [Health Physics 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 required position.~~

C.2.4

- d. ~~Either a licensed SRO or licensed SRO limited to fuel handling who has no concurrent responsibilities during this operation shall be present during fuel handling and shall directly supervise all CORE ALTERATIONS.~~

- e. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety related functions (e.g., licensed SROs, licensed ROs, health physicists, auxiliary operators, and key maintenance personnel).

Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work an [8 or 12] hour day, nominal 40 hour week while the unit is operating. However, 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 modification, on a temporary basis the following guidelines shall be followed:

1. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time;
2. 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 7 day period, all excluding shift turnover time;
3. A break of at least 8 hours should be allowed between work periods, including shift turnover time;

(continued)



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C.2.ü

- b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54 (m) (2) (i) and Specifications 6.2.2.a and 6.2.2.e 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 requirement.

5.2 Organization

5.2.2 Unit Staff (continued)

4. 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 in advance by the [Plant Superintendent] or his designee, in accordance with approved administrative procedures, or by higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation.

Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the [Plant Superintendent] or his designee to ensure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

OR

C.7.vii

- d. The amount of overtime worked by unit staff members performing safety related functions shall be limited and controlled in accordance with the NRC Policy Statement on working hours (Generic Letter 82-12)? a NRC approved program

C.6.iii

- f. The [Operations Manager or Assistant Operations Manager] shall hold an SRO license.

e.g. The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor (SS) in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit.

C.1.ii

C.2.ii

The STA shall be assigned to the shift crew above Cold Shutdown and shall meet the qualifications specified within a NRC approved STA training program.

Table 5.2.2-1 (page 1 of 1)
Minimum Shift Crew Composition(a)
[Single Unit Facility]

POSITION(b)	MINIMUM CREW NUMBER	
	UNIT IN MODE 1, 2, 3, OR 4	UNIT IN MODE 5 OR 6
SS	1	1
SRO	1	None
RO	2	1
AO	2	1
STA(c)	1	None

(a) The shift crew composition may be one less than the minimum requirements of Table 5.2.2-1 for not more than 2 hours to accommodate unexpected absences of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements of Table 5.2.2-1. 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.

(b) Table Notation:

SS - [Shift Supervisor] with a Senior Reactor Operator license;
SRO - Individual with a Senior Reactor Operator license;
RO - Individual with a Reactor Operator license;
AO - Auxiliary Operator;
STA - Shift Technical Advisor.

(c) The STA position may be filled by an on-shift SS or SRO provided the individual meets the Commission Policy Statement on Engineering Expertise on Shift.

Table 5.2.2-1 (page 1 of 1)
Minimum Shift Crew Composition^(a)
[Two Units With a Common Control Room]
(Totals for Both Units)

POSITION ^(b)	MINIMUM CREW NUMBER		
	EACH UNIT IN MODE 1, 2, 3, OR 4	ONE UNIT IN MODE 1, 2, 3, OR 4, AND ONE UNIT IN MODE 5, MODE 6, OR DEFUELED	EACH UNIT IN MODE 5 OR 6 OR DEFUELED
SS	1	1	1
SRO	1	1	None
RO	3	3	2
AO	3	3	3
STA ^(c)	1	1	None

(a) The shift crew composition may be one less than the minimum requirements of Table 5.2.2-1 for not more than 2 hours 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 5.2.2-1. 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.

(b) Table Notation:

- SS - [Shift Supervisor] with a Senior Reactor Operator license for each unit whose reactor contains fuel.
- SRO - Individual with a Senior Reactor Operator license for each unit whose reactor contains fuel. Otherwise, provide an individual for each unit who holds a Senior Reactor Operator license for the unit assigned. During CORE ALTERATIONS on either unit at least one licensed SRO or licensed SRO limited to fuel handling, who has no other concurrent responsibilities, must be present.
- RO - Individual with a Reactor Operator license or a Senior Reactor Operator license for unit assigned. At least one RO shall be assigned to each unit whose reactor contains fuel and one RO shall be assigned as relief operator for unit(s) in MODE 1, 2, or 3. Individuals acting as relief operators shall hold a license for both units. Otherwise, for each unit, provide a relief operator who holds a license for the unit assigned.
- AO - At least one auxiliary operator shall be assigned to each unit whose reactor contains fuel.
- STA - Shift Technical Advisor.

(c) The STA position may be filled by an on-shift SS or SRO provided the individual meets the Commission Policy Statement on Engineering Expertise on Shift.

Table 5.2.2-1 (page 1 of 1)
Minimum Shift Crew Composition(a)
[Two Units With Two Control Rooms]
(Numbers for Each Unit)

POSITION(b)	MINIMUM CREW NUMBER			
	UNIT IN MODE 1, 2, 3, OR 4	UNIT IN MODE 5 OR 6	UNIT IN MODE 1, 2, 3, OR 4; OTHER UNIT IN MODE 5 OR 6 OR DEFUELED	UNIT IN MODE 5 OR 6; OTHER UNIT IN MODE 5 OR 6 OR DEFUELED
SS	1(d)	1(d)	1(d)	1(d)
SRO	1	None	1	None
RO	2	1	2	1
AO	2	1	2	2(e)
STA(c)	1(d)	None	1	None

(a) The shift crew composition may be one less than the minimum requirements of Table 5.2.2-1 for not more than 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 5.2.2-1. 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.

(b) Table Notation:

SS - [Shift Supervisor] with a Senior Reactor Operator license;
SRO - Individual with a Senior Reactor Operator license;
RO - Individual with a Reactor Operator license;
AO - Auxiliary Operator;
STA - Shift Technical Advisor.

(c) The STA position may be filled by an on-shift SS or SRO provided the individual meets the Commission Policy Statement on Engineering Expertise on Shift.

(d) Individual may fill the same position on the other unit if licensed for both.

(e) One of the two required individuals may fill the same position on the other unit.

6
5.0 ADMINISTRATIVE CONTROLS6
5.3 Unit Staff Qualifications

Reviewer's Note: Minimum qualifications for members of the unit staff shall be specified by use of an overall qualification statement referencing an ANSI Standard acceptable to the NRC staff or by specifying individual position qualifications. Generally, the first method is preferable; however, the second method is adaptable to those unit staffs requiring special qualification statements because of unique organizational structures.

- 5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ~~[Regulatory Guide 1.8, Revision 2, 1987, or more recent revisions, or ANSI Standard acceptable to the NRC staff].~~ The staff not covered by ~~[Regulatory Guide 1.8]~~ shall meet or exceed the minimum qualifications of ~~[Regulations, Regulatory Guides, or ANSI Standards acceptable to NRC staff].~~ In addition, the Shift Technical Advisor shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.
- C. 1.22
C. 6.2V

ANSI Standard N18.1-1971, as supplemented by Regulatory Guide 1.8, Revision 1, September 1975, for comparable positions.

5.0 ADMINISTRATIVE CONTROLS

5.4 Training

- 5.4.1 A retraining and replacement training program for the unit staff shall be maintained under the direction of the [position title] and shall meet or exceed the requirements and recommendations of Section [] of [an ANSI Standard acceptable to the NRC staff] and 10 CFR 55, and, for appropriate designated positions, shall include familiarization with relevant industry operational experience.
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5.0 ADMINISTRATIVE CONTROLS

5.5 Reviews and Audits

Reviewer's Note: The licensee shall describe the method(s) established to conduct independent reviews and audits. The methods may take a range of forms acceptable to the NRC. These methods may include creating an organizational unit or a standing or ad hoc committee, or assigning individuals capable of conducting these reviews and audits. When an individual performs a review function, a cross disciplinary review determination is necessary. If deemed necessary, such reviews shall be performed by the review personnel of the appropriate discipline. Individual reviewers shall not review their own work. Regardless of the method used, the licensee shall specify the functions, organizational arrangement, responsibilities, appropriate ANSI/ANS 3.1-1981 qualifications, and reporting requirements of each functional element or unit that contributes to these processes.

Reviews and audits of activities affecting plant safety have two distinct elements. The first element is the reviews performed by plant staff personnel to ensure that day to day activities are conducted in a safe manner. These reviews are described in Section 5.5.1. The second element, described in Section 5.5.2, is the [offsite] reviews and audits of unit activities and programs affecting nuclear safety that are performed independent of the plant staff. The [offsite] reviews and audits should provide integration of the reviews and audits into a cohesive program that provides senior level utility management with an assessment of facility operation and recommends actions to improve nuclear safety and plant reliability. It should include an assessment of the effectiveness of reviews conducted according to Section 5.5.1.

5.5.1 Plant Reviews

Reviewer's Note: The licensee shall describe provisions for plant reviews (organization, reporting, records) and the appropriate ANSI/ANS Standard for personnel qualification.

5.5.1.1 Functions

The [plant review method specified in Specification 5.5.1] shall, as a minimum, incorporate functions that:

- a. Advise the [Plant Superintendent] on all matters related to nuclear safety;

(continued)

5.5 Reviews and Audits

5.5.1.1 Functions (continued)

- b. Recommend to the [Plant Superintendent] approval or disapproval of items considered under Specifications 5.5.1.2.a through 5.5.1.2.e prior to their implementation, except as provided in Specification 5.7.1.3;
- c. Determine whether each item considered under Specifications 5.5.1.2.a through 5.5.1.2.d constitutes an unreviewed safety question as defined in 10 CFR 50.59; and
- d. Notify the [Vice President — Nuclear Operations] of any safety significant disagreement between the [review organization or individual specified in Specification 5.5.1] and the [Plant Superintendent] within 24 hours. However, the [Plant Superintendent] shall have responsibility for resolution of such disagreements pursuant to Specification 5.1.1.

5.5.1.2 Responsibilities

The [plant review method specified in Specification 5.5.1] shall be used to conduct, as a minimum, reviews of the following:

- a. All proposed procedures required by Specification 5.7.1.1 and changes thereto;
- b. All proposed programs required by Specification 5.7.2 and changes thereto;
- c. All proposed changes and modifications to unit systems or equipment that affect nuclear safety;
- d. All proposed tests and experiments that affect nuclear safety; and
- e. All proposed changes to these Technical Specifications (TS), their Bases, and the Operating License.

(continued)

5.5 Reviews and Audits (continued)

5.5.2 [Offsite] Review and Audit

Reviewer's Note: The licensee shall describe the provisions for reviews and audits independent of the plant's staff (organization, reporting, and records) and the appropriate ANSI/ANS Standards for personnel qualifications. These individuals may be located onsite or offsite provided organizational independence from plant staff is maintained. The [technical] review responsibilities, Specification 5.5.2.4, shall include several individuals located onsite.

5.5.2.1 Functions

The [offsite review and audit provisions specified in Specification 5.5.2] shall, as a minimum, incorporate the following functions that:

- a. Advise the [Vice President — Nuclear Operations] on all matters related to nuclear safety;
- b. Advise the management of the audited organization, and [its Corporate Management and Vice President — Nuclear Operations], of the audit results as they relate to nuclear safety;
- c. Recommend to the management of the audited organization, and its management, any corrective action to improve nuclear safety and plant operation; and
- d. Notify the [Vice President — Nuclear Operations] of any safety significant disagreement between the [review organization or individual specified in Specification 5.5.2] and the [organization or function being reviewed] within 24 hours.

5.5.2.2 [Offsite] Review Responsibilities

The [review method specified in Specification 5.5.2] shall be responsible for the review of:

- a. The safety evaluations for changes to procedures, equipment, or systems, and tests or experiments completed under the provisions of 10 CFR 50.59, to verify that such actions do not constitute an unreviewed safety question as defined in 10 CFR 50.59;

(continued)

5.5 Reviews and Audits (continued)

5.5.2.2 [Offsite] Review Responsibilities (continued)

- b. Proposed changes to procedures, equipment, or systems that involve an unreviewed safety question as defined in 10 CFR 50.59;
- c. Proposed tests or experiments that involve an unreviewed safety question as defined in 10 CFR 50.59;
- d. Proposed changes to TS and the Operating License;
- e. Violations of codes, regulations, orders, license requirements, and internal procedures or instructions having nuclear safety significance;
- f. All Licensee Event Reports required by 10 CFR 50.73;
- g. Plant staff performance;
- h. Indications of unanticipated deficiencies in any aspect of design or operation of structures, systems, or components that could affect nuclear safety;
- i. Significant accidental, unplanned, or uncontrolled radioactive releases, including corrective action to prevent recurrence;
- j. Significant operating abnormalities or deviations from normal and expected performance of equipment that affect nuclear safety; and
- k. The performance of the corrective action system.

Reports or records of these reviews shall be forwarded to the [Vice President — Nuclear Operations] within 30 days following completion of the review.

5.5.2.3 Audit Responsibilities

The audit responsibilities shall encompass:

- a. The conformance of unit operation to provisions contained within the TS and applicable license conditions;
- b. The training and qualifications of the unit staff;

(continued)

5.5 Reviews and Audits (continued)

5.5.2.3 Audit Responsibilities (continued)

- c. The implementation of all programs required by Specification 5.7.2;
- d. Actions taken to correct deficiencies occurring in equipment, structures, systems, components, or method of operation that affect nuclear safety; and
- e. Other activities and documents as requested by the [Vice President — Nuclear Operations].

Reports or records of these audits shall be forwarded to the [Vice President — Nuclear Operations] within 30 days following completion of the review.

5.5.2.4 [Technical] Review Responsibilities

The [technical] review responsibilities shall encompass:

- a. Plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources that may indicate areas for improving plant safety;
- b. Plant operations, modifications, maintenance, and surveillance to verify independently that these activities are performed safely and correctly and that human errors are reduced as much as practical;
- c. Internal and external operational experience information that may indicate areas for improving plant safety; and
- d. Making detailed recommendations through the [Vice President — Nuclear Operations] for revising procedures, equipment modifications or other means of improving nuclear safety and plant reliability.

5.5.3 Records

Written records of reviews and audits shall be maintained. As a minimum these records shall include:

- a. Results of the activities conducted under the provisions of Section 5.5;

(continued)

5.5 Reviews and Audits (continued)

5.5.3 Records (continued)

- b. Recommendations to the management of the organization being audited;
 - c. An assessment of the safety significance of the review or audit findings;
 - d. Recommended approval or disapproval of items considered under Specifications 5.5.1.2.a through 5.5.1.2.e; and
 - e. Determination whether each item considered under Specifications 5.5.1.2.a through 5.5.1.2.d constitutes an unreviewed safety question as defined in 10 CFR 50.59.
-

5.0 ADMINISTRATIVE CONTROLS

5.6 Technical Specifications (TS) Bases Control

- 5.6.1 Changes to the Bases of the TS shall be made under appropriate administrative controls and reviewed according to Specification 5.5.1.
- 5.6.2 Licensees may make changes to Bases without prior NRC approval provided the changes do not involve either of the following:
- a. A change in the TS incorporated in the license; or
 - b. A change to the updated FSAR or Bases that involves an unreviewed safety question as defined in 10 CFR 50.59.
- 5.6.3 The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the FSAR.
- 5.6.4 Proposed changes that meet the criteria of (a) or (b) above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71.
-

C.5.iii

6.0
5.0 ADMINISTRATIVE CONTROLS6.4
5.7 ~~Procedures, Programs, and Manuals~~5.7.1 ~~Procedures~~5.7.1.1 ~~Scope~~

6.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:

- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;
- b. The emergency operating procedures required to implement the requirements of NUREG-0737 and ~~to~~ NUREG-0737, Supplement 1, as stated in ~~Generic Letter 82-33~~, and

C.2.IV.

~~c. Security plan implementation;~~

C.2.V

~~d. Emergency plan implementation;~~

C.5.IV

~~e. Quality assurance for effluent and environmental monitoring;~~

C.1.IV

~~f. Fire Protection Program implementation; and~~

~~c.g.~~ All programs specified in Specification ~~5.7.2~~

6.5

5.7.1.2 Review and Approval

Each procedure of Specification 5.7.1.1, and changes thereto, shall be reviewed in accordance with Specification 5.5.1, approved by the [Plant Superintendent] or his designee in accordance with approved administrative procedures prior to implementation and reviewed periodically as set forth in administrative procedures.

5.7.1.3 Temporary Changes

Temporary changes to procedures of Specification 5.7.1 may be made provided:

- a. The intent of the existing procedure is not altered;
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator license on the unit affected; and

(continued)

6.0 ADMINISTRATIVE CONTROLS

~~5.7~~ ^{6.5} ~~Procedures, Programs, and Manuals~~

5.7.1.3 Temporary Changes (continued)

- C.3.VL
- c. The change is documented and reviewed in accordance with Specification 5.5.1 and approved by the [Plant Superintendent] or his designee in accordance with approved administrative procedures within 14 days of implementation.

~~5.7.2~~ ~~Programs and Manuals~~

The following programs shall be established, implemented, and maintained.

5.7.2.1 Radiation Protection Program

C.2.X

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR 20 and shall be approved, maintained, and adhered to for all operations involving personnel radiation exposure.

5.7.2.2 Process Control Program (PCP)

C.3.V

The PCP shall contain the current formulas, sampling, analyses, tests, and determinations to be made to ensure that processing and packaging of solid radioactive wastes will be accomplished to ensure compliance with 10 CFR 20, 10 CFR 61, and 10 CFR 71; state regulations; burial ground requirements; and other requirements governing the disposal of solid radioactive waste.

Licensee initiated changes to the PCP:

- a. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
1. sufficient information to support the change(s) and appropriate analyses or evaluations justifying the change(s), and
 2. a determination that the change(s) maintain the overall conformance of the solidified waste product to the existing requirements of Federal, State, or other applicable regulations.

(continued)

6.5
~~5.7e~~ Procedures, Programs, and Manuals

5.7.2.2 Process Control Program (PCP) (continued)

- C.3.V b. Shall be effective after review and acceptance by the [review method of Specification 5.5.1] and the approval of the [Plant Superintendent].

~~5.7.2.3e~~ Offsite Dose Calculation Manual (ODCM)
6.5.1

- C.1. viii a. The ODCM shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the Radiological Environmental Monitoring Program; and
- b. The ODCM shall also contain the Radioactive Effluent Controls and Radiological Environmental Monitoring programs activities required by Specification 5.7.2, and descriptions of the information that should be included in the Annual Radiological Environmental Operating and Radioactive Effluent Release Reports required by Specification [5.9.1.3]e and Specification [5.9.1.4]e.
6.6.3 6.6.2

Licensee initiated changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
1. sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s),
 2. a determination that the change(s) maintain the levels of radioactive effluent control required by 10 CFR 20.106, 40 CFR 190, 10 CFR 50.36a, and 10 CFR 50, Appendix I, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations;
- b. Shall become effective after review and acceptance by the onsite review [review method of Specification 5.5.1]e and the approval of the [Plant Superintendent]; and
Manager function

(continued)

~~6.5~~
~~5.7e~~ Procedures, Programs, and Manuals

~~6.5.1~~
~~5.7.2.3e~~ Offsite Dose Calculation Manual (ODCM) (continued)

- c. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in 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 (i.e., month and year) the change was implemented.

5.7.2.4 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include [Recirculation Spray, Safety Injection, Chemical and Volume Control, gas stripper, and Hydrogen Recombiner]. The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements; and
b. Integrated leak test requirements for each system at refueling cycle intervals or less.

5.7.2.5 In Plant Radiation Monitoring

This program provides controls to ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

- a. Training of personnel;
b. Procedures for monitoring; and
c. Provisions for maintenance of sampling and analysis equipment.

(continued)

6.5
5.7e Procedures, Programs, and Manuals

5.7.2 ~~Programs and Manuals (continued)~~

5.7.2.6e Post Accident Sampling Program
6.5.2

This program provides controls that ensure the capability to obtain and analyze reactor coolant, radioactive gases, and particulates in plant gaseous effluents and containment atmosphere samples under accident conditions. The program shall include the following:

- a. Training of personnel;
- b. Procedures for sampling and analysis; and
- c. Provisions for maintenance of sampling and analysis equipment.

5.7.2.7 Radioactive Effluent Controls Program

C.S. VII
This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;
- b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to 10 CFR 20, Appendix B, Table II, Column 2;
- c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 and with the methodology and parameters in the ODCM;
- d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.7 Radioactive Effluent Controls Program (continued)

- e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days;
- f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;
- g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary conforming to the dose associated with 10 CFR 20, Appendix B, Table II, Column 1;
- h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;
- i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and
- j. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

5.7.2.8 Radiological Environmental Monitoring Program

This program is for monitoring the radiation and radionuclides in the environs of the plant. The program shall provide representative measurements of radioactivity in the highest potential exposure pathways and verification of the accuracy of the effluent monitoring program and modeling of environmental

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.8 Radiological Environmental Monitoring Program (continued)

exposure pathways. The program shall be contained in the ODCM, shall conform to the guidance of 10 CFR 50, Appendix I, and shall include the following:

- a. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM;
- b. A Land Use Census to ensure that changes in the use of areas at and beyond the site boundary are identified and that modifications to the monitoring program are made if required by the results of this census; and
- c. Participation in an Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

5.7.2.9 Component Cyclic or Transient Limit

This program provides controls to track the FSAR, Section [], cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.7.2.10 Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in prestressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The program shall include baseline measurements prior to initial operations. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with [Regulatory Guide 1.35, Revision 3, 1989].

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2 Programs and Manuals (continued)

5.7.2.11 Inservice Inspection Program

This program provides controls for inservice inspection of ASME Code Class 1, 2, and 3 components, including applicable supports. The program shall include the following:

- a. Provisions that inservice inspection of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a;
- b. The provisions of SR 3.0.2 are applicable to the frequencies for performing inservice inspection activities;
- c. Inspection of each reactor coolant pump flywheel per the recommendations of Regulation Position c.4.b of Regulatory Guide 1.14, Revision 1, August 1975; and
- d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any TS.

5.7.2.12 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components including applicable supports. The program shall include the following:

- a. Provisions that inservice testing of ASME Code Class 1, 2, and 3 pumps, valves, and snubbers shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a;
- b. Testing frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as follows:

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.12 Inservice Testing Program (continued)

ASME Boiler and Pressure
Vessel Code and
applicable Addenda
terminology for
inservice testing
activities

Required Frequencies
for performing inservice
testing activities

Weekly
Monthly
Quarterly or every
3 months
Semiannually or
every 6 months
Every 9 months
Yearly or annually
Biennially or every
2 years

At least once per 7 days
At least once per 31 days
At least once per 92 days
At least once per 184 days
At least once per 276 days
At least once per 366 days
At least once per 731 days

- c. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities;
- d. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any TS.

5.7.2.13 Steam Generator (SG) Tube Surveillance Program

Each SG shall be demonstrated OPERABLE by performance of an inservice inspection program. The program shall include the following:

- a. SG tube sample size selection, sample size expansion, and inspection result classification criteria. Sample selection and testing shall be in accordance with [Regulatory Guide 1.83, Revision [], date].

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.13 Steam Generator (SG) Tube Surveillance Program (continued)

- b. The establishment of SG tube inspection frequency dependent upon inspection result classification. Inspection frequency shall be in accordance with [Regulatory Guide 1.83, Revision [], date].
- c. SG tube plugging/repair limits. These limits shall be [40]% of the nominal tube wall thickness consistent with [Regulatory Guide 1.83, Revision [], date].
- d. Specific definitions and limits for SG tube inservice inspection acceptance criteria consistent with [Regulatory Guide 1.83, Revision [], date].

The content and frequency of written reports shall be in accordance with Specification 5.9/2.

The provisions of SR 3.0.2 are applicable to SG Tube Surveillance Program inspection frequencies except those established by Category C-3 inspection results.

[Key elements to be discussed and provided.]

5.7.2.14 Secondary Water Chemistry

This program provides controls for monitoring secondary water chemistry to inhibit SG tube degradation and low pressure turbine disc stress corrosion cracking. The program shall include:

- a. Identification of a sampling schedule for the critical variables and control points for these variables;
- b. Identification of the procedures used to measure the values of the critical variables;
- c. Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in leakage;
- d. Procedures for the recording and management of data;
- e. Procedures defining corrective actions for all off control point chemistry conditions; and

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.14 Secondary Water Chemistry (continued)

- f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events, which is required to initiate corrective action.

5.7.2.15 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in [Regulatory Guide], and in accordance with [Regulatory Guide 1.52, Revision 2; ASME N510-1989; and AG-1].

- a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < [0.05]% when tested in accordance with [Regulatory Guide 1.52, Revision 2, and ASME N510-1989] at the system flowrate specified below [$\pm 10\%$].

ESF Ventilation System

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Flowrate

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- b. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass < [0.5]% when tested in accordance with [Regulatory Guide 1.52, Revision 2, and ASME N510-1989] at the system flowrate specified below [$\pm 10\%$].

ESF Ventilation System

--	--

Flowrate

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(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.15 Ventilation Filter Testing Program (VFTP) (continued)

- c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in [Regulatory Guide 1.52, Revision 2], shows the methyl iodide penetration less than the value specified below when tested in accordance with [ASTM D3803-1989] at a temperature of $\leq [30^{\circ}\text{C}]$ and greater than or equal to the relative humidity specified below.

ESF Ventilation System	Penetration	RH
<input type="text"/>	<input type="text"/>	<input type="text"/>

Reviewer's Note: Allowable penetration = $[100\% - \text{methyl iodide efficiency for charcoal credited in staff safety evaluation} / (\text{safety factor})]$.

Safety factor = [5] for systems with heaters.
= [7] for systems without heaters.

- d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with [Regulatory Guide 1.52, Revision 2, and ASME N510-1989] at the system flowrate specified below $[\pm 10\%]$.

ESF Ventilation System	Delta P	Flowrate
<input type="text"/>	<input type="text"/>	<input type="text"/>

- e. Demonstrate that the heaters for each of the ESF systems dissipate the value specified below $[\pm 10\%]$ when tested in accordance with [ASME N510-1989].

ESF Ventilation System	Wattage
<input type="text"/>	<input type="text"/>

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.15 Ventilation Filter Testing Program (VFTP) (continued)

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

5.7.2.16 Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the [Waste Gas Holdup System], [the quantity of radioactivity contained in unprotected outdoor liquid storage tanks]. The gaseous radioactivity quantities shall be determined following the methodology in [Branch Technical Position (BTP) ETSB 11-5, "Postulated Radioactive Release due to Waste Gas System Leak or Failure"]. The liquid radwaste quantities shall be determined in accordance with [Standard Review Plan, Section 15.7.3, "Postulated Radioactive Release due to Tank Failures"].

The program shall include:

- a. The limits for concentrations of hydrogen and oxygen in the [Waste Gas Holdup System] and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion);
- b. A surveillance program to ensure that the quantity of radioactivity contained in [each gas storage tank and fed into the offgas treatment system] is less than the amount that would result in a whole body exposure of ≥ 0.5 rem to any individual in an unrestricted area, in the event of [an uncontrolled release of the tanks' contents]; and
- c. A surveillance program to ensure that the quantity of radioactivity contained in all outdoor liquid radwaste tanks that are not surrounded by liners, dikes, or walls, capable of holding the tanks' contents and that do not have tank overflows and surrounding area drains connected to the [Liquid Radwaste Treatment System] is less than the amount that would result in concentrations less than the limits of 10 CFR 20, Appendix B, Table II, Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area, in the event of an uncontrolled release of the tanks' contents.

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.16 Explosive Gas and Storage Tank Radioactivity Monitoring Program (continued)

C.5.xiv
The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Explosive Gas and Storage Tank Radioactivity Monitoring Program surveillance frequencies.

5.7.2.17 Diesel Fuel Oil Testing Program

C.5.xv
A diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the following:

- a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:
 1. an API gravity or an absolute specific gravity within limits,
 2. a flash point and kinematic viscosity within limits for ASTM 2D fuel oil, and
 3. a clear and bright appearance with proper color;
- b. Other properties for ASTM 2D fuel oil are within limits within 30 days following sampling and addition to storage tanks; and
- c. Total particulate concentration of the fuel oil is ≤ 10 mg/l when tested every 31 days in accordance with ASTM D-2276, Method A-2 or A-3.

5.7.2.18 Fire Protection Program

C.6.vii
This program provides controls to ensure that appropriate fire protection measures are maintained to protect the plant from fire and to ensure the capability to achieve and maintain safe shutdown in the event of a fire is maintained.

5.0 ADMINISTRATIVE CONTROLS

5.8 Safety Function Determination Program (SFDP)

C.S.xvii
5.8.1 This program ensures loss of safety function is detected and appropriate actions taken. Upon failure to meet two or more LCOs at the same time, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6.

5.8.2 The SFDP shall contain the following:

- a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;
- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

5.8.3 A loss of safety function exists when, assuming no concurrent single failure, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable (Case A); or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable (Case B); or

(continued)



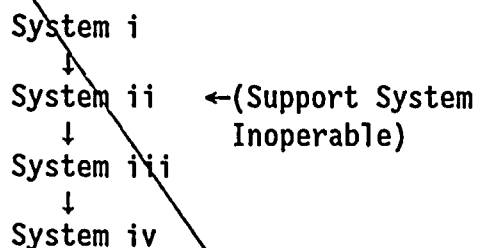
5.8 SFDP

5.8.3 (continued)

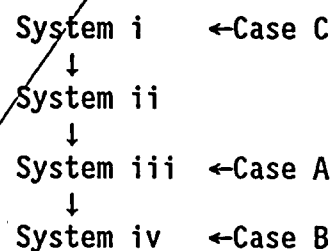
- c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable (Case C).

Generic Example:

Train A



Train B



- 5.8.4 The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.



~~5.0~~ ADMINISTRATIVE CONTROLS~~6.6~~ ~~5.9~~ Reporting Requirements~~5.9.1~~ ~~Routine Reports~~

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.9.1.1 Startup Report

A summary report of plant startup and power escalation testing shall be submitted following:

- a. Receipt of an Operating License;
- b. Amendment to the license involving a planned increase in power level;
- c. Installation of fuel that has a different design or has been manufactured by a different fuel supplier; and
- d. Modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the unit.

The initial Startup Report shall address each of the startup tests identified in FSAR, Chapter [14], and shall 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 specific details required in license conditions based on other commitments shall be included in this report. Subsequent Startup Reports shall address startup tests that are necessary to demonstrate the acceptability of changes and modifications.

Startup Reports shall be submitted within 90 days following completion of the Startup Test Program; 90 days following resumption or commencement of commercial power operation; or 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of Startup Test Program, and resumption or commencement of commercial operation), supplementary reports shall be submitted at least every 3 months until all three events have been completed.

(continued)

6.6
~~5.9~~ Reporting Requirements5.9.1 Routine Reports (continued)

5.9.1.2 Annual Reports

-----NOTE-----

A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

Annual Reports covering the activities of the unit as described below for the previous calendar year shall be submitted by March 31 of each year. [The initial report shall be submitted by March 31 of the year following initial criticality.]

Reports required on an annual basis include:

6.6.1 a. Occupational Radiation Exposure Report

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors) receiving exposures > 100 mrem/yr and their associated man rem exposure according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance [describe maintenance], waste processing, and refueling).

← 20.220416b This tabulation supplements the requirements of 10 CFR 20.407. The dose assignments to various duty functions may be estimated based on pocket dosimeter, thermoluminescent dosimeter (TLD), or film badge measurements. Small exposures totalling < 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources should be assigned to specific major work functions, and ←

[b. Any other unit unique reports required on an annual basis.]

(C.7. x)

The report shall be submitted on or before April 30 of each year.

(continued)

~~6.6~~
~~5.9~~^a Reporting Requirements~~5.9.1~~ ~~Routine Reports~~ (continued)^a~~6.6.2~~~~5.9.1.3~~^a Annual Radiological Environmental Operating Report

-----NOTE-----

A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

C.S.viii

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the ODCM, as well as summarized and tabulated results of these analyses and measurements [in the format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979]. ~~[The report shall identify the TLD results that represent collocated dosimeters in relation to the NRC TLD program and the exposure period associated with each result.]~~ In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in a supplementary report as soon as possible.

(continued)

~~5.9~~
6.6
5.9 Reporting Requirements~~5.9.1~~ ~~Routine Reports~~ (continued)^a~~5.9.1.4~~
6.6.3
Radioactive Effluent Release Report

-----NOTE-----

A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

The Radioactive Effluent Release Report covering the operation of the unit shall be submitted in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the ODCM and ~~Process Control Program~~ and in conformance with 10 CFR 50.36a and 10 CFR 50, Appendix I, Section IV.B.1.

~~5.9.1.5~~
6.6.4
Monthly Operating Reports

Routine reports of operating statistics and shutdown experience^a, including documentation of all challenges to the pressurizer power operated relief valves or pressurizer safety valves, shall be submitted on a monthly basis no later than the 15th of each month following the calendar month covered by the report.

~~5.9.1.6~~ CORE OPERATING LIMITS REPORT (COLR)

- a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

C.5xvii [The individual specifications that address core operating limits must be referenced here.]

- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

(continued)

5.9 Reporting Requirements

5.9.1.6 CORE OPERATING LIMITS REPORT (COLR) (continued)

Identify the Topical Report(s) by number, title, date, and NRC staff approval document, or identify the staff Safety Evaluation Report for a plant specific methodology by NRC letter and date.

- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.9.1.7 Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)

RCS pressure and temperature limits, including heatup and cooldown rates, criticality, and hydrostatic and leak test limits, shall be established and documented in the PTLR. [The individual Specifications that address the reactor vessel pressure and temperature limits and the heatup and cooldown rates may be referenced.] The analytical methods used to determine the pressure and temperature limits including the heatup and cooldown rates shall be those previously reviewed and approved by the NRC in [Topical Report(s), number, title, date, and NRC staff approval document, or staff safety evaluation report for a plant specific methodology by NRC letter and date]. The reactor vessel pressure and temperature limits, including those for heatup and cooldown rates, shall be determined so that all applicable limits (e.g., heatup limits, cooldown limits, and inservice leak and hydrostatic testing limits) of the analysis are met. The PTLR, including revisions or supplements thereto, shall be provided upon issuance for each reactor vessel fluency period.

(continued)

5.9 Reporting Requirements (continued)

5.9.2 Special Reports

Special Reports may be required covering inspection, test, and maintenance activities. These special reports are determined on an individual basis for each unit and their preparation and submittal are designated in the Technical Specifications.

Special Reports shall be submitted in accordance with 10 CFR 50.4 within the time period specified for each report.

The following Special Reports shall be submitted:

- a. In the event an ECCS is actuated and injects water into the RCS in MODE 1, 2, or 3, a Special Report shall be prepared and submitted within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.
- b. If an individual emergency diesel generator (EDG) experiences four or more valid failures in the last 25 demands, these failures and any nonvalid failures experienced by that EDG in that time period shall be reported within 30 days. Reports on EDG failures shall include the information recommended in Regulatory Guide 1.9, Revision 3, Regulatory Position C.5, or existing Regulatory Guide 1.108 reporting requirement.
- c. When a Special Report is required by Condition B or G of LCO 3.3.[1], "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days from the time the action is required. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

(continued)

C.6.viii

C.5.xix

C.5.xx

5.9 Reporting Requirements

5.9.2 Special Reports (continued)

d. Any abnormal degradation of the containment structure detected during the tests required by the Pre-stressed Concrete Containment Tendon Surveillance Program shall be reported to the NRC within 30 days. The report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and the corrective action taken.

e. Following each inservice inspection of steam generator (SG) tubes, in accordance with the SG Tube Surveillance Program, the number of tubes plugged and tubes sleeved in each SG shall be reported to the NRC within 15 days.

The complete results of the SG tube inservice inspection shall be submitted to the NRC within 12 months following the completion of the inspection. The report shall include:

1. Number and extent of tubes inspected,
2. Location and percent of wall-thickness penetration for each indication of an imperfection, and
3. Identification of tubes plugged and tubes sleeved.

Results of SG tube inspections that fall into Category C-3 shall be reported to the NRC prior to resumption of plant operation. This report shall provide a description of investigations conducted to determine cause of the tube degradation and corrective measures taken to prevent recurrence.

5.0 ADMINISTRATIVE CONTROLS

5.10 Record Retention

5.10.1 The following records shall be retained for at least 3 years:

- a. All License Event Reports required by 10 CFR 50.73;
- b. Records of changes made to the procedures required by Specification 5.7.1.1; and
- c. Records of radioactive shipments.

5.10.2 The following records shall be retained for at least 5 years:

- a. Records and logs of unit operation covering time intervals at each power level;
- b. Records and logs of principal maintenance activities — inspections, repair, and replacement of principal items of equipment related to nuclear safety;
- c. Records of surveillance activities, inspections, and calibrations required by the Technical Specifications (TS) [and the Fire Protection Program];
- d. Records of sealed source and fission detector leak tests and results; and
- e. Records of annual physical inventory of all sealed source material of record.

5.10.3 The following records shall be retained for the duration of the unit Operating License:

- a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the FSAR;
- b. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories;
- c. Records of radiation exposure for all individuals entering radiation control areas;

(continued)

5.10 Record Retention

5.10.3 (continued)

- d. Records of gaseous and liquid radioactive material released to the environs;
- e. Records of transient or operational cycles for those unit components identified in [FSAR, Section X];
- f. Records of reactor tests and experiments;
- g. Records of training and qualification for members of the unit staff;
- h. Records of inservice inspections performed pursuant to the TS;
- i. Records of quality assurance activities required by the Operational Quality Assurance (QA) Manual [not listed in Specification 5.10.1 and which are classified as permanent records by applicable regulations, codes, and standards];
- j. Records of reviews performed for changes made to procedures, equipment, or reviews of tests and experiments pursuant to 10 CFR 50.59;
- k. Records of the reviews and audits required by Specification 5.5.1 and Specification 5.5.2;
- l. Records of the service lives of all hydraulic and mechanical snubbers required by [document where snubber requirements relocated to], including the date at which the service life commences, and associated installation and maintenance records;
- [m. Records of secondary water sampling and water quality;]
- n. Records of analyses required by the Radiological Environmental Monitoring Program that would permit evaluation of the accuracy of the analysis at a later date (these records should include procedures effective at specified times and QA records showing that these procedures were followed);
- o. Records of reviews performed for changes made to the Offsite Dose Calculation Manual and the Process Control Program;

(continued)

5.10 Record Retention

5.10.3 (continued)

[p. Records of pre-stressed concrete containment tendon surveillances;] and

[q. Records of steam generator tube surveillances].

C.3.vii

5.0 ADMINISTRATIVE CONTROLS

~~[5.11 High Radiation Area]~~

5.11.1

Pursuant to 10 CFR 20, paragraph 20.203(c)(5)^{1601(a)}, in lieu of the requirements of 10 CFR 20.203(c)^{1601(a)}, each high radiation area, as defined in 10 CFR 20, in which the intensity of radiation is > 100 mrem/hr but < 1000 mrem/hr, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP). Individuals qualified in radiation protection procedures (e.g., ~~Health Physics Technicians~~^{Radiation Protection Technicians}) or personnel continuously escorted by such individuals may be exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas with exposure rates \leq 1000 mrem/hr, provided they are otherwise following plant radiation protection procedures for entry into such high radiation areas.

Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device that continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device that continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel are aware of them.
- c. An individual qualified in radiation protection procedures with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the ~~[Radiation Protection Manager]~~^{Radiation Protection Technician} in the RWP.

5.11.2

In addition to the requirements of Specification 5.11.1, areas with radiation levels \geq 1000 mrem/hr shall be provided with locked or continuously guarded doors to prevent unauthorized entry and the keys shall be maintained under the administrative control of the Shift Foreman^{Supervisor} on duty or ~~health physics~~^{Radiation Protection Technician} supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP that shall specify the dose rate levels in

(continued)

~~[High Radiation Area]~~
~~[5.11]~~
6.7

6.7
~~[5.11]~~ High Radiation Area

5.11.2 (continued)

the immediate work areas and the maximum allowable stay times for individuals in those areas. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

5.11.3

For individual high radiation areas with radiation levels of ≥ 1000 mrem/hr, accessible to personnel, that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, or that cannot be continuously guarded, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded and conspicuously posted, and a flashing light shall be activated as a warning device.

