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## 6.0 ADMINISTRATIVE CONTROLS

### 6.1 RESPONSIBILITY

The Station Director shall be accountable for overall facility operation. In his absence, the Station Director shall designate, in writing, the individual to assume this responsibility.

### 6.2 ORGANIZATION

#### A. OFFSITE AND ONSITE 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.

1. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in Pilgrim Station Final Safety Analysis Report.
2. The Station Director shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
3. The Senior Vice President - Nuclear 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.
4. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

#### B. UNIT STAFF

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

## 6.0 ADMINISTRATIVE CONTROLS

2. When the unit is in an operational mode other than cold shutdown or refueling, a person holding a Senior Reactor Operator License shall be present in the control room at all times. In addition to this Senior Operator, a Licensed Operator or Senior Operator shall be present at the controls when fuel is in the vessel.
3. At least two Licensed Operators shall be present in the control room during reactor startup, scheduled reactor shutdown and during recovery from reactor trips.
4. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor.
5. ALL CORE ALTERATIONS performed while fuel is in the reactor vessel after the initial fuel loading 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.
6. A Fire Brigade of 5 members including a Fire Brigade Leader shall be maintained on site at all times. This excludes 3 members of the minimum shift crew necessary for safe shutdown and any personnel required for other essential functions during a fire emergency.
7. The Chief Operating Engineer, Nuclear Watch Engineers, and Nuclear Operations Supervisors shall hold a Senior Reactor Operator License. The Nuclear Plant Operators shall hold a Reactor Operator License.

## 6.3 UNIT STAFF QUALIFICATIONS

The qualifications with regard to educational and experience backgrounds of the unit staff at the time of appointment to the active position shall meet the requirements as described in the American National Standards Institute N18.1-1971, "Selection and Training of Personnel for Nuclear Power Plants." In addition, the individual performing the function of Radiation Protection Manager shall meet or exceed the qualifications of Regulatory Guide 1.8, September, 1975.

## 6.4 TRAINING

A retraining and replacement training program for the unit staff shall be maintained under the direction of the Nuclear Training Department Manager. The training programs for the licensed personnel shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and Appendix A of 10CFR Part 55. The training programs for the Fire Brigade shall meet or exceed the requirements of NFPA Standard No. 27-1975 "Private Fire Brigade". Fire Protection Training sessions will be held quarterly.



PILGRIM NUCLEAR POWER STATION  
MINIMUM OPERATING SHIFT CREW COMPOSITION  
TECHNICAL SPECIFICATION

TABLE 6.2-1

STATION CONDITION	CREW (a)	MINIMUM NUMBER ON DUTY
OPERATING	Licensed Senior Reactor Operator	2 (b)
	Licensed Reactor Operator	2
	Unlicensed Operator	2
	Shift Technical Advisor	1
COLD SHUTDOWN and REFUELING	Licensed Senior Reactor Operator	1
	Licensed Reactor Operator	1
	Unlicensed Operator	1
	Shift Technical Advisor	None Required

Notes:

- (a) Higher grade licensed operators may take the place of lower grade licensed or unlicensed personnel.
- (b) A Shift Technical Advisor (STA) with a Senior Reactor Operator license may simultaneously serve as STA and SRO.



## 6.5 REVIEW AND AUDIT

### A. OPERATIONS REVIEW COMMITTEE (ORC)

#### 1. FUNCTION

The ORC shall function to advise the Station Director on all matters related to safety.

#### 2. COMPOSITION

The ORC shall be composed of a Chairman, and at least six members, who shall be appointed in writing by the Station Director from senior experienced onsite individuals, at the manager level or equivalent, representing each of the following disciplines: plant operations, plant maintenance, plant technical, reactor engineering, radiation protection, and chemistry.

#### 3. ALTERNATES

Alternates shall be appointed in writing by the Station Director to serve on a temporary basis.

#### 4. MEETING FREQUENCY

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

#### 5. QUORUM

A quorum of the ORC shall consist of the Chairman or designated alternate and a majority of members/designated alternates; however, no more than two alternates shall be allowed to meet quorum requirements.

#### 6. RESPONSIBILITIES

The ORC 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 that affect nuclear safety.
- b. Review 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.

#### 6.5.A.6 RESPONSIBILITIES (Continued)

- e. Review of facility operations to detect potential safety hazards.
- f. Review of the Station Security Plan and implementing procedures and changes to the plan and procedures.
- g. Review of the Emergency Plan and implementing procedures and changes to the plan and procedures.
- h. Performance of special reviews and investigations and reports thereon as requested by the Nuclear Safety Review and Audit Committee (NSRAC) Chairman.
- i. Investigation of all violations of the Technical Specifications and shall prepare and forward a report covering evaluation and recommendations to prevent recurrence to the Station Director, the NSRAC Chairman, and the Senior Vice President - Nuclear.
- j. Review the Station Fire Protection Plan and implementing procedures and changes to the plan and procedures.

The ORC Chairman may appoint subcommittees composed of personnel who are not members of ORC to perform staff work necessary to the efficient functioning of ORC.

#### 7. AUTHORITY

- a. Recommend in writing to the Station Director the approval or disapproval of items considered under 6.5.A.6(a) through (d) above.
- b. Render determinations in writing with regard to whether or not each item considered under 6.5.A.6(a) through (d) above constitutes an unreviewed safety question.
- c. Provide written notification within 24 hours to the Station Director, the Nuclear Safety Review and Audit Committee, and the Senior Vice President - Nuclear of disagreement between the ORC Members and the ORC Chairman. The Station Director shall have responsibility for resolution of such disagreements.

#### 8. RECORDS

The ORC shall maintain written minutes of each meeting and copies shall be forwarded to the Station Director and the NSRAC Chairman.



6.5.B. NUCLEAR SAFETY REVIEW AND AUDIT COMMITTEE (NSRAC)

1. FUNCTION

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

1. nuclear power plant operations;
2. nuclear engineering;
3. chemistry and radiochemistry;
4. metallurgy;
5. instrumentation and control;
6. radiological safety;
7. mechanical and electrical engineering;
8. quality assurance practices
9. fire protection

2. COMPOSITION

The NSRAC Chairman and other members shall be appointed by the Senior Vice President - Nuclear.

The membership shall collectively possess a broad based level of experience and competence enabling the Committee to review and audit those activities designated in 6.5.B.1 above and to recognize when it is necessary to obtain technical advice and counsel. The collective competence of the Committee will be maintained as changes to the membership are made. The membership shall consist of a minimum of five persons of whom no more than a minority are members of the plant staff.

3. ALTERNATES

Alternate members shall be appointed in writing by the Senior Vice President - Nuclear or the Chairman to serve on a temporary basis.

4. CONSULTANTS

Consultants shall be utilized as determined by the NSRAC Chairman to provide expert advice to the NSRAC.

5. MEETING FREQUENCY

The NSRAC shall meet at least once per six months.

6. QUORUM

A quorum of the NSRAC shall consist of the Chairman or his designated alternate and at least four NSRAC members including alternates. The Vice Chairman is the designated alternate to the Chairman. No more than a minority of the quorum shall have line responsibility for operation of the facility. No more than two alternates shall participate in a quorum at any one time.



7. REVIEW

The NSRAC shall review:

a. The written safety evaluations for:

- (1) changes in the facility as described in the Final Safety Analysis Report;
- (2) changes in the procedures described in Chapter 13 of the Final Safety Analysis Report;
- (3) test and experiments not described in the Final Safety Analysis Report

to verify that such changes, tests or experiments did not involve a change in the Technical Specifications or an unreviewed safety question as defined in 10CFR50.59(a)(2).

- b. Proposed changes to procedures, equipment or systems involve an unreviewed safety question as defined in Section 50.59, 10 CFR.
- c. Proposed tests or experiments which involve an unreviewed safety question as defined in Section 50.59, 10 CFR.
- d. Proposed changes in Technical Specifications or operating license.
- 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 effect nuclear safety.
- g. All events which are required by 10 CFR 50.73 to be reported to the NRC in writing.
- h. Any other matter involving safe operation of the nuclear plant which NSRAC deems appropriate for consideration or which is referred to NSRAC for the onsite operating organization or by other functional organizational units within Boston Edison.
- i. Reports and meeting minutes of the Operations Review Committee.

8. AUDITS

Audits of facility activities shall be performed under the cognizance of the NSRAC. These audits shall encompass:

- a. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions at least once per year.
- b. The training and qualifications of the entire unit staff at least once per year.

#### 6.5.B.8 AUDITS (Continued)

- c. The results of all actions required by 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 to meet the criteria of Appendix "B", 10 CFR 50, at least once per two years.
- e. The Emergency Plan and implementing procedures at least once per two years.
- f. The Station Security Plan and implementing procedures at least once per two years.
- g. Any other area of facility operation considered appropriate by the NSRAC or the Senior Vice President - Nuclear.
- h. The Fire Protection Program and implementing procedures at least once per two years.

#### 9. AUTHORITY

The NSRAC shall report to and advise the Senior Vice President - Nuclear on those areas of responsibility specified in Section 6.5.B.7 and 6.5.B.8.

#### 10. RECORDS

Records of NSRAC activities shall be prepared, approved and distributed as indicated below:

- a. Minutes of each NSRAC meeting shall be prepared, approved and forwarded to the Senior Vice President - Nuclear, NSRAC members, and others the Chairman may designate.
- b. Reports of reviews encompassed by Section 6.5.B.7.e, f, g and h above, shall be prepared, approved and forwarded to the Senior Vice President - Nuclear, with a copy to the Station Director within 21 days following the completion of the review.
- c. Audit reports encompassed by Section 6.5.B.f above shall be forwarded to the Senior Vice President - Nuclear and to the management positions responsible for the areas audited within 30 days after completion of the audit.

#### 6.6 REPORTABLE EVENT ACTION

The following actions shall be taken for each reportable event:

- A. The Commission shall be notified and/or a report submitted pursuant to the requirements of either 10 CFR 50.72 or 10 CFR 50.73.
- B. Each Reportable Event Report submitted to the Commission shall be reviewed by the ORC and submitted to the NSRAC Chairman and the Station Director.



## 6.7 SAFETY LIMIT VIOLATION

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 Commission within 1 hour per 10CFR50.36(c)(6) and 50.72, and to the Station Director and the NSRAC Chairman immediately.
- C. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the ORC. 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 the Commission within 30 days in accordance with 10CFR50.36(c)(7) and 50.73 and to the NSRAC Chairman and the Station Director.

## 6.8 PROCEDURES

- A. Written procedures and administrative policies shall be established, implemented and maintained that meet or exceed the requirements and recommendations of Sections 5.1 and 5.3 of ANSI N18.7 - 1972 and Appendix "A" of USNRC Regulatory Guide 1.33, except as provided in 6.8.B and 6.8.C below.
- B. Each procedure of 6.8.A above, and changes thereto, shall be reviewed by the ORC and approved by the responsible department manager prior to implementation. These procedures shall be reviewed periodically as set forth in administrative procedures.

NOTE: ORC review and approval of procedures for vendors/contractors, who have a QA Program approved by Boston Edison Company, is not required for work performed at the vendor/contractor facility.

- C. Temporary changes to procedures of 6.8.A above may be made provided:
  - 1. The intent of the original procedure is not altered.
  - 2. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's license on the unit affected.
  - 3. The change is documented, subsequently reviewed by the ORC within 14 days of implementation, and approved by the responsible department manager.
- D. Written procedures to implement the Fire Protection Program shall be established, implemented and maintained.



## 6.9 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 Commission.

### A. Routine Reports

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 identified in the FSAR and shall in general include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 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 power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

2. Monthly Operating Report. Routine reports of operating statistics, shutdown experience and forced reductions in power shall be submitted on a monthly basis to the Commission to arrive no later than the 15th of each month following the calendar month covered by the report.

The Monthly Operating Report shall include a narrative summary of operating experience that describes the operation of the facility, including safety-related maintenance, for the monthly report period.

3. Occupational Exposure Tabulation. A tabulation 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 inservice inspection, routine maintenance, special maintenance (including a description), waste processing, and refueling shall be submitted on an annual basis. This tabulation supplements the requirements of 20.407 of 10 CFR 20. The dose assignment to various duty functions may be estimates based on pocket 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.

B. (Deleted by Amendment No. 38)

## 6.9.C. Unique Reporting Requirements

### 1. Semi-Annual Radioactive Effluent Release Report

- a. Routine radioactive effluent release reports covering the operation of the unit during the previous 6 months of operation shall be submitted within 60 days after January 1 and July 1 of each year. The report should be in accordance with Appendix B of Regulatory Guide 1.21 (Revision 1) dated June, 1974. A supplemental report containing dose assessments for the previous year shall be submitted annually within 60 days after January 1.
- b. Any changes to the Offsite Dose Calculation Manual (ODCM) shall be submitted to the Commission in the Semi-Annual Radioactive Effluent Release Report.

### 2. Annual Radiological Environmental Monitoring Report

A report on the radiological environmental surveillance program for the previous calendar year of operation shall be submitted to the Commission prior to May 1 of the year. The reports shall include summaries, interpretations, and statistical evaluation of the results of the radiological environmental surveillance activities for the report period, operational controls 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 any land use surveys which affect the choice of sample locations. If harmful effects or evidence of irreversible damage are detected by the monitoring, the licensee shall provide an analysis of the problem and a proposed course of action to alleviate the problem.

The Annual Radiological Environmental Monitoring Report shall include a summary of the results of analysis 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 Offsite Dose Calculation Manual (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 results are not available prior to May 1 of the year, the report shall be submitted, noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

The report shall also include the following: a summary description of the radiological environmental monitoring program; at least two legible maps covering all sampling locations keyed to a table giving distances and directions from the centerline of the reactor; discussion of all deviations from the sampling schedule of Table 8.1-1; and discussion of all analyses in which the lower limits of detection (LLD) required by Table 8.1-4 were not achievable.

<sup>1</sup> One map shall cover stations near the site boundary; a second shall include the more distant stations.



6.9.C Unique Reporting Requirements (Continued)

3. Special Reports

Special reports shall be submitted as indicated in Table 6.9.1.

6.10 RECORD RETENTION

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

1. Records of facility operation covering time interval at each power level.
2. Records of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
3. Reportable Event Reports.
4. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.
5. Records of reactor tests and experiments.
6. Records of changes made to Operating Procedures.
7. Records of radioactive shipments.
8. Records of sealed source leak tests and results.
9. Records of annual physical inventory of all source material of record.

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

1. Record and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
2. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
3. Records of facility radiation and contamination surveys.
4. Records of radiation exposure for all individuals entering radiation control areas.
5. Records of the service lives of all hydraulic and mechanical snubbers listed in PNPS procedures including the date at which the service life commences and associated installation and maintenance records.



TABLE 6.9.1

<u>Area</u>	<u>Reference</u>	<u>Submittal Date</u>
a. Secondary Containment Leak Rate Testing (1)	4.7.C.1.c	Upon completion of each test (2)
b. (Deleted)		
c. (Deleted)		
d. (Deleted)		
e. Standby Liquid Control solution enrichment out of specification	3.4.C.3	Fourteen days after receipt of a non-complying enrichment report or lack of receipt of such a report within the required thirty days, if enrichment compliance cannot be achieved within seven days.

- NOTES: 1. Each integrated leak rate test of the secondary containment shall be the subject of a summary technical report. This report shall include data on the wind speed, wind direction, outside and inside temperatures during the test, concurrent reactor building pressure, and emergency ventilation flow rate. The report shall also include analyses and interpretations of those data which demonstrate compliance with the specified leak rate limits.
2. The report shall be submitted approximately 90 days after completion of each test. Test periods shall be based on the commercial service date as the starting point.

#### 6.10.B RECORD RETENTION (Continued)

6. Records of gaseous and liquid radioactive material released to the environs.
7. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.
8. Records of training and qualification for current members of the plant staff.
9. Records of in-service inspections performed pursuant to these Technical Specifications.
10. Records of Quality Assurance activities required by the QA Manual.
11. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
12. Records of meetings of the ORC and the NSRAC.
13. Records for Environmental Qualification.

#### 6.11 RADIATION PROTECTION PROGRAM

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

#### 6.12 (Deleted)

#### 6.13 HIGH RADIATION AREA (OPTIONAL)

- 6.13.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 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\*. 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 which continuously indicates the radiation dose rate in the area.

\* Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirements during the performance of this assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.



#### 6.13.1 HIGH RADIATION AREA (Continued)

- b. A radiation monitoring device 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 level in the area has been established and personnel have been made knowledgeable of them.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be 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 in the Radiation Work Permit.

6.13.2 The requirements of 6.13.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Nuclear Watch Engineer on duty and/or the Radiation Protection Manager.

#### 6.14 FIRE PROTECTION PROGRAM

The following inspections and audits shall be performed:

1. An independent fire protection inspection and audit shall be performed annually utilizing either qualified off-site licensee personnel or an outside fire protection firm.
2. An inspection and audit by an outside qualified fire consultant shall be performed at intervals no greater than 3 years.

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## 6.0 ADMINISTRATIVE CONTROLS

### 6.1 RESPONSIBILITY

The Station Director shall be accountable for overall facility operation. In his absence, the Station Director shall designate, in writing, the individual to assume this responsibility.

### 6.2 ORGANIZATION

#### A. OFFSITE AND ONSITE 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.

1. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in Pilgrim Station Final Safety Analysis Report.
2. The Station Director shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
3. The Senior Vice President - Nuclear 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.
4. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

#### B. FACILITY *Unit Staff*

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

## 6.0 ADMINISTRATIVE CONTROLS

2. When the unit is in an operational mode other than cold shutdown or refueling, a person holding a Senior Reactor Operator License shall be present in the control room at all times. In addition to this Senior Operator, a Licensed Operator or Senior Operator shall be present at the controls when fuel is in the vessel.
3. At least two Licensed Operators shall be present in the control room during reactor startup, scheduled reactor shutdown and during recovery from reactor trips.
4. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor.
5. ALL CORE ALTERATIONS performed while fuel is in the reactor vessel after the initial fuel loading 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.
6. A Fire Brigade of 5 members including a Fire Brigade Leader shall be maintained on site at all times. This excludes 3 members of the minimum shift crew necessary for safe shutdown and any personnel required for other essential functions during a fire emergency.
7. The Technical Section Manager, Chief Operating Engineer, Nuclear Watch Engineers, and Nuclear Operations Supervisors shall hold a Senior Reactor Operator License. The Nuclear Plant Reactor Operators shall hold a Reactor Operator License.

### 6.3 FACILITY STAFF QUALIFICATIONS

*Unit Staff Qualifications*

*unit* The qualifications with regard to educational and experience backgrounds of the facility staff at the time of appointment to the active position shall meet the requirements as described in the American National Standards Institute N18.1-1971, "Selection and Training of Personnel for Nuclear Power Plants." In addition, the individual performing the function of Radiation Protection Manager shall meet or exceed the qualifications of Regulatory Guide 1.8, September, 1975.

### 6.4 TRAINING

*unit* A retraining and replacement training program for the facility staff shall be maintained under the direction of the Nuclear Training Department Manager. The training programs for the licensed personnel shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and Appendix A of 10CFR Part 55. The training programs for the Fire Brigade shall meet or exceed the requirements of NFPA Standard No. 27-1975 "Private Fire Brigade". Fire Protection Training sessions will be held quarterly.



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PILGRIM NUCLEAR POWER STATION  
MINIMUM OPERATING SHIFT CREW COMPOSITION  
TECHNICAL SPECIFICATION

TABLE 6.2-1

STATION CONDITION	CREW (a)	MINIMUM NUMBER ON DUTY
OPERATING	Licensed Senior Reactor Operator	2 (b)
	Licensed Reactor Operator	2
	Unlicensed Operator	2
	Shift Technical Advisor	1
COLD SHUTDOWN and REFUELING	Licensed Senior Reactor Operator	1
	Licensed Reactor Operator	1
	Unlicensed Operator	1
	Shift Technical Advisor	None Required

Notes:

- (a) Higher grade licensed operators may take the place of lower grade licensed or unlicensed personnel.
- (b) A Shift Technical Advisor (STA) with a Senior Reactor Operator license may simultaneously serve as STA and SRO.

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## 6.5 REVIEW AND AUDIT

### A. OPERATIONS REVIEW COMMITTEE (ORC)

#### 1. FUNCTION

The ORC shall function to advise the Station Director on all matters related to safety.

#### 2. COMPOSITION

The ORC shall be composed of ~~the Technical Section Manager, who shall serve as ORC Chairman~~ and at least six members, who shall be appointed in writing by the Station Director from senior experienced onsite individuals, at the manager level or equivalent, representing each of the following disciplines: plant operations, plant maintenance, plant technical, reactor engineering, radiation protection, and chemistry.

#### 3. ALTERNATES

Alternates shall be appointed in writing by the Station Director to serve on a temporary basis.

#### 4. MEETING FREQUENCY

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

#### 5. QUORUM

A quorum of the ORC shall consist of the Chairman or designated alternate and a majority of members/designated alternates; however, no more than two alternates shall be allowed to meet quorum requirements.

#### 6. RESPONSIBILITIES

The ORC 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 that affect nuclear safety.
- b. Review 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.



#### 6.5.A.6 RESPONSIBILITIES (Continued)

- e. Review of facility operations to detect potential safety hazards.
- f. Review of the Station Security Plan and implementing procedures and changes to the plan and procedures.
- g. Review of the Emergency Plan and implementing procedures and changes to the plan and procedures.
- h. Performance of special reviews and investigations and reports thereon as requested by the Nuclear Safety Review and Audit Committee (NSRAC) Chairman.
- i. Investigation of all violations of the Technical Specifications and shall prepare and forward a report covering evaluation and recommendations to prevent recurrence to the Station Director, the NSRAC Chairman, and the Senior Vice President - Nuclear.
- j. Review the Station Fire Protection Plan and implementing procedures and changes to the plan and procedures.

The ORC Chairman may appoint subcommittees composed of personnel who are not members of ORC to perform staff work necessary to the efficient functioning of ORC.

#### 7. AUTHORITY

- a. Recommend in writing to the Station Director the approval or disapproval of items considered under 6.5.A.6(a) through (d) above.
- b. Render determinations in writing with regard to whether or not each item considered under 6.5.A.6(a) through (d) above constitutes an unreviewed safety question.
- c. Provide ~~immediate~~ written notification <sup>within 24 hours</sup> to the Station Director, the Nuclear Safety Review and Audit Committee, and the Senior Vice President - Nuclear of disagreement between the ORC Members and the ORC Chairman. The Station Director shall have responsibility for resolution of such disagreements.

#### 8. RECORDS

The ORC shall maintain written minutes of each meeting and copies shall be forwarded to the Station Director and the NSRAC Chairman.

6.5.B. NUCLEAR SAFETY REVIEW AND AUDIT COMMITTEE (NSRAC)

1. FUNCTION

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

1. nuclear power plant operations;
2. nuclear engineering;
3. chemistry and radiochemistry;
4. metallurgy;
5. instrumentation and control;
6. radiological safety;
7. mechanical and electrical engineering;
8. quality assurance practices
9. fire protection

2. COMPOSITION

The NSRAC Chairman and other members shall be appointed by the Senior Vice President - Nuclear.

The membership shall collectively possess a broad based level of experience and competence enabling the Committee to review and audit those activities designated in 6.5.B.1 above and to recognize when it is necessary to obtain technical advice and counsel. The collective competence of the Committee will be maintained as changes to the membership are made. The membership shall consist of a minimum of five persons of whom no more than a minority are members of the plant staff.

3. ALTERNATES

Alternate members shall be appointed in writing by the Senior Vice President - Nuclear or the Chairman to serve on a temporary basis.

4. CONSULTANTS

Consultants shall be utilized as determined by the NSRAC Chairman to provide expert advice to the NSRAC.

5. MEETING FREQUENCY

The NSRAC shall meet at least once per six months.

6. QUORUM

A quorum of the NSRAC shall consist of the Chairman or his designated alternate and at least four NSRAC members including alternates. The Vice Chairman is the designated alternate to the Chairman. No more than a minority of the quorum shall have line responsibility for operation of the facility. No more than two alternates shall participate in a quorum at any one time.

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## 6.5.B (Continued)

### 7. REVIEW

The NSRAC shall review:

a. The written safety evaluations for:

- (1) changes in the facility as described in the Final Safety Analysis Report;
- (2) changes in the procedures described in Chapter 13 of the Final Safety Analysis Report;
- (3) test and experiments not described in the Final Safety Analysis Report

to verify that such changes, tests or experiments did not involve a change in the Technical Specifications or an unreviewed safety question as defined in 10CFR50.59(a)(2).

- b. Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in Section 50.59, 10 CFR.
- c. Proposed tests or experiments which involve an unreviewed safety question as defined in Section 50.59, 10 CFR.
- d. Proposed changes in Technical Specifications or operating license.
- 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 effect nuclear safety.
- g. All events which are required by 10 CFR 50.73 to be reported to the NRC in writing.
- h. Any other matter involving safe operation of the nuclear plant which NSRAC deems appropriate for consideration or which is referred to NSRAC for the onsite operating organization or by other functional organizational units within Boston Edison.
- i. Reports and meeting minutes of the Operations Review Committee.

### 8. AUDITS

Audits of facility activities shall be performed under the cognizance of the NSRAC. These audits shall encompass:

- a. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions at least once per year.
- b. The training and qualifications of the entire ~~facility~~<sup>unit</sup> staff at least once per year.

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6.5.B.8 AUDITS (Continued)

- c. The results of all actions required by 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 to meet the criteria of Appendix "B", 10 CFR 50, at least once per two years.
- e. The Emergency Plan and implementing procedures at least once per two years.
- f. The Station Security Plan and implementing procedures at least once per two years.
- g. Any other area of facility operation considered appropriate by the NSRAC or the Senior Vice President - Nuclear.
- h. The Fire Protection Program and implementing procedures at least once per two years.

9. AUTHORITY

The NSRAC shall report to and advise the Senior Vice President - Nuclear on those areas of responsibility specified in Section 6.5.B.7 and 6.5.B.8.

10. RECORDS

Records of NSRAC activities shall be prepared, approved and distributed as indicated below:

- a. Minutes of each NSRAC meeting shall be prepared, approved and forwarded to the Senior Vice President - Nuclear, NSRAC members, and others the Chairman may designate.
- b. Reports of reviews encompassed by Section 6.5.B.7.e, f, g and h above, shall be prepared, approved and forwarded to the Senior Vice President - Nuclear, with a copy to the Station Director within 21 days following the completion of the review.
- c. Audit reports encompassed by Section 6.5.B.8 above shall be forwarded to the Senior Vice President - Nuclear and to the management positions responsible for the areas audited within 30 days after completion of the audit.

6.6 REPORTABLE EVENT ACTION

The following actions shall be taken for each reportable event:

- A. The Commission shall be notified and/or a report submitted pursuant to the requirements of either 10 CFR 50.72 or 10 CFR 50.73.
- B. Each Reportable Event Report submitted to the Commission shall be reviewed by the ORC and submitted to the NSRAC Chairman and the Station Director.

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## 6.7 SAFETY LIMIT VIOLATION

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

- A. The provisions of 10 CFR 50.36(c) (1) (1) shall be complied with immediately.
- B. The Safety Limit Violation shall be reported to the Commission within 1 hour per 10CFR50.36(c)(6) and 50.72, and to the Station Director and the NSRAC Chairman immediately.
- C. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the ORC. 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 the Commission within 30 days in accordance with 10CFR50.36(c)(7) and 50.73 and to the NSRAC Chairman and the Station Director.

## 6.8 PROCEDURES

- A. Written procedures and administrative policies shall be established, implemented and maintained that meet or exceed the requirements and recommendations of Sections 5.1 and 5.3 of ANSI N18.7 - 1972 and Appendix "A" of USNRC Regulatory Guide 1.33, except as provided in 6.8.B and 6.8.C below.
- B. Each procedure of 6.8.A above, and changes thereto, shall be reviewed by the ORC and approved by the responsible department manager prior to implementation. These procedures shall be reviewed periodically as set forth in administrative procedures.

NOTE: ORC review and approval of procedures for vendors/contractors, who have a QA Program approved by Boston Edison Company, is not required for work performed at the vendor/contractor facility.

- C. Temporary changes to procedures of 6.8.A above may be made provided:
  - 1. The intent of the original procedure is not altered.
  - 2. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's license on the unit affected.
  - 3. The change is documented, subsequently reviewed by the ORC within 14 → 30 days of implementation, and approved by the responsible department manager.
- D. Written procedures to implement the Fire Protection Program shall be established, implemented and maintained.

## 6.9 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 Commission. 1

### A. Routine Reports

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 identified in the FSAR and shall in general include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 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 power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

2. Monthly Operating Report. Routine reports of operating statistics, shutdown experience and forced reductions in power shall be submitted on a monthly basis to the Commission to arrive no later than the 15th of each month following the calendar month covered by the report. 1

The Monthly Operating Report shall include a narrative summary of operating experience that describes the operation of the facility, including safety-related maintenance, for the monthly report period.

3. Occupational Exposure Tabulation. A tabulation 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 inservice inspection, routine maintenance, special maintenance (including a description), waste processing, and refueling shall be submitted on an annual basis. This tabulation supplements the requirements of 20.407 of 10 CFR 20. The dose assignment to various duty functions may be estimates based on pocket 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.

*B. (Deleted by Amendment No. 88)*

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6.9.C. Unique Reporting Requirements

1. Semi-Annual Radioactive Effluent Release Report

- a. Routine radioactive effluent release reports covering the operation of the unit during the previous 6 months of operation shall be submitted within 60 days after January 1 and July 1 of each year. The report should be in accordance with Appendix B of Regulatory Guide 1.21 (Revision 1) dated June, 1974. A supplemental report containing dose assessments for the previous year shall be submitted annually within 90 days after January 1.
- b. Any changes to the Offsite Dose Calculation Manual (ODCM) shall be submitted to the Commission in the Semi-Annual Radioactive Effluent Release Report.

2. Annual Radiological Environmental Monitoring Report

A report on the radiological environmental surveillance program for the previous calendar year of operation shall be submitted to the Commission prior to May 1 of the year. The reports shall include summaries, interpretations, and statistical evaluation of the results of the radiological environmental surveillance activities for the report period, operational controls 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 any land use surveys which affect the choice of sample locations. If harmful effects or evidence of irreversible damage are detected by the monitoring, the licensee shall provide an analysis of the problem and a proposed course of action to alleviate the problem.

The Annual Radiological Environmental Monitoring Report shall include a summary of the results of analysis 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 Offsite Dose Calculation Manual (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 results are not available prior to May 1 of the year, the report shall be submitted, noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

The report shall also include the following: a summary description of the radiological environmental monitoring program; at least two legible maps<sup>1</sup> covering all sampling locations keyed to a table giving distances and directions from the centerline of the reactor; discussion of all deviations from the sampling schedule of Table 8.1-1; and discussion of all analyses in which the lower limits of detection (LLD) required by Table 8.1-4 were not achievable.

<sup>1</sup> One map shall cover stations near the site boundary; a second shall include the more distant stations.



3. Special Reports

Special reports shall be submitted as indicated in Table 6.9.1.

6.10 RECORD RETENTION

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

1. Records of facility operation covering time interval at each power level.
2. Records of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
3. Reportable Event Reports.
4. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.
5. Records of reactor tests and experiments.
6. Records of changes made to Operating Procedures.
7. Records of radioactive shipments.
8. Records of sealed source leak tests and results.
9. Records of annual physical inventory of all source material of record.

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

1. Record and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
2. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
3. Records of facility radiation and contamination surveys.
4. Records of radiation exposure for all individuals entering radiation control areas.
5. Records of the service lives of all hydraulic and mechanical snubbers listed in PNPS procedures including the date at which the service life commences and associated installation and maintenance records.

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TABLE 6.9.1

Area	Reference	Submittal Date
a. Secondary Containment Leak Rate Testing (1)	4.7.C.1.c	Upon completion of each test (2)
b. (Deleted)		
c. (Deleted)	(Deleted)	
d. Gross Gaseous Release 0.05 Ci/sec for 48 Hours	A, B, B	Ten days after the release occurs
e. Standby Liquid Control solution enrichment out of specification	3.4.C.3	Fourteen days after receipt of a non- complying enrichment report or lack of receipt of such a report within the required thirty days, if enrichment compliance cannot be achieved within seven days.

- NOTES: 1. Each integrated leak rate test of the secondary containment shall be the subject of a summary technical report. This report shall include data on the wind speed, wind direction, outside and inside temperatures during the test, concurrent reactor building pressure, and emergency ventilation flow rate. The report shall also include analyses and interpretations of those data which demonstrate compliance with the specified leak rate limits.
2. The report shall be submitted approximately 90 days after completion of each test. Test periods shall be based on the commercial service date as the starting point.



#### 6.10.B RECORD RETENTION (Continued)

6. Records of gaseous and liquid radioactive material released to the environs.
7. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.
8. Records of training and qualification for current members of the plant staff.
9. Records of in-service inspections performed pursuant to these Technical Specifications.
10. Records of Quality Assurance activities required by the QA Manual.
11. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
12. Records of meetings of the ORC and the NSRAC.
13. Records for Environmental Qualification.

#### 6.11 RADIATION PROTECTION PROGRAM

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

#### 6.12 (Deleted)

#### 6.13 HIGH RADIATION AREA (OPTIONAL)

- 6.13.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 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\*. 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 which continuously indicates the radiation dose rate in the area.

\* Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirements during the performance of this assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

6.13.1 HIGH RADIATION AREA (Continued)

- b. A radiation monitoring device 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 level in the area has been established and personnel have been made knowledgeable of them.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be 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 in the Radiation Work Permit.

6.13.2 The requirements of 6.13.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Nuclear Watch Engineer on duty and/or the Radiation Protection Manager.

6.14 FIRE PROTECTION PROGRAM

The following inspections and audits shall be performed:

1. An independent fire protection inspection and audit shall be performed annually utilizing either qualified off-site licensee personnel or an outside fire protection firm.
2. An inspection and audit by an outside qualified fire consultant shall be performed at intervals no greater than 3 years.

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