

ATTACHMENT TO LICENSE AMENDMENT NO. 108

PROVISIONAL OPERATING LICENSE NO. DPR-20

DOCKET NO. 50-255

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

i  
ii  
iii  
iv  
v  
vi  
--  
6-1  
6-1a  
6-1b  
6-2  
6-3  
--  
6-4  
6-5  
--  
6-6  
6-6a  
6-7  
6-8  
6-9  
6-25  
6-26  
6-27  
6-28  
6-33

INSERT

i  
ii  
iii  
iv  
v  
vi  
vii  
6-1  
6-1a  
6-1b  
6-2  
6-3  
6-3a  
6-4  
6-5  
6-5a  
6-6  
6-6a  
6-7  
6-8  
6-9  
6-25  
6-26  
6-27  
6-28  
6-33

8711050284 871030  
PDR ADDCK 05000255  
PDR

PALISADES PLANT TECHNICAL SPECIFICATIONS  
TABLE OF CONTENTS - APPENDIX A

<u>SECTION</u>	<u>DESCRIPTION</u>	<u>PAGE NO</u>
1.0	<u>DEFINITIONS</u>	1-1
1.1	REACTOR OPERATING CONDITIONS	1-1
1.2	PROTECTIVE SYSTEMS	1-3
1.3	INSTRUMENTATION SURVEILLANCE	1-3
1.4	MISCELLANEOUS DEFINITIONS	1-4
2.0	<u>SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS</u>	2-1
2.1	SAFETY LIMITS - REACTOR CORE	2-1
2.2	SAFETY LIMITS - PRIMARY COOLANT SYSTEM PRESSURE	2-3
2.3	LIMITING SAFETY SYSTEM SETTINGS - REACTOR PROTECTIVE SYSTEM	2-4
Table 2.3.1	Reactor Protective System Trip Setting Limits	2-5
Figure 2-1	Reactor Core Safety Limits 2 Pump Operation	2-11
Figure 2-2	Reactor Core Safety Limits 3 Pump Operation	2-12
Figure 2-3	Reactor Core Safety Limits 4 Pump Operation	2-13
3.0	<u>LIMITING CONDITIONS FOR OPERATION</u>	3-1
3.0	APPLICABILITY	3-1
3.1	PRIMARY COOLANT SYSTEM	3-1b
3.1.1	Operable Components	3-1b
Figure 3-0	Reactor Inlet Temperature vs Operating Pressure	3-3a
3.1.2	Heatup and Cooldown Rates	3-4
Figure 3-1	Pressure - Temperature Limits for Heatup	3-9
Figure 3-2	Pressure - Temperature Limits for Cooldown	3-10
Figure 3-2	Pressure - Temperature Limits for Hydro Test	3-11
3.1.3	Minimum Conditions for Criticality	3-12
3.1.4	Maximum Primary Coolant Radioactivity	3-17
3.1.5	Primary Coolant System Leakage Limits	3-20
3.1.6	Maximum Primary Coolant Oxygen and Halogens Concentrations	3-23
3.1.7	Primary and Secondary Safety Valves	3-25
3.1.8	Overpressure Protection Systems	3-25a
3.2	CHEMICAL AND VOLUME CONTROL SYSTEM	3-26
3.3	EMERGENCY CORE COOLING SYSTEM	3-29
3.4	CONTAINMENT COOLING	3-34
3.5	STEAM AND FEEDWATER SYSTEMS	3-38
3.6	CONTAINMENT SYSTEM	3-40
3.7	ELECTRICAL SYSTEMS	3-41
3.8	REFUELING OPERATIONS	3-46
3.9	EFFLUENT RELEASE (DELETED)	3-50



PALISADES PLANT TECHNICAL SPECIFICATIONS  
TABLE OF CONTENTS - APPENDIX A

SECTION	DESCRIPTION	PAGE NO
3.0	<u>LIMITING CONDITIONS FOR OPERATION (Continued)</u>	
3.10	CONTROL ROD AND POWER DISTRIBUTION LIMITS	3-58
3.10.1	Shutdown Margin Requirements	3-58
3.10.2	Individual Rod Worth	3-58
3.10.3	Part-Length Control Rods	3-58
3.10.4	Misaligned or Inoperable Control Rod or Part-Length Rod	3-60
3.10.5	Regulating Group Insertion Limits	3-60
3.10.6	Shutdown Rod Limits	3-61
3.10.7	Low Power Physics Testing	3-61
3.10.8	Center Control Rod Misalignment	3-61
Figure 3-6	Control Rod Insertion Limits	3-62
3.11	POWER DISTRIBUTION INSTRUMENTATION	3-65
3.11.1	Incore Detectors	3-65
3.11.2	Excore Power Distribution Monitoring System	3-66a
Figure 3.11-1	Axial Variation Bounding Condition	3-66d
3.12	MODERATOR TEMPERATURE COEFFICIENT OF REACTIVITY	3-67
3.13	CONTAINMENT BUILDING AND FUEL STORAGE BUILDING CRANES	3-69
3.14	CONTROL ROOM VENTILATION	3-70
3.15	REACTOR PRIMARY SHIELD COOLING SYSTEM	3-70
3.16	ENGINEERED SAFETY FEATURES SYSTEM INITIATION INSTRUMENTATION SETTINGS	3-71
Table 3.16.1	Engineered Safety Features System Initiation Instrument Setting Limits	3-75
3.17	INSTRUMENTATION AND CONTROL SYSTEMS	3-76
Table 3.17.1	Instrumentation Operating Requirements for Reactor Protective System	3-78
Table 3.17.2	Instrumentation Operating Requirements for Engineered Safety Feature Systems	3-79
Table 3.17.3	Instrument Operating Conditions for Isolation Functions	3-80
Table 3.17.4	Instrumentation Operating Requirements for Other Safety Feature Functions	3-81
3.18	SECONDARY WATER MONITORING REQUIREMENTS	3-82
Table 3.18.1	Secondary Water Monitoring Control Parameters	3-83
3.19	IODINE REMOVAL SYSTEM	3-84
3.20	SHOCK SUPPRESSORS (SNUBBERS)	3-88
Table 3.20.1	Safety-Related Hydraulic Shock Suppressors (Snubbers)	3-89
Table 3.20.2	Safety-Related Mechanical Shock Suppressors (Snubbers)	3-91
3.21	MOVEMENT OF SHIELDED SHIPPING CASK IN FUEL HANDLING AREAS	3-92
3.22	FIRE PROTECTION SYSTEM	3-96
3.22.1	Fire Detection Instrumentation	3-96
Table 3.22.1	Fire Detection Instrumentation - Minimum Instruments Operable	3-97

PALISADES PLANT TECHNICAL SPECIFICATIONS  
TABLE OF CONTENTS - APPENDIX A

SECTION	DESCRIPTION	PAGE NO
3.0	<u>LIMITING CONDITIONS FOR OPERATION (Continued)</u>	
3.22.2	Fire Suppression Water System	3-98
3.22.3	Fire Sprinkler System	3-100
3.22.4	Fire Hose Stations	3-101
3.22.5	Penetration Fire Barriers	3-102
3.23	POWER DISTRIBUTION LIMITS	3-103
3.23.1	Linear Heat Rate (LHR)	3-103
Table 3.23.1	Linear Heat Rate Limits	3-107
Table 3.23.2	Radial Peaking Factor Limits, $F_L$	3-107
Fig. 3.23-1	Allowable LHR as a Function of Peak Power Location	3-108
Fig. 3.23-2	Allowable LHR as a Function of Burnup	3-109
Fig. 3.23-3	Allowable LHR as a Function of Peak Power Location for Interior and Narrow Water Gap Fuel Rods	3-110
3.23.2	Radial Peaking Factors	3-111
3.23.3	Quadrant Power Tilt - $T_q$	3-112
3.24	RADIOLOGICAL EFFLUENT RELEASES	3-114
3.24.1	Radioactive Liquid Effluent Monitoring Instrumentation	3-114
Table 3.24-1	Radioactive Liquid Effluent Monitoring Instrumentation	3-115
	Bases for 3.24.1	3-128
3.24.2	Radioactive Gaseous Effluent Monitoring Instrumentation	3-117
Table 3.24-2	Radioactive Gaseous Effluent Monitoring Instrumentation	3-118
	Bases for 3.24.2	3-128
3.24.3	Liquid Effluents Concentration	3-120
	Bases for 3.24.3	3-129
3.24.4	Liquid Effluent Dose	3-121
	Bases for 3.24.4	3-129
3.24.5	Gaseous Effluents Dose	3-122
	Bases for 3.24.5	3-130
3.24.5.1	Dose Rate	3-122
	Bases for 3.24.5.1	3-130
3.24.5.2	Noble Gases	3-123
	Bases for 3.24.5.2	3-131
3.24.5.3	Dose - Iodine-131, Iodine-133, Tritium and Radionuclides in Particulate Form	3-124
	Bases for 3.24.5.3	3-131
3.24.6	Gaseous Waste Treatment System	3-125
	Bases for 3.24.6	3-132
3.24.7	Solid Radioactive Waste	3-126
	Bases for 3.24.7	3-132
3.24.8	Total Dose	3-127
	Bases for 3.24.8	3-133



PALISADES PLANT TECHNICAL SPECIFICATIONS  
TABLE OF CONTENTS - APPENDIX A

SECTION	DESCRIPTION	PAGE NO
4.0	<u>SURVEILLANCE REQUIREMENTS</u>	4-1
4.1	INSTRUMENTATION AND CONTROL	4-1
4.1.1	Overpressure Protection Systems	4-1
Table 4.1.1	Minimum Frequencies for Checks, Calibrations and Testing of Reactor Protective System	4-3
Table 4.1.2	Minimum Frequencies for Checks, Calibrations and Testing of Engineered Safety Feature Instrumentation Controls	4-6
Table 4.1.3	Minimum Frequencies for Checks, Calibrations and Testing of Miscellaneous Instrumentation and Controls	4-10
4.2	EQUIPMENT AND SAMPLING TESTS	4-13
Table 4.2.1	Minimum Frequencies for Sampling Tests	4-14
Table 4.2.2	Minimum Frequencies for Equipment Tests	4-15
Table 4.2.3	HEPA Filter and Charcoal Adsorber Systems	4-15c
4.3	SYSTEMS SURVEILLANCE	4-16
Table 4.3.1	Primary Coolant System Pressure Isolation Valves	4-19
Table 4.3.2	Miscellaneous Surveillance Items	4-23
4.4	PRIMARY COOLANT SYSTEM INTEGRITY TESTING	4-24
4.5	CONTAINMENT TESTS	4-25
4.5.1	Integrated Leakage Rate Tests	4-25
4.5.2	Local Leak Detection Tests	4-27
4.5.3	Recirculation Heat Removal Systems	4-28
4.5.4	Surveillance for Prestressing System	4-29
4.5.5	End Anchorage Concrete Surveillance	4-30
4.5.6	Liner Plate Surveillance	4-31
4.5.7	Penetrations Surveillance	4-32
4.5.8	Dome Delamination Surveillance	4-32a
4.6	SAFETY INJECTION AND CONTAINMENT SPRAY SYSTEMS TESTS	4-39
4.6.1	Safety Injection System	4-39
4.6.2	Containment Spray System	4-39
4.6.3	Pumps	4-39
4.6.4	Valves (Deleted)	4-40
4.6.5	Containment Air Cooling System	4-40
4.7	EMERGENCY POWER SYSTEM PERIODIC TESTS	4-42
4.7.1	Diesel Generators	4-42
4.7.2	Station Batteries	4-42
4.7.3	Emergency Lighting	4-43
4.8	MAIN STEAM STOP VALVES	4-44
4.9	AUXILIARY FEEDWATER SYSTEM	4-45
4.10	REACTIVITY ANOMALIES	4-46
4.11	RADIOLOGICAL ENVIRONMENTAL MONITORING	4-47
Table 4.11-1	Radiological Environmental Monitoring Program	4-49
Table 4.11-2	Reporting Levels for Radioactivity Concentrations in Environmental Samples	4-56

PALISADES PLANT TECHNICAL SPECIFICATIONS  
TABLE OF CONTENTS - APPENDIX A

SECTION	DESCRIPTION	PAGE NO
4.0	<u>SURVEILLANCE REQUIREMENTS (Continued)</u>	
Table 4.11-3	Detection Capabilities for Environmental Sample Analysis	4-57
4.11.1	Bases for Monitoring Program	4-59a
4.11.3	Bases for Land Use Census	4-59a
4.11.5	Bases for Interlaboratory Comparison Program	4-59a
4.12	AUGMENTED INSERVICE INSPECTION PROGRAM FOR HIGH ENERGY LINES OUTSIDE OF CONTAINMENT	4-60
Fig. 4.12 A	Augmented Inservice Inspection Program - Main Steam Welds	4-63
Fig. 4.12 B	Augmented Inservice Inspection Program - Feedwater Line Welds	4-64
4.13	REACTOR INTERNALS VIBRATION MONITORING (DELETED)	4-65
4.14	AUGMENTED INSERVICE INSPECTION PROGRAM FOR STEAM GENERATORS	4-68
Table 4.14.1	Operating Allowances	4-68d
Table 4.14.2	Maximum Allowable Degradation	4-69
4.15	PRIMARY SYSTEM FLOW MEASUREMENT	4-70
4.16	INSERVICE INSPECTION PROGRAM FOR SHOCK SUPPRESSORS (SNUBBERS)	4-71
4.17	FIRE PROTECTION SYSTEM	4-75
4.17.1	Fire Detection Instrumentation	4-75
4.17.2	Fire Suppression Water System	4-76
4.17.3	Fire Sprinkler System	4-78
4.17.4	Fire Hose Stations	4-79
4.17.5	Penetration Fire Barriers	4-80
4.18	POWER DISTRIBUTION INSTRUMENTATION	4-81
4.18.1	Incore Detectors	4-81
4.18.2	Excore Monitoring System	4-82
4.19	POWER DISTRIBUTION LIMITS	4-83
4.19.1	Linear Heat Rate	4-83
4.19.2	Radial Peaking Factors	4-84
4.20	(Intentionally Left Blank)	4-85
4.21	(Intentionally Left Blank)	4-86
4.22	(Intentionally Left Blank)	4-87
4.23	(Intentionally Left Blank)	4-88
	(Intentionally Left Blank)	4-89
4.24	RADIOLOGICAL EFFLUENT RELEASES	4-90
4.24.1	Radiological Liquid Effluent Monitoring Instrumentation	4-90
4.24.2	Radiological Gaseous Effluent Monitoring Instrumentation	4-90
4.24.3	Liquid Effluent Concentration	4-90
4.24.4	Liquid Effluent Dose	4-90
4.24.5	Gaseous Effluent Dose	4-90



PALISADES PLANT TECHNICAL SPECIFICATIONS  
TABLE OF CONTENTS - APPENDIX A

<u>SECTION</u>	<u>DESCRIPTION</u>	<u>PAGE NO</u>
4.0	<u>SURVEILLANCE REQUIREMENTS (Continued)</u>	
4.24.6	Gaseous Waste System	4-91
4.24.7	Solid Radioactive Waste	4-91
4.24.8	Total Dose	4-91
Table 4.24-1	Radioactive Liquid Effluent Monitoring Instrumentation Surveillance Requirements	4-92
Table 4.24-2	Radioactive Gaseous Effluent Monitoring Instrumentation Surveillance Requirements	4-93
Table 4.24-3	Radioactive Liquid Waste Sampling and Analysis Program	4-95
Table 4.24-5	Radioactive Gaseous Waste Sampling and Analysis Program	4-97
5.0	<u>DESIGN FEATURES</u>	5-1
5.1	SITE	5-1
5.2	CONTAINMENT DESIGN FEATURES	5-1
5.2.1	Containment Structures	5-1
5.2.2	Penetrations	5-2
5.2.3	Containment Structure Cooling Systems	5-2
5.3	NUCLEAR STEAM SUPPLY SYSTEM (NSSS)	5-2
5.3.1	Primary Coolant System	5-2
5.3.2	Reactor Core and Control	5-3
5.3.3	Emergency Core Cooling System	5-3
5.4	FUEL STORAGE	5-4
5.4.1	New Fuel Storage	5-4
5.4.2	Spent Fuel Storage	5-4a
Figure 5-1	Site Environment TLD Stations	5-5
6.0	<u>ADMINISTRATIVE CONTROLS</u>	6-1
6.1	RESPONSIBILITY	6-1
6.2	ORGANIZATION	6-1
6.2.1	Offsite	6-1
6.2.2	Plant Staff	6-1
6.2.3	Plant Safety Engineering (PSE)	6-1a
6.3	PLANT STAFF QUALIFICATIONS	6-1b
Figure 6.2-1	Consumers Power Company Offsite Organization	6-2
Figure 6.2-2	Consumers Power Company Plant Organization	6-3
Table 6.2-1	Minimum Shift Crew Composition	6-4
6.4	TRAINING	6-5

PALISADES PLANT TECHNICAL SPECIFICATIONS  
TABLE OF CONTENTS - APPENDIX A

SECTION PAGE NO	DESCRIPTION	
6.0	ADMINISTRATIVE CONTROLS (Continued)	
6.5	REVIEW AND AUDIT	6-5
6.5.1	Plant Review Committee (PRC)	6-5
6.5.2	Nuclear Safety Board (NSB)	6-6a
6.6	(Deleted)	6-10
6.7	SAFETY LIMIT VIOLATION	6-10
6.8	PROCEDURES	6-10
6.9	REPORTING REQUIREMENTS	6-11
6.9.1	Routine Reports	6-11
6.9.2	Reportable Events	6-12
6.9.3	Other Reporting Requirements	6-18
6.9.3.1	Routine Reports	6-18
6.9.3.1.A	Radioactive Effluent Releases	6-18
6.9.3.1.B	Annual Radiological Environmental Operating Report	6-24
6.9.3.2	Nonroutine Reports	6-25b
Table 6.9-1	Environmental Radiological Monitoring Program Summary	6-25c
6.9.3.3	Special Reports	6-26
6.10	RECORD RETENTION	6-26
6.11	RADIATION PROTECTION PROGRAM	6-28
6.12	HIGH RADIATION AREA	6-28
6.13	(Deleted)	6-33
6.14	(Deleted)	6-33
6.15	SYSTEMS INTEGRITY	6-33
6.16	IODINE MONITORING	6-33
6.17	POST ACCIDENT SAMPLING	6-34
6.18	OFFSITE DOSE CALCULATION MANUAL (ODCM)	6-35
6.19	PROCESS CONTROL PROGRAM (PCP)	6-35
6.20	MAJOR MODIFICATIONS TO RADIOACTIVE LIQUID, GASEOUS AND SOLID WASTE TREATMENT SYSTEMS	6-36
6.21	SEALED SOURCE CONTAMINATION	6-37



6.1 RESPONSIBILITY

- 6.1.1 The Plant General Manager shall be responsible for overall plant operation and shall delegate in writing the succession for this responsibility during his absence.
- 6.1.2 The Shift Supervisor or in his absence from the control room, the second licensed senior operator on duty shall be responsible for the shift command function. A directive to this effect shall be issued annually by the Vice President - Nuclear Operations.

6.2 ORGANIZATION

6.2.1 OFFSITE

The offsite organization for plant management and technical support shall be as shown in Figure 6.2-1.

6.2.2 PLANT STAFF

The plant organization shall be as shown in Figure 6.2-2 and:

- a. Each on-duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.
- b. At least one licensed senior operator shall be in the control room at all times during conditions other than cold shutdown or refueling. In addition to this senior operator, at least one licensed operator or senior operator shall be present at the controls at all times when fuel is in the reactor.
- c. A radiation safety technician shall be on site when fuel is in the reactor.\*
- d. All core alterations, after the initial fuel loading, shall either be performed under the direct supervision of a licensed Senior Operator or Senior Operator holding a license limited to fuel handling. During this time no other responsibilities shall be assigned to this individual.
- e. A Fire Brigade of at least 5 members shall be maintained on site at all times.\* The Fire Brigade shall not include 3 members of the minimum shift crew necessary for safe shutdown or any personnel required for other essential functions during a fire emergency.

---

\*The radiation safety technician and the Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed two hours in order to accommodate unexpected absence provided immediate action is taken to restore the minimum requirements.

## ADMINISTRATIVE CONTROLS

---

### 6.2.2 PLANT STAFF (Continued)

- f. Administrative procedures shall limit the working hours of Plant staff who perform safety-related functions.

In the event that overtime is used, the following guidelines shall be followed:

- A. An individual shall not be permitted to work more than 16 hours straight (excluding shift turnover time).
- B. An individual shall not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any seven-day period (all excluding shift turnover time).
- C. A break of at least eight hours shall be allowed between work periods (including shift turnover time).
- D. 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.

Deviations from the overtime guidelines shall be authorized by the Plant General Manager or his Alternate. The basis for granting the deviation shall be documented. Routine deviations are not to be authorized.

Individual overtime will be reviewed monthly by the Plant General Manager or his designee to assure that excessive hours have not been assigned.

### 6.2.3 PLANT SAFETY ENGINEERING (PSE)

#### 6.2.3.1 FUNCTION

PSE shall function to examine plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports and other sources which may indicate areas for improving plant safety. The organization shall report to the Director of Nuclear Safety. With the concurrence of the Director, PSE may function as staff to the onsite and offsite review organizations and provide technical support for problem resolution.



## ADMINISTRATIVE CONTROLS

---

### 6.2.3.2 COMPOSITION

PSE shall consist of a minimum of five (5) technical personnel located at the Palisades Plant.

### 6.2.3.3 QUALIFICATIONS

At least three of the full-time members at the Palisades Plant shall have a bachelor's degree in engineering or a related science. At least one of the three shall have a minimum of five years' professional experience which includes a minimum of two years' experience in nuclear power plant operation and/or design. Those individuals comprising the minimum complement of five and not having bachelor's degrees in engineering or a related science shall have at least two years' experience in the field for which they will provide expertise to PSE.

### 6.2.3.4 REPORTS

Reports of PSE activities shall be submitted regularly to the NSB.

## 6.3 PLANT STAFF QUALIFICATIONS

6.3.1 Each member of the plant staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions.

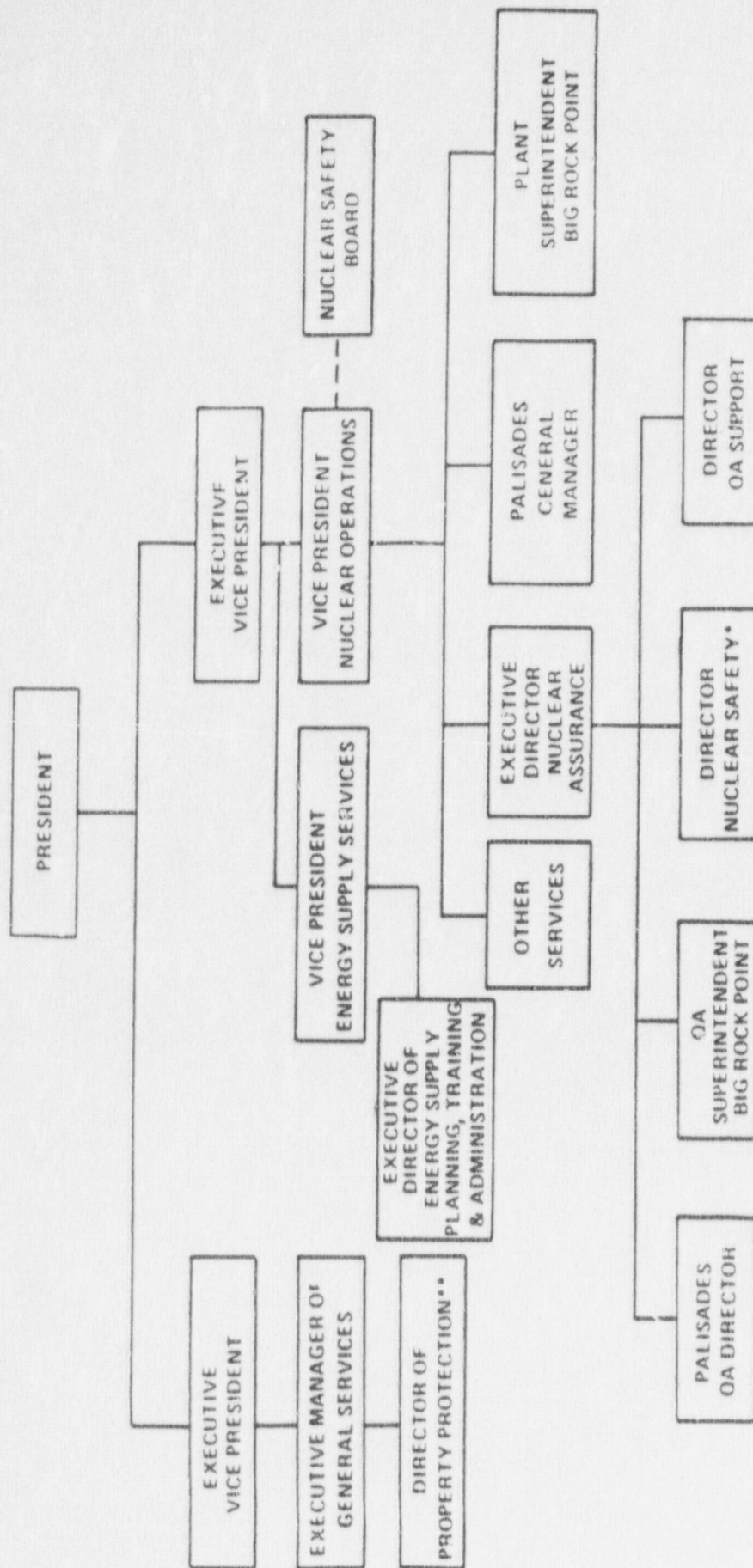
6.3.2 The Plant Health Physics Superintendent shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.\*

6.3.3 The Shift Technical Advisor shall have a bachelor's degree or equivalent and the Shift Engineer shall have a bachelor's degree in a scientific or engineering discipline with specific training in plant design and/or operations, and response and analysis of the plant for transients and accidents. The Shift Engineer shall hold a Senior Operator License.

---

\*For the purpose of this section, "Equivalent," as utilized in Regulatory Guide 1.8 for the bachelor's degree requirement, may be met with four years of any one or combination of the following: (a) Formal schooling in science or engineering, or (b) operational or technical experience/training in nuclear power.

CONSUMERS POWER COMPANY  
OFFSITE ORGANIZATION

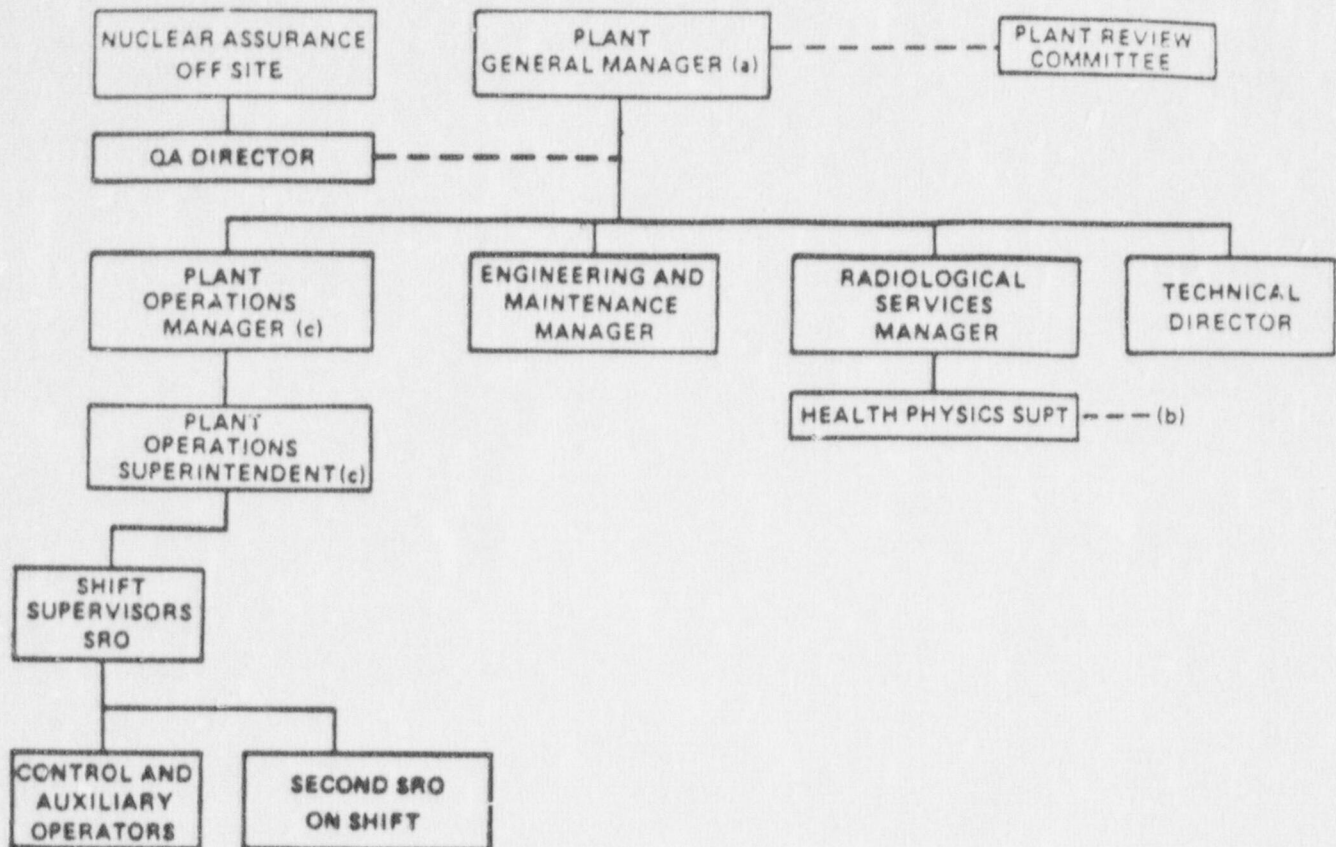


\* NSB CHAIRMAN

\*\* RESPONSIBLE FOR OVERALL FIRE PROTECTION PROGRAM



CONSUMERS POWER COMPANY  
PLANT ORGANIZATION



A. To support the above Plant organization, individuals knowledgeable in the following areas identified in ANSI N18.7-1976/ ANS 3.2 will report at the discretion of the Plant General Manager:

1. Nuclear Power Plant Mechanical, Electrical and Electronic Systems
2. Nuclear Engineering
3. Chemistry and Radiochemistry
4. Radiation Protection (Reports to Health Physics Superintendent)

A single individual may be qualified and perform in more than one discipline.

(a) Responsible for the Plant Fire Protection Program implementation.

(b) A Radiation Safety Manager (RPM as defined in Regulatory Guide 1.8) shall be designated by the Plant General Manager and shall be either the Radiological Services Manager or the Health Physics Superintendent. The Radiation Safety Manager shall have direct access to the Plant General Manager in the matters of radiation safety.

(c) Either the Plant Operations Manager or the Plant Operations Superintendent will hold an SRO License and meet the other requirements of 6.3.1 of these Technical Specifications (as applicable to Operations Manager in ANSI N18.1). The individual holding an SRO License shall be responsible for directing the activities of licensed operators.

Figure 6.2-2

Figure 6.2-2 (Contd)

- B. The Security Force will be supervised as described in the Plant Security Plan.
- C. Quality Assurance/Control activities will be in accordance with Consumers Power Company's Quality Assurance Program Description for Operational Nuclear Power Plants (CPC-2A, as revised).



Table 6.2-1

## MINIMUM SHIFT CREW COMPOSITION

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	Power Operation, Hot Standby and Hot Shutdown	Cold Shutdown and Refueling Shutdown*
SS	1**	1
SE or SRO	1**	None
RO	2	1
AO	2	2
STA	1**	None

SS - Shift Supervisor with a Senior Reactor Operators License  
 SE - Shift Engineer 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.

\*Does not include additional personnel required when core alterations are being conducted. See Section 6.2.2.d.

\*\*There shall be two individuals with Senior Reactor Operator Licenses on shift. If either SRO on shift satisfies the Shift Engineer qualification requirements, then the STA does not need to be stationed.

## ADMINISTRATIVE CONTROLS

---

### 6.4 TRAINING

6.4.1 A retraining and replacement training program for the plant staff shall be maintained under the direction of the Executive Director of Energy Supply Planning, Training and Administration, 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 Director of Property Protection is responsible for the development, revision, approval and implementation of the Fire Brigade training program. This training shall, as practicable, meet or exceed the requirements of Section 27 of the NFPA Code-1975. Fire Brigade training drills shall be held at least quarterly.

### 6.5 REVIEW AND AUDIT

#### 6.5.1 PLANT REVIEW COMMITTEE (PRC)

##### 6.5.1.1 FUNCTION

The Plant Review Committee (PRC) shall function to advise the Plant General Manager on all matters related to nuclear safety.

##### 6.5.1.2 COMPOSITION

The PRC shall be composed of:

Chairman: Technical Engineer or Designated Alternate  
Member: Operations Manager\*  
Member: Engineering and Maintenance Manager\*  
Member: Radiological Services Manager\*  
Member: Technical Director\*  
Member: Reactor Engineering Superintendent  
Member: Operations Superintendent  
Member: Instrumentation and Control Superintendent  
Member: Shift Supervisor or Shift Engineer (1)

\*may serve as Designated Alternate for the Chairman

##### 6.5.1.3 ALTERNATES

Alternate members of the PRC shall be appointed in writing by the PRC Chairman to serve on a temporary basis. No more than two alternates shall participate as voting members at any one time in PRC activities. Members identified with a asterisk (\*) above may function as the Designated Alternate for the Chairman, and in so doing, are not considered alternate members for voting purposes.



## ADMINISTRATIVE CONTROLS

---

### 6.5.1.4 MEETING FREQUENCY

The PRC shall meet at least once per calendar month with special meetings as required.

### 6.5.1.5 QUORUM

A quorum of the PRC all consist of the Chairman and four members (including alternates).

### 6.5.1.6 RESPONSIBILITIES

The PRC shall be responsible for:

- a. Review of: (1) all procedures required by Specification 6.8 and changes thereto and (2) any other proposed procedures or changes thereto as determined by the Plant General Manager to affect nuclear safety.
- b. Review of all proposed tests and experiments that affect nuclear safety.
- c. Review of all proposed changes to Appendix "A" 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. (A report shall be prepared covering evaluation and recommendations to prevent recurrence and forwarded to the Vice President - Nuclear Operations and to the Director of Nuclear Safety.)
- f. Review of plant operations to detect potential nuclear safety hazards.
- g. Performance of special reviews and investigations and reports thereof as requested by the Plant General Manager or Chairman of NSB.
- h. Review of the Site Emergency Plan and implementing procedures.
- i. Review of all reportable events as defined in Section 1.4.

PRC review may be performed through a routing of the item subject to the requirements of Specification 6.5.1.7.

## ADMINISTRATIVE CONTROLS

---

### 6.5.1.7 AUTHORITY

The PRC shall:

- a. Recommend in writing to the Plant General Manager approval or disapproval of items considered under Specifications 6.5.1.6.a. through d. above.
- b. Render determinations in writing with regard to whether or not each item considered under Specifications 6.5.1.6.a. through e. above constitutes an unreviewed safety question.
- c. Provide written notification within 24 hours to the Vice President - Nuclear Operations and to the Vice Chairman of NSB of any disagreement between the PRC and the Plant General Manager; however, the Plant General Manager shall have responsibility for the resolution of such disagreements pursuant to Specification 6.1.1 above.

The PRC Chairman may recommend to the Plant General Manager approval of those items identified in Specifications 6.5.1.6 a. through d. above based on a routing review provided the following conditions are met: (1) at least five PRC members, including the Chairman and no more than 2 alternates, shall review the item, concur with determination as to whether or not the item constitutes an unreviewed safety question, and provide written comments on the item; (2) all comments shall be resolved to the satisfaction of the reviewers providing the comments; and (3) if the PRC Chairman determines that the comments are significant, the item (including comments and resolutions) shall be recirculated to all reviewers for additional comments. The item shall be reviewed at a PRC meeting in the event that: (1) comments are not resolved; or (2) the Plant General Manager overrides the recommendations of the PRC; or (3) a proposed change to the Technical Specifications involves a safety limit, a limiting safety system setting or a limiting condition for operation; or (4) the item was reportable to the NRC.

### 6.5.1.8 RECORDS

The PRC shall maintain written minutes of each PRC meeting and shall provide copies to the NSB.



## ADMINISTRATIVE CONTROLS

---

### 6.5.2 NUCLEAR SAFETY BOARD (NSB)

#### 6.5.2.1 RESPONSIBILITIES

The Nuclear Safety Board (NSB) is responsible for maintaining a continuing examination of nuclear safety-related Corporate and plant activities and defining opportunities for policy changes related to improved nuclear safety performance. The NSB shall operate in accordance with a written charter, approved by the Vice President - Nuclear Operations, which designates the membership, authority, and rules for conducting the meetings.

#### 6.5.2.2 FUNCTION

The NSB shall function to provide a review of designated activities in the areas specified in Specification 6.5.2.3.

6.5.2.3 COMPOSITION

The NSB shall consist of members appointed by the Vice President - Nuclear Operations. NSB shall be chaired by the Director of Nuclear Safety who will report directly to the Vice President on Nuclear Safety Board matters.

Collectively, personnel appointed for NSB shall be competent to conduct reviews in the following areas:

- 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

An individual appointed to NSB may possess expertise in more than one of the above specialties. These individuals should, in general, have had professional experience in their specialty at or above the Senior Engineer level.

6.5.2.4 ALTERNATE MEMBERS

Alternate members may be appointed in writing by the Vice President - Nuclear Operations to act in place of members during any legitimate and unavoidable absences. The qualifications of alternate members shall be similar to those of members.

6.5.2.5 CONSULTANTS

Consultants shall be utilized as determined by the NSB Chairman to provide expert advice to the NSB. NSB members are not restricted as to sources of technical input and may call for separate investigation from any competent source.

6.5.2.6 MEETING FREQUENCY

NSB shall meet at least once per calendar quarter during the initial year of facility operation following fuel loading and at least once every six months thereafter.

6.5.2.7 QUORUM

A quorum of NSB shall consist of the Chairman, or his designated alternate, and at least four (4) members. No more than a minority of the quorum shall have line responsibility for operation of the facility. It is the responsibility of the Chairman to ensure that the quorum convened for a meeting contains appropriately qualified members or has at its disposal consultants sufficient to carry out the review functions required by the meeting agenda.

6.5.2.8 RESPONSIBILITIES

6.5.2.8.1 REVIEW

NSB shall be responsible for the review of:

- a. Significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- b. All reportable events and other violations (of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements or of internal procedures or instructions) having nuclear safety significance.
- c. Issues of safety significance identified by the Plant General Manager, the NSB Chairman, or the PRC.
- d. Proposed changes in the operating license or Appendix "A" Technical Specifications.
- e. The results of actions taken to correct deficiencies identified by the audit program specified in Specifications 6.5.2.8.2 and 6.5.2.8.3 at least once every six months.
- f. 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 did not constitute an unreviewed safety question.
- g. Maintain cognizance of PRC activities through PSE attendance at scheduled PRC meetings or through review of PRC meeting minutes.

6.5.2.8.2 AUDITS

Audits of operational nuclear safety-related facility activities shall be performed under the cognizance of NSB. These audits shall encompass:

- a. The conformance of plant operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.
- b. The performance, training and qualifications of the entire facility staff at least once per 12 months.



## ADMINISTRATIVE CONTROLS

- c. The performance of activities required by the operational quality assurance program (CPC-2A QAPD) to meet the criteria of Appendix "B", 10 CFR 50, at least once per 24 months.
- d. The Site Emergency Plan and implementing procedures at least once per 12 months.
- e. The Site Security Plan and implementing procedures (as required by the Site Security Plan) at least once per 12 months.
- f. Any other area of plant operation considered appropriate by NSB or the Vice President - Nuclear Operations.
- g. The plant Fire Protection Program and implementing procedures at least once per 24 months.
- h. An independent fire protection and loss prevention inspection and audit shall be performed annually 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 shall be performed by an outside qualified fire consultant at intervals no greater than 3 years.

Audit reports encompassed by Specification 6.5.2.8.2 above shall be forwarded to the NSB Vice Chairman and Secretary, and Management positions responsible for the areas audited within thirty (30) days after completion of the audit.

### 6.5.2.8.3 Audits of Nuclear Operations Department activities shall be performed under the cognizance of the NSB. These audits shall encompass:

- a. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- b. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- c. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.

Audit reports encompassed by Specification 6.5.2.8.3 above shall be forwarded to the NSB Vice Chairman and Secretary, and Management positions responsible for the areas audited within thirty (30) days after completion of the audit.

### 6.5.2.9 AUTHORITY

The NSB Chairman shall report to and advise the Vice President - Nuclear Operations of significant findings associated with NSB activities and of recommendations related to improving plant nuclear safety performance.

6.9.3.1.B (Continued)

The annual radiological environmental operating reports shall include summarized and tabulated results in the format of Table 6.9-1 of all radiological environmental samples taken during the report period. In the event that some 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 as soon as possible in a supplementary report.

The reports shall also include the following: a summary description of the radiological environmental monitoring program including sampling methods for each sample type, a map of all sampling locations keyed to a table giving distances and directions from the reactor and the results of land use censuses required by the Specification 4.11.3, and results of the Interlaboratory Comparison Program required by Specification 4.11.5.

## ADMINISTRATIVE CONTROLS

### 6.9.3.3 Special Reports

- a. Special reports shall be submitted to the NRC covering the activities identified below pursuant to the requirements of the applicable referenced specifications:

<u>Area</u>	<u>Specification Reference</u>	<u>Reporting Due</u>
Prestressing, Anchorage, Liner and Penetration Tests	4.5.4 4.5.5	90 Days After Completion of the Test*

\* A test is considered to be complete after all associated mechanical, chemical, etc., tests have been completed.

- b. Special reports shall be submitted in accordance with 10 CFR 50.4, within the time period specified for each report.

### 6.10 RECORD RETENTION

In addition to the applicable record retention requirements of Title 10, Code of Federal Regulations, the following records shall be retained for at least the minimum period indicated:

- 6.10.1 The following records shall be retained for at least five years:
- a. Records and logs of facility operation covering time interval 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. All reportable events as defined in Section 1.4.
  - d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.



## ADMINISTRATIVE CONTROLS

### RECORD RETENTION (Contd)

- e. Records of changes made to the procedures required by Specification 6.8.1.
- f. Records of radioactive shipments.
- g. Records of sealed source leak tests and results.
- h. Records of annual physical inventory of all source material of record.

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

- a. Record and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of monthly radiation exposure for all individuals entering radiation control areas.
- d. Records of gaseous and liquid radioactive material released to the environs.
- e. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.
- f. Records of inservice inspections performed pursuant to these Technical Specifications.
- g. Records of Quality Assurance activities required by the QA Program Description.
- h. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- i. Records of meetings of the PRC and NSB.
- j. Records of monthly facility radiation and contamination surveys.

## ADMINISTRATIVE CONTROLS

- k. Records of secondary water sampling and quality.\*\*
- l. Records of the service lives of all hydraulic and mechanical snubbers covered by Specification 3.20. This shall include the date at which the service life commences and associated installation and maintenance records.
- m. Records of training and qualification for members of the plant staff.\*\*
- n. Records of reactor tests and experiments.\*\*

### 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 HIGH RADIATION AREA

- 6.12.1 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.
  - 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.

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

\*\*Effective with the issuance of Amendment No. 108.

## ADMINISTRATIVE CONTROLS

---

6.13 (Deleted)

6.14 (Deleted)

6.15 SYSTEMS INTEGRITY

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

6.16 IODINE MONITORING

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.