



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

8 APR 1987

Locket Nos.: STN 50-528
and STN 50-529

Mr. E. E. Van Brunt, Jr.
Executive Vice President
Arizona Nuclear Power Project
Post Office Box 52034
Phoenix, Arizona 85072-2034

Dear Mr. Van Brunt:

Subject: Issuance of Amendment No. 14 to Facility Operating License No. NPF-41 for Palo Verde, Unit 1, and Amendment No. 8 to Facility Operating License No. NPF-51 for Palo Verde, Unit 2

The Commission has issued the enclosed Amendment No. 14 to Facility Operating License No. NPF-41 for Palo Verde Nuclear Generating Station, Unit 1, and Amendment No. 8 to Facility Operating License No. NPF-51 for the Palo Verde Nuclear Generating Station, Unit 2. The amendments consists of changes to the Technical Specifications in response to your application transmitted by letter dated July 14, 1986, as supplemented by letters dated December 2, 1986, and February 9, 1987.

In accordance with the guidance issued in Generic Letter 86-10, the amendments delete certain sections of the Technical Specifications pertaining to the fire protection program, since the program is currently included in the Palo Verde FSAR. The Amendment to NPF-41 for Palo Verde, Unit 1 also revises the license condition relating to the fire protection program by substituting the standard condition delineated in Generic Letter 86-10 and which is already included in NPF-51 for Palo Verde, Unit 2.

A copy of the Safety Evaluation supporting the amendments is enclosed.

8704230688 870408
PDR ADOCK 05000528
P PDR

Also enclosed are pages 6-4 for both Technical Specifications. These pages are reissued to correctly reflect the changes approved for Units 1 and 2 by Amendments 13 and 7, issued February 9, 1987.

Sincerely,

~~original signed by:~~
~~George W. Knighton~~

George W. Knighton, Director
PWR Project Directorate No. 7
Division of PWR Licensing-B

Enclosures:

1. Amendment No. 14 to NPF-41
2. Amendment No. 8 to NPF-51
3. Safety Evaluation
4. Page 6-4 of Unit 1 Technical Specifications
5. Page 6-4 of Unit 2 Technical Specifications

cc: See next page

*See previous concurrence

*PD7
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3/20/87

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Also enclosed are pages 6-4 for both Technical Specifications. These pages are reissued to correctly reflect the changes approved for Units 1 and 2 by Amendments 13 and 7, issued February 9, 1987.

Sincerely,

E. A. Licitra, Project Manager
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Division of PWR Licensing-B

Enclosures:

1. Amendment No. 14 to NPF-41
2. Amendment No. 8 to NPF-51
3. Safety Evaluation
4. Page 6-4 of Unit 1 Technical Specifications
5. Page 6-4 of Unit 2 Technical Specifications

cc: See next page

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*See attached
notes from
T. Greene, FOB*

April 8, 1987

ISSUANCE OF AMENDMENT NO. 14 TO FACILITY OPERATING
LICENSE NPF-41 AND FOR PALO VERDE UNIT 1 AND AMENDMENT NO. 8
TO FACILITY OPERATING LICENSE NPF-51 FOR PALO VERDE UNIT 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-528

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 14
License No. NPF-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment, dated July 14, 1986, as supplemented by letters dated December 2, 1986, and February 9, 1987, by the Arizona Public Service Company (APS) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the enclosure to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-41 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 14, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. In addition, paragraph 2.C(7) of Facility Operating License No. NPF-41 is hereby amended to read as follows:


(7) Fire Protection Program (Section 9.5.1, SSER 6, SSER 7 and SSER 8)

APS shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety analysis Report for the facility, as supplemented and amended, and as approved in the SER through Supplement 8, subject to the following provision:

APS may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

4. The changes in the Technical Specifications are to become effective within 30 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licensees shall adhere to the Technical Specifications existing at the time. The period of time during changeover shall be minimized.
5. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


George W. Knighton, Director
PWR Project Directorate No. 7
Division of PWR Licensing-B

Enclosure:
Changes to the Technical
Specifications

Date of Issuance: April 8, 1987

ENCLOSURE TO LICENSE AMENDMENT NO. 14FACILITY OPERATING LICENSE NO. NPF-41DOCKET NO. STN 50-528

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. Also to be replaced are the following overleaf pages to the amended pages.

Amendment Pages

V
VIII
XIII
XXI
XXII
3/4 11-14
B 3/4 3-5
B 3/4 7-7
6-20

Overleaf Pages

VI
VII
XIV
-
-
3/4 11-13
-
-
6-19

In addition, the following pages dealing with the fire protection program are to be deleted.

3/4 3-61 thru 3/4 3-68
3/4 7-29 thru 3/4 7-44

The remaining pages in the affected sections have been renumbered and are to be replaced with the specified insertion pages.

Old Pages

3/4 3-69 thru 3/4 3-80
3/4 7-45
3/4 7-46
B 3/3 3-6
B 3/4 7-8

New Pages

3/4 3-61 thru 3/4 3-72
3/4 7-29
3/4 7-30
-
-

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.2 POWER DISTRIBUTION LIMITS</u>	
3/4.2.1 LINEAR HEAT RATE.....	3/4 2-1
3/4.2.2 PLANAR RADIAL PEAKING FACTORS.....	3/4 2-2
3/4.2.3 AZIMUTHAL POWER TILT.....	3/4 2-3
3/4.2.4 DNBR MARGIN.....	3/4 2-5
3/4.2.5 RCS FLOW RATE.....	3/4 2-8
3/4.2.6 REACTOR COOLANT COLD LEG TEMPERATURE.....	3/4 2-9
3/4.2.7 AXIAL SHAPE INDEX.....	3/4 2-11
3/4.2.8 PRESSURIZER PRESSURE.....	3/4 2-12
<u>3/4.3 INSTRUMENTATION</u>	
3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION.....	3/4 3-1
3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION.....	3/4 3-17
3/4.3.3 MONITORING INSTRUMENTATION	
RADIATION MONITORING INSTRUMENTATION.....	3/4 3-37
INCORE DETECTORS.....	3/4 3-41
SEISMIC INSTRUMENTATION.....	3/4 3-42
METEOROLOGICAL INSTRUMENTATION.....	3/4 3-45
REMOTE SHUTDOWN SYSTEM.....	3/4 3-48
POST-ACCIDENT MONITORING INSTRUMENTATION.....	3/4 3-57
LOOSE-PART DETECTION INSTRUMENTATION.....	3/4 3-61
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION.....	3/4 3-63
<u>3/4.4 REACTOR COOLANT SYSTEM</u>	
3/4.4.1 REACTOR COOLANT LOOPS AND COOLANT CIRCULATION	
STARTUP AND POWER OPERATION.....	3/4 4-1
HOT STANDBY.....	3/4 4-2
HOT SHUTDOWN.....	3/4 4-3
COLD SHUTDOWN - LOOPS FILLED.....	3/4 4-5
COLD SHUTDOWN - LOOPS NOT FILLED.....	3/4 4-6

INDEX

LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
3/4.4.2 SAFETY VALVES	
SHUTDOWN.....	3/4 4-7
OPERATING.....	3/4 4-8
3/4.4.3 PRESSURIZER	
PRESSURIZER.....	3/4 4-9
AUXILIARY SPRAY.....	3/4 4-10
3/4.4.4 STEAM GENERATORS.....	3/4 4-11
3/4.4.5 REACTOR COOLANT SYSTEM LEAKAGE	
LEAKAGE DETECTION SYSTEMS.....	3/4 4-18
OPERATIONAL LEAKAGE.....	3/4 4-19
3/4.4.6 CHEMISTRY.....	3/4 4-22
3/4.4.7 SPECIFIC ACTIVITY.....	3/4 4-25
3/4.4.8 PRESSURE/TEMPERATURE LIMITS	
REACTOR COOLANT SYSTEM.....	3/4 4-29
PRESSURIZER HEATUP/COOLDOWN LIMITS.....	3/4 4-32
OVERPRESSURE PROTECTION SYSTEMS.....	3/4 4-33
3/4.4.9 STRUCTURAL INTEGRITY.....	3/4 4-34
3/4.4.10 REACTOR COOLANT SYSTEM VENTS.....	3/4 4-35
<u>3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)</u>	
3/4.5.1 SAFETY INJECTION TANKS.....	3/4 5-1
3/4.5.2 ECCS SUBSYSTEMS - $T_{cold} \geq 350^{\circ}\text{F}$	3/4 5-3
3/4.5.3 ECCS SUBSYSTEMS - $T_{cold} < 350^{\circ}\text{F}$	3/4 5-7
3/4.5.4 REFUELING WATER TANK.....	3/4 5-8

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.6 CONTAINMENT SYSTEMS</u>	
3/4.6.1 PRIMARY CONTAINMENT	
CONTAINMENT INTEGRITY.....	3/4 6-1
CONTAINMENT LEAKAGE.....	3/4 6-2
CONTAINMENT AIR LOCKS.....	3/4 6-4
INTERNAL PRESSURE.....	3/4 6-6
AIR TEMPERATURE.....	3/4 6-7
CONTAINMENT VESSEL STRUCTURAL INTEGRITY.....	3/4 6-8
CONTAINMENT VENTILATION SYSTEM.....	3/4 6-14
3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS	
CONTAINMENT SPRAY SYSTEM.....	3/4 6-15
IODINE REMOVAL SYSTEM.....	3/4 6-17
3/4.6.3 CONTAINMENT ISOLATION VALVES.....	3/4 6-19
3/4.6.4 COMBUSTIBLE GAS CONTROL	
HYDROGEN MONITORS.....	3/4 6-36
ELECTRIC HYDROGEN RECOMBINERS.....	3/4 6-37
HYDROGEN PURGE CLEANUP SYSTEM.....	3/4 6-38

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.7 PLANT SYSTEMS</u>	
3/4.7.1 TURBINE CYCLE	
SAFETY VALVES.....	3/4 7-1
AUXILIARY FEEDWATER SYSTEM.....	3/4 7-4
CONDENSATE STORAGE TANK.....	3/4 7-6
ACTIVITY.....	3/4 7-7
MAIN STEAM LINE ISOLATION VALVES.....	3/4 7-9
ATMOSPHERIC DUMP VALVES.....	3/4 7-10
3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION.....	3/4 7-11
3/4.7.3 ESSENTIAL COOLING WATER SYSTEM.....	3/4 7-12
3/4.7.4 ESSENTIAL SPRAY POND SYSTEM.....	3/4 7-13
3/4.7.5 ULTIMATE HEAT SINK.....	3/4 7-14
3/4.7.6 ESSENTIAL CHILLED WATER SYSTEM.....	3/4 7-15
3/4.7.7 CONTROL ROOM ESSENTIAL FILTRATION SYSTEM.....	3/4 7-16
3/4.7.8 ESF PUMP ROOM AIR EXHAUST CLEANUP SYSTEM.....	3/4 7-19
3/4.7.9 SNUBBERS.....	3/4 7-21
3/4.7.10 SEALED SOURCE CONTAMINATION.....	3/4 7-27
3/4.7.11 SHUTDOWN COOLING SYSTEM.....	3/4 7-29
3/4.7.12 CONTROL ROOM AIR TEMPERATURE.....	3/4 7-30
<u>3/4.8 ELECTRICAL POWER SYSTEMS</u>	
3/4.8.1 A.C. SOURCES	
OPERATING.....	3/4 8-1
SHUTDOWN.....	3/4 8-8

INDEX

BASES

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.7 PLANT SYSTEMS</u>	
3/4.7.1 TURBINE CYCLE.....	B 3/4 7-1
3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION.....	B 3/4 7-3
3/4.7.3 ESSENTIAL COOLING WATER SYSTEM.....	B 3/4 7-3
3/4.7.4 ESSENTIAL SPRAY POND SYSTEM.....	B 3/4 7-4
3/4.7.5 ULTIMATE HEAT SINK.....	B 3/4 7-4
3/4.7.6 ESSENTIAL CHILLED WATER SYSTEM.....	B 3/4 7-4
3/4.7.7 CONTROL ROOM ESSENTIAL FILTRATION SYSTEM.....	B 3/4 7-5
3/4.7.8 ESF PUMP ROOM AIR EXHAUST CLEANUP SYSTEM.....	B 3/4 7-5
3/4.7.9 SNUBBERS.....	B 3/4 7-5
3/4.7.10 SEALED SOURCE CONTAMINATION.....	B 3/4 7-7
3/4.7.11 SHUTDOWN COOLING SYSTEM.....	B 3/4 7-7
3/4.7.12 CONTROL ROOM AIR TEMPERATURE.....	B 3/4 7-7
<u>3/4.8 ELECTRICAL POWER SYSTEMS</u>	
3/4.8.1, 3/4.8.2, and 3/4.8.3 A.C. SOURCES, D.C. SOURCES, and ONSITE POWER DISTRIBUTION SYSTEMS.....	B 3/4 8-1
3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES.....	B 3/4 8-3
<u>3/4.9 REFUELING OPERATIONS</u>	
3/4.9.1 BORON CONCENTRATION.....	B 3/4 9-1
3/4.9.2 INSTRUMENTATION.....	B 3/4 9-1
3/4.9.3 DECAY TIME.....	B 3/4 9-1
3/4.9.4 CONTAINMENT BUILDING PENETRATIONS.....	B 3/4 9-1
3/4.9.5 COMMUNICATIONS.....	B 3/4 9-1

INDEX

BASES

<u>SECTION</u>	<u>PAGE</u>
3/4.9.6 REFUELING MACHINE.....	B 3/4 9-2
3/4.9.7 CRANE TRAVEL - SPENT FUEL STORAGE POOL BUILDING.....	B 3/4 9-2
3/4.9.8 SHUTDOWN COOLING AND COOLANT CIRCULATION.....	B 3/4 9-2
3/4.9.9 CONTAINMENT PURGE VALVE ISOLATION SYSTEM.....	B 3/4 9-3
3/4.9.10 and 3/4.9.11 WATER LEVEL - REACTOR VESSEL and STORAGE POOL	B 3/4 9-3
3/4.9.12 FUEL BUILDING ESSENTIAL VENTILATION SYSTEM.....	B 3/4 9-3
<u>3/4.10 SPECIAL TEST EXCEPTIONS</u>	
3/4.10.1 SHUTDOWN MARGIN.....	B 3/4 10-1
3/4.10.2 MODERATOR TEMPERATURE COEFFICIENT, GROUP HEIGHT, INSERTION, AND POWER DISTRIBUTION LIMITS.....	B 3/4 10-1
3/4.10.3 REACTOR COOLANT LOOPS.....	B 3/4 10-1
3/4.10.4 CEA POSITION, REGULATING CEA INSERTION LIMITS AND REACTOR COOLANT COLD LEG TEMPERATURE.....	B 3/4 10-1
3/4.10.5 MINIMUM TEMPERATURE AND PRESSURE FOR CRITICALITY.....	B 3/4 10-1
3/4.10.6 SAFETY INJECTION TANKS.....	B 3/4 10-2
3/4.10.7 SPENT FUEL POOL LEVEL.....	B 3/4 10-2
3/4.10.8 SAFETY INJECTION TANK PRESSURE.....	B 3/4 10-2
<u>3/4.11 RADIOACTIVE EFFLUENTS</u>	
3/4.11.1 SECONDARY SYSTEM LIQUID WASTE DISCHARGES TO ONSITE EVAPORATION PONDS.....	B 3/4 11-1
3/4.11.2 GASEOUS EFFLUENTS.....	B 3/4 11-2
3/4.11.3 SOLID RADIOACTIVE WASTE.....	B 3/4 11-5
3/4.11.4 TOTAL DOSE.....	B 3/4 11-5
<u>3/4.12 RADIOLOGICAL ENVIRONMENTAL MONITORING</u>	
3/4.12.1 MONITORING PROGRAM.....	B 3/4 12-1
3/4.12.2 LAND USE CENSUS.....	B 3/4 12-2
3/4.12.3 INTERLABORATORY COMPARISON PROGRAM.....	B 3/4 12-2

INDEX

LIST OF TABLES

	<u>PAGE</u>
4.3-6 REMOTE SHUTDOWN INSTRUMENTATION SURVEILLANCE REQUIREMENTS.....	3/4 3-56
3.3-10 POST-ACCIDENT MONITORING INSTRUMENTATION.....	3/4 3-58
4.3-7 POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS.....	3/4 3-59
3.3-11 LOOSE PARTS SENSOR LOCATIONS.....	3/4 3-62
3.3-12 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION.....	3/4 3-64
4.3-8 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS.....	3/4 3-69
4.4-1 MINIMUM NUMBER OF STEAM GENERATORS TO BE INSPECTED DURING INSERVICE INSPECTION.....	3/4 4-16
4.4-2 STEAM GENERATOR TUBE INSPECTION.....	3/4 4-17
3.4-1 REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES.....	3/4 4-21
3.4-2 REACTOR COOLANT SYSTEM CHEMISTRY.....	3/4 4-23
4.4-3 REACTOR COOLANT SYSTEM CHEMISTRY LIMITS SURVEILLANCE REQUIREMENTS.....	3/4 4-24
4.4-4 PRIMARY COOLANT SPECIFIC ACTIVITY SAMPLE AND ANALYSIS PROGRAM.....	3/4 4-27
4.4-5 REACTOR VESSEL MATERIAL SURVEILLANCE PROGRAM WITHDRAWAL SCHEDULE.....	3/4 4-31
4.6-1 TENDON SURVEILLANCE - FIRST YEAR.....	3/4 6-12
4.6-2 TENDON LIFT-OFF FORCE - FIRST YEAR.....	3/4 6-13
3.6-1 CONTAINMENT ISOLATION VALVES.....	3/4 6-21
3.7-1 STEAM LINE SAFETY VALVES PER LOOPS.....	3/4 7-2

INDEX

LIST OF TABLES

	<u>PAGE</u>
3.7-2 MAXIMUM ALLOWABLE STEADY STATE POWER LEVEL AND MAXIMUM VARIABLE OVERPOWER TRIP SETPOINT WITH INOPERABLE STEAM LINE SAFETY VALVES.....	3/4 7-3
4.7-1 SECONDARY COOLANT SYSTEM SPECIFIC ACTIVITY SAMPLE AND ANALYSIS PROGRAM.....	3/4 7-8
4.8-1 DIESEL GENERATOR TEST SCHEDULE.....	3/4 8-7
3.8-1 D.C. ELECTRICAL SOURCES.....	3/4 8-11
4.8-2 BATTERY SURVEILLANCE REQUIREMENTS.....	3/4 8-12
3.8-2 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES.....	3/4 8-19
3.8-3 MOTOR-OPERATED VALVES THERMAL OVERLOAD PROTECTION AND/OR BYPASS DEVICES.....	3/4 8-41
4.11-1 RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM..	3/4 11-2
4.11-2 RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM.....	3/4 11-8
3.12-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM.....	3/4 12-3
3.12-2 REPORTING LEVELS FOR RADIOACTIVITY CONCENTRATIONS IN ENVIRONMENTAL SAMPLES.....	3/4 12-7
4.12-1 DETECTION CAPABILITIES FOR ENVIRONMENTAL SAMPLE ANALYSIS.....	3/4 12-8
B 3/4.4-1 REACTOR VESSEL TOUGHNESS.....	B 3/4 4-8
5.7-1 COMPONENT CYCLIC OR TRANSIENT LIMITS.....	5-7
5.7-2 PRESSURIZER SPRAY NOZZLE USAGE FACTOR.....	5-9
6.2-1 MINIMUM SHIFT CREW COMPOSITION.....	6-5

INSTRUMENTATION

LOOSE-PART DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.7 The loose-part detection system shall be OPERABLE with all sensors specified in Table 3.3-11.

APPLICABILITY: MODES 1 and 2.

ACTION:

- a. With one or more loose-part detection system channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.7 Each channel of the loose-part detection system shall be demonstrated OPERABLE by performance of:

- a. a CHANNEL CHECK at least once per 24 hours,
- b. a CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- c. a CHANNEL CALIBRATION at least once per 18 months.

TABLE 3.3-11

LOOSE PARTS SENSOR LOCATIONS

<u>INSTRUMENT NO.</u>	<u>LOCATION</u>
JSVNYE - 1	UPPER VESSEL A (STUD BOLTS)
JSVNYE - 2	UPPER VESSEL B (STUD BOLTS)
JSVNYE - 3	LOWER VESSEL A (INCORE NOZZLE)
JSVNYE - 4	LOWER VESSEL B (INCORE NOZZLE)
JSVNYE - 5	SG-1A (HOT LEG)
JSVNYE - 6	SG-1B (COLD LEG 1A)
JSVNYE - 7	SG-2A (HOT LEG)
JSVNYE - 8	SG-2B (COLD LEG 2A)

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-12 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined and adjusted in accordance with the methodology and parameters in the ODCM.

APPLICABILITY: As shown in Table 3.3-12.

ACTION:

- a. With a low range radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, immediately suspend the release of radioactive gaseous effluents monitored by the affected channel, or declare the channel inoperable, or change the setpoint so it is acceptably conservative.
- b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-12. Restore the inoperable instrumentation to OPERABLE status within 30 days and, if unsuccessful, explain in the next Semi-annual Radioactive Effluent Release Report why this inoperability was not corrected within the time specified.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-8.

TABLE 3.3-12RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
1. GASEOUS RADWASTE SYSTEM			
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release #RU-12	1	#	35
b. Flow Rate Monitor	1	#	36
2. GASEOUS RADWASTE SYSTEM EXPLOSIVE GAS MONITORING SYSTEM			
a. Hydrogen Monitor	2	**	39
b. Oxygen Monitor	2	**	39

TABLE 3.3-12 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>		<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
3.	CONDENSER EVACUATION SYSTEM			
A.	Low Range Monitors			
a.	Noble Gas Activity Monitor #RU-141	1	1, 2, 3, 4	37
b.	Iodine Sampler	1	1, 2, 3, 4	40
c.	Particulate Sampler	1	1, 2, 3, 4	40
d.	Flow Rate Monitor	1	1, 2, 3, 4	36
e.	Sampler Flow Rate Measuring Device	1	1, 2, 3, 4	36
B.	High Range Monitors			
a.	Noble Gas Activity Monitor #RU-142	1	1, 2, 3, 4	42
b.	Iodine Sampler	1	1, 2, 3, 4	42
c.	Particulate Sampler	1	1, 2, 3, 4	42
d.	Sampler Flow Rate Measuring Device	1	1, 2, 3, 4	42
4.	PLANT VENT SYSTEM			
A.	Low Range Monitors			
a.	Noble Gas Activity Monitor #RU-143	1	*	37
b.	Iodine Sampler	1	*	40
c.	Particulate Sampler	1	*	40
d.	Flow Rate Monitor	1	*	36
e.	Sampler Flow Rate Measuring Device	1	*	36

TABLE 3.3-12 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>		<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
4.	PLANT VENT SYSTEM (Continued)			
B.	High Range Monitors			
a.	Noble Gas Activity Monitor #RU-144	1	*	42
b.	Iodine Sampler	1	*	42
c.	Particulate Sampler	1	*	42
d.	Sampler Flow Rate Measuring Device	1	*	42
5.	FUEL BUILDING VENTILATION SYSTEM			
A.	Low Range Monitors			
a.	Noble Gas Activity Monitor #RU-145	1	##	37,41
b.	Iodine Sampler	1	##	40
c.	Particulate Sampler	1	##	40
d.	Flow Rate Monitor	1	##	36
e.	Sampler Flow Rate Measuring Device	1	##	36
B.	High Range Monitors			
a.	Noble Gas Activity Monitor #RU-146	1	##	41,42
b.	Iodine Sampler	1	##	42
c.	Particulate Sampler	1	##	42
d.	Sampler Flow Rate Measuring Device	1	##	42

TABLE 3.3-12 (Continued)

TABLE NOTATION

* At all times.

** During GASEOUS RADWASTE SYSTEM operation.

During waste gas release.

In MODES 1, 2, 3, and 4 or when irradiated fuel is in the fuel storage pool.

- ACTION 35 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, the contents of the tank(s) may be released to the environment provided that prior to initiating the release:
- a. At least two independent samples of the tank's contents are analyzed, and
 - b. At least two technically qualified members of the facility staff independently verify the release rate calculations and discharge valve lineup;
- Otherwise, suspend release of radioactive effluents via this pathway.
- ACTION 36 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 4 hours.
- ACTION 37 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the actions of (A) or (B) are performed:
- a. Initiate the Preplanned Alternate Sampling Program of Specification 6.16 to monitor the appropriate parameter(s).
 - b. Place moveable air monitors in-line or take grab samples at least once per 12 hours.
- ACTION 38 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, immediately suspend PURGING of radioactive effluents via this pathway.
- ACTION 39 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, operation of the GASEOUS RADWASTE SYSTEM may continue provided grab samples are taken and analyzed daily. With both channels inoperable operation may continue provided grab samples are taken and analyzed (1) every 4 hours during degassing operations, and (2) daily during other operations.

TABLE 3.3-12 (Continued)

TABLE NOTATION

- ACTION 40 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via the effected pathway may continue provided samples are continuously collected with auxiliary sampling equipment as required in Table 4.11-2 within one hour after the channel has been declared inoperable.
- ACTION 41 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirements, comply with the ACTION b of Specification 3.9.12 or operate the fuel building essential ventilation system while moving irradiated fuel.
- ACTION 42 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement restore the channel to OPERABLE status within 72 hours or:
- a. Initiate the Preplanned Alternate Sampling Program of Specification 6.16 to monitor the appropriate parameter(s) when it is needed.
 - b. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the action(s) taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.

TABLE 4.3-8RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE IS REQUIRED</u>
1. GASEOUS RADWASTE SYSTEM					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release RU-12	P	P	R(3)	Q(1),(2),P###	#
b. Flow Rate Monitor	P	N.A.	R	Q,P###	#
2. GASEOUS RADWASTE SYSTEM EXPLOSIVE GAS MONITORING SYSTEM					
a. Hydrogen Monitor (continuous)	D	N.A.	Q(4)	M	**
b. Hydrogen Monitor (sequential)	D	N.A.	Q(4)	M	**
c. Oxygen Monitor (continuous)	D	N.A.	Q(5)	M	**
d. Oxygen Monitor (sequential)	D	N.A.	Q(5)	M	**

TABLE 4.3-8 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE IS REQUIRED</u>
3. CONDENSER EVACUATION SYSTEM (RU-141 and RU-142)					
a. Noble Gas Activity Monitor	D(6)	M	R(3)	Q(2)	1, 2, 3, 4
b. Iodine Sampler	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
c. Particulate Sampler	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
d. Flow Rate Monitor	D(7)	N.A.	R	Q	1, 2, 3, 4
e. Sampler Flow Rate Measuring Device	D(7)	N.A.	R	Q	1, 2, 3, 4
4. PLANT VENT SYSTEM (RU-143 and RU-144)					
a. Noble Gas Activity Monitor	D(6)	M	R(3)	Q(2)	*
b. Iodine Sampler	N.A.	N.A.	N.A.	N.A.	*
c. Particulate Sampler	N.A.	N.A.	N.A.	N.A.	*
d. Flow Rate Monitor	D(7)	N.A.	R	Q	*
e. Sampler Flow Rate Measuring Device	D(7)	N.A.	R	Q	*

TABLE 4.3-8 (Continued)RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE IS REQUIRED</u>
5. FUEL BUILDING VENTILATION SYSTEM (RU-145 and RU-146)					
a. Noble Gas Activity Monitor	D(6)	M	R(3)	Q(2)	##
b. Iodine Sampler	N.A.	N.A.	N.A.	N.A.	##
c. Particulate Sampler	N.A.	N.A.	N.A.	N.A.	##
d. Flow Rate Monitor	D(7)	N.A.	R	Q	##
e. Sampler Flow Rate Measuring Device	D(7)	N.A.	R	Q	##

TABLE 4.3-8 (Continued)

TABLE NOTATIONS

- * At all times.
 - ** During GASEOUS RADWASTE SYSTEM operation.
 - # During waste gas release.
 - ## During MODES 1, 2, 3 or 4 or with irradiated fuel in the fuel storage pool.
 - ### Functional test should consist of, but not be limited to, a verification of system isolation capability by the insertion of a simulated alarm condition.
- (1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway occurs if the instrument indicates measured levels above the alarm/trip setpoint.
 - (2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm setpoint.
 2. Circuit failure.
 3. Instrument indicates a downscale failure.
 4. Instrument controls not set in operate mode.
 - (3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards (NBS) or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.
 - (4) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:
 1. One volume percent hydrogen, balance nitrogen, and
 2. Four volume percent hydrogen, balance nitrogen.
 - (5) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:
 1. One volume percent oxygen, balance nitrogen, and
 2. Four volume percent oxygen, balance nitrogen.
 - (6) The channel check for channels in standby status shall consist of verification that the channel is "on-line and reachable."
 - (7) Daily channel check not required for flow monitors in standby status.

PLANT SYSTEMS

3/4.7.11 SHUTDOWN COOLING SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.11 Two independent shutdown cooling subsystems shall be OPERABLE, with each subsystem comprised of:

- a. One OPERABLE low pressure safety injection pump, and
- b. An independent OPERABLE flow path capable of taking suction from the RCS hot leg and discharging coolant through the shutdown cooling heat exchanger and back to the RCS through the cold leg injection lines.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With one shutdown cooling subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within 1 hour, be in at least HOT SHUTDOWN within the next 6 hours and be in COLD SHUTDOWN within the next 30 hours and continue action to restore the required subsystem to OPERABLE status.
- b. With both shutdown cooling subsystems inoperable, restore one subsystem to OPERABLE status within 1 hour or be in at least HOT STANDBY within 1 hour and be in HOT SHUTDOWN within the next 6 hours and continue action to restore the required subsystems to OPERABLE status.
- c. With both shutdown cooling subsystems inoperable and both reactor coolant loops inoperable, initiate action to restore the required subsystems to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.7.11 Each shutdown cooling subsystem shall be demonstrated OPERABLE:

- a. At least once per 18 months, during shutdown, by establishing shutdown cooling flow from the RCS hot legs, through the shutdown cooling heat exchangers, and returning to the RCS cold legs.
- b. At least once per 18 months, during shutdown, by testing the automatic and interlock action of the shutdown cooling system connections from the RCS. The shutdown cooling system suction valves shall not open when RCS pressure is greater than 410 psia. The shutdown cooling system suction valves located outside containment shall close automatically when RCS pressure is greater than 500 psia. The shutdown cooling system suction valve located inside containment shall close automatically when RCS pressure is greater than 700 psia.

PLANT SYSTEMS

3/4.7.12 CONTROL ROOM AIR TEMPERATURE

LIMITING CONDITION OF OPERATION

3.7.12 The control room air temperature shall be maintained less than or equal to 80°F.

APPLICABILITY: ALL MODES

ACTION:

With the control room air temperature greater than 80°F, reduce the air temperature to less than or equal to 80°F within 30 days or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.12 At least once per 12 hours, verify that the control room air temperature is less than or equal to 80°F.

RADIOACTIVE EFFLUENTS

GASEOUS RADWASTE TREATMENT

LIMITING CONDITION FOR OPERATION

3.11.2.4 The GASEOUS RADWASTE SYSTEM and the VENTILATION EXHAUST TREATMENT SYSTEM shall be used to reduce radioactive materials in gaseous waste prior to their discharge when the projected gaseous effluent air doses due to gaseous effluent releases, from each reactor unit, from the site (see Figures 5.1-1 and 5.1-3), when averaged over 31 days, would exceed 0.2 mrad for gamma radiation and 0.4 mrad for beta radiation. The VENTILATION EXHAUST TREATMENT SYSTEM shall be used to reduce radioactive materials in gaseous waste prior to their discharge when the projected doses due to gaseous effluent releases, from each reactor unit, to areas at and beyond the SITE BOUNDARY (see Figures 5.1-1 and 5.1-3) when averaged over 31 days would exceed 0.3 mrem to any organ of a MEMBER OF THE PUBLIC.

APPLICABILITY: At all times.

ACTION:

- a. With radioactive gaseous waste being discharged without treatment and in excess of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which includes the following information:
 1. Identification of the inoperable equipment or subsystems and the reason for inoperability,
 2. Action(s) taken to restore the inoperable equipment to OPERABLE status, and
 3. Summary description of action(s) taken to prevent a recurrence.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.4 Doses due to gaseous releases from the site shall be projected at least once per 31 days, in accordance with the methodology and parameters in the ODCM.

RADIOACTIVE EFFLUENTS

EXPLOSIVE GAS MIXTURE

LIMITING CONDITION FOR OPERATION

3.11.2.5 The concentration of oxygen in the waste gas holdup system shall be limited to less than or equal to 2% by volume whenever the hydrogen concentration exceeds 4% by volume.

APPLICABILITY: At all times.

ACTION:

- a. With the concentration of oxygen in the waste gas holdup system greater than 2% by volume but less than or equal to 4% by volume, reduce the oxygen concentration to the above limit within 48 hours.
- b. With the concentration of oxygen in the waste gas holdup system greater than 4% by volume, immediately suspend all additions of waste gases to the system and reduce the concentration of oxygen to less than 4% by volume within 6 hours.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.5 The concentration of hydrogen or oxygen in the waste gas holdup system shall be determined to be within the above limits by continuously monitoring the waste gases in the waste gas holdup system with the hydrogen and oxygen monitors required OPERABLE by Table 3.3-12 of Specification 3.3.3.8:

INSTRUMENTATION

BASES

POST ACCIDENT MONITORING INSTRUMENTATION (Continued)

In the event more than four sensors in a Reactor Vessel Level channel are inoperable, repairs may only be possible during the next refueling outage. This is because the sensors are accessible only after the missile shield and reactor vessel head are removed. It is not feasible to repair a channel except during a refueling outage when the missile shield and reactor vessel head are removed to refuel the core. If both channels are inoperable, the channels shall be restored to OPERABLE status in the nearest refueling outage. If only one channel is inoperable, it is intended that this channel be restored to OPERABLE status in a refueling outage as soon as reasonably possible.

3/4.3.3.7 LOOSE-PART DETECTION INSTRUMENTATION

The OPERABILITY of the loose-part detection instrumentation ensures that sufficient capability is available to detect loose metallic parts in the primary system and avoid or mitigate damage to primary system components. The allowable out-of-service times and surveillance requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

3/4.3.3.8 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases of gaseous effluents. The alarm/trip setpoints for these instruments shall be calculated and adjusted in accordance with the methodology and parameters in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring (and controlling) the concentrations of potentially explosive gas mixtures in the GASEOUS RADWASTE SYSTEM. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

There are two separate radioactive gaseous effluent monitoring systems: the low range effluent monitors for normal plant radioactive gaseous effluents and the high range effluent monitors for post-accident plant radioactive gaseous effluents. The low range monitors operate at all times until the concentration of radioactivity in the effluent becomes too high during post-accident conditions. The high range monitors only operate when the concentration of radioactivity in the effluent is above the setpoint in the low range monitors.

PLANT SYSTEMS

BASES

3/4.7.10 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism (i.e. sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shield mechanism.

3/4.7.11 SHUTDOWN COOLING SYSTEM

The OPERABILITY of two separate and independent shutdown cooling subsystems ensures that the capability of initiating shutdown cooling in the event of an accident exists even assuming the most limiting single failure occurs. The safety analysis assumes that shutdown cooling can be initiated when conditions permit.

The limits of operation with one shutdown cooling inoperable for any reason minimize the time exposure of the plant to an accident event occurring concurrent with the failure of a component on the other shutdown cooling subsystem.

3/4.7.12 CONTROL ROOM AIR TEMPERATURE

Maintaining the control room air temperature less than or equal to 80°F ensures that (1) the ambient air temperature does not exceed the allowable air temperature for continuous duty rating for the equipment and instrumentation in the control room and (2) the control room will remain habitable for operations personnel during plant operation. The 30 days to return the control room air temperature to less than or equal to 80°F in the Action Statement is consistent with the equipment qualification program for the control room.

ADMINISTRATIVE CONTROLS

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (Continued)

The Semiannual Radioactive Effluent Release Report to be submitted within 60 days after January 1 of each year shall include an annual summary of hourly meteorological data collected over the previous year. This annual summary may be either in the form of an hour-by-hour listing on magnetic tape of wind speed, wind direction, atmospheric stability, and precipitation (if measured), or in the form of joint frequency distributions of wind speed, wind direction, and atmospheric stability.* This same report shall include an assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the unit or station during the previous calendar year. This same report shall also include an assessment of the radiation doses from radioactive liquid and gaseous effluents to MEMBERS OF THE PUBLIC due to their activities inside the SITE BOUNDARY (Figure 5.1-1) during the report period. All assumptions used in making these assessments, i.e., specific activity, exposure time and location, shall be included in these reports. The meteorological conditions concurrent with the time of release of radioactive materials in gaseous effluents, as determined by sampling frequency and measurement, shall be used for determining the gaseous pathway doses. The assessment of radiation doses shall be performed in accordance with the methodology and parameters in the OFFSITE DOSE CALCULATION MANUAL.

The Semiannual Radioactive Effluent Release Report to be submitted 60 days after January 1 of each year shall also include an assessment of radiation doses to the likely most exposed MEMBER OF THE PUBLIC from reactor releases and other nearby uranium fuel cycle sources, including doses from primary effluent pathways and direct radiation, for the previous calendar year to show conformance with 40 CFR Part 190, Environmental Radiation Protection Standards for Nuclear Power Operation. Acceptable methods for calculating the dose contribution from liquid and gaseous effluents are given in Regulatory Guide 1.109, Rev. 1, October 1977.

The Semiannual Radioactive Effluent Release Reports shall include the following information for each class of solid waste (as defined by 10 CFR Part 61) shipped offsite during the report period:

- a. Container volume,
- b. Total curie quantity (specify whether determined by measurement or estimate),
- c. Principal radionuclides (specify whether determined by measurement or estimate),
- d. Source of waste and processing employed (e.g., dewatered spent resin compacted dry waste, evaporator bottoms),

*In lieu of submission with the first half year Semiannual Radioactive Effluent Release Report, the licensee has the option of retaining this summary of required meteorological data on site in a file that shall be provided to the NRC upon request.

ADMINISTRATIVE CONTROLS

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (Continued)

- e. Type of container (e.g., LSA, Type A, Type B, Large Quantity), and
- f. Solidification agent or absorbent (e.g., cement, urea formaldehyde).

The Semiannual Radioactive Effluent Release Reports shall include a list and description of unplanned releases from the site to UNRESTRICTED AREAS of radioactive materials in gaseous and liquid effluents made during the reporting period.

The Semiannual Radioactive Effluent Release Reports shall include any changes made during the reporting period to the PROCESS CONTROL PROGRAM and to the OFFSITE DOSE CALCULATION MANUAL, as well as a listing of new locations for dose calculations and/or environmental monitoring identified by the land use census pursuant to Specification 3.12.2.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office of the NRC within the time period specified for each report.

6.9.3 Violations of the requirements of the fire protection program described in the Final Safety Analysis Report which would have adversely affected the ability to achieve and maintain safe shutdown in the event of a fire shall be reported in accordance with 10 CFR 50.73.

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 5 years:

- a. Records and logs of unit 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 submitted to the Commission.
- d. Records of surveillance activities; inspections and calibrations required by these Technical Specifications.
- e. Records of changes made to the procedures of Specification 6.8.1.
- f. Records of radioactive shipments.
- g. Records of sealed source and fission detector leak tests and results.
- h. Records of annual physical inventory of all sealed source material of record.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-529

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 8
License No. NPF-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment, dated July 14, 1986, as supplemented by letters dated December 2, 1986, and February 9, 1987, by the Arizona Public Service Company (APS) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.


2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the enclosure to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-51 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 8, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The changes in the Technical Specification are to become effective within 30 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licensees shall adhere to the Technical Specifications existing at the time. The period of time during changover shall be minimized.
4. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


George W. Knighton, Director
PWR Project Directorate No. 7
Division of PWR Licensing-B

Enclosure:
Changes to the Technical
Specifications

Date of Issuance: April 8, 1987

April 8, 1987

ENCLOSURE TO LICENSE AMENDMENT NO. 8

FACILITY OPERATING LICENSE NO. NPF-51

DOCKET NO. STN 50-529

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. Also to be replaced are the following overleaf pages to the amended pages.

Amendment Pages

Overleaf Pages

V
VIII
XIII
XVII
XXI
XXII
3/4 11-14
B 3/4 3-5
B 3/4 7-7
6-20
6-21
6-22
6-23

VI
VII
XIV
XVIII
-
-
3/4 11-13
-
-
6-19
-
-
6-24

In addition, the following pages dealing with the fire protection program are to be deleted.

3/4 3-61 thru 3/4 3-68
3/4 7-29 thru 3/4 7-44

The remaining pages in the affected sections have been renumbered and are to be replaced with the specified insertion pages.

Old Pages

3/4 3-69 thru 3/4 3-80
3/4 7-45
3/4 7-46
B 3/4 3-6
B 3/4 7-8

New Pages

3/4 3-61 thru 3/4 3-72
3/4 7-29
3/4 7-30
-
-

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.2 POWER DISTRIBUTION LIMITS</u>	
3/4.2.1 LINEAR HEAT RATE.....	3/4 2-1
3/4.2.2 PLANAR RADIAL PEAKING FACTORS - F_{xy}	3/4 2-2
3/4.2.3 AZIMUTHAL POWER TILT - T_q	3/4 2-3
3/4.2.4 DNBR MARGIN.....	3/4 2-5
3/4.2.5 RCS FLOW RATE.....	3/4 2-8
3/4.2.6 REACTOR COOLANT COLD LEG TEMPERATURE.....	3/4 2-9
3/4.2.7 AXIAL SHAPE INDEX.....	3/4 2-11
3/4.2.8 PRESSURIZER PRESSURE.....	3/4 2-12
<u>3/4.3 INSTRUMENTATION</u>	
3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION.....	3/4 3-1
3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION.....	3/4 3-17
3/4.3.3 MONITORING INSTRUMENTATION	
RADIATION MONITORING INSTRUMENTATION.....	3/4 3-37
INCORE DETECTORS.....	3/4 3-41
SEISMIC INSTRUMENTATION.....	3/4 3-42
METEOROLOGICAL INSTRUMENTATION.....	3/4 3-45
REMOTE SHUTDOWN SYSTEM.....	3/4 3-48
POST-ACCIDENT MONITORING INSTRUMENTATION.....	3/4 3-57
LOOSE-PART DETECTION INSTRUMENTATION.....	3/4 3-61
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION.....	3/4 3-63
<u>3/4.4 REACTOR COOLANT SYSTEM</u>	
3/4.4.1 REACTOR COOLANT LOOPS AND COOLANT CIRCULATION	
STARTUP AND POWER OPERATION.....	3/4 4-1
HOT STANDBY.....	3/4 4-2
HOT SHUTDOWN.....	3/4 4-3
COLD SHUTDOWN - LOOPS FILLED.....	3/4 4-5
COLD SHUTDOWN - LOOPS NOT FILLED.....	3/4 4-6

INDEX

LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
3/4.4.2 SAFETY VALVES	
SHUTDOWN.....	3/4 4-7
OPERATING.....	3/4 4-8
3/4.4.3 PRESSURIZER	
PRESSURIZER.....	3/4 4-9
AUXILIARY SPRAY.....	3/4 4-10
3/4.4.4 STEAM GENERATORS.....	3/4 4-11
3/4.4.5 REACTOR COOLANT SYSTEM LEAKAGE	
LEAKAGE DETECTION SYSTEMS.....	3/4 4-18
OPERATIONAL LEAKAGE.....	3/4 4-19
3/4.4.6 CHEMISTRY.....	3/4 4-22
3/4.4.7 SPECIFIC ACTIVITY.....	3/4 4-25
3/4.4.8 PRESSURE/TEMPERATURE LIMITS	
REACTOR COOLANT SYSTEM.....	3/4 4-28
PRESSURIZER HEATUP/COOLDOWN LIMITS.....	3/4 4-31
OVERPRESSURE PROTECTION SYSTEMS.....	3/4 4-32
3/4.4.9 STRUCTURAL INTEGRITY.....	3/4 4-34
3/4.4.10 REACTOR COOLANT SYSTEM VENTS.....	3/4 4-35
<u>3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)</u>	
3/4.5.1 SAFETY INJECTION TANKS.....	3/4 5-1
3/4.5.2 ECCS SUBSYSTEMS - $T_{cold} \geq 350^{\circ}\text{F}$	3/4 5-3
3/4.5.3 ECCS SUBSYSTEMS - $T_{cold} < 350^{\circ}\text{F}$	3/4 5-7
3/4.5.4 REFUELING WATER TANK.....	3/4 5-8

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.6 CONTAINMENT SYSTEMS</u>	
3/4.6.1 PRIMARY CONTAINMENT	
CONTAINMENT INTEGRITY.....	3/4 6-1
CONTAINMENT LEAKAGE.....	3/4 6-2
CONTAINMENT AIR LOCKS.....	3/4 6-4
INTERNAL PRESSURE.....	3/4 6-6
AIR TEMPERATURE.....	3/4 6-7
CONTAINMENT VESSEL STRUCTURAL INTEGRITY.....	3/4 6-8
CONTAINMENT VENTILATION SYSTEM.....	3/4 6-14
3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS	
CONTAINMENT SPRAY SYSTEM.....	3/4 6-15
IODINE REMOVAL SYSTEM.....	3/4 6-17
3/4.6.3 CONTAINMENT ISOLATION VALVES.....	3/4 6-19
3/4.6.4 COMBUSTIBLE GAS CONTROL	
HYDROGEN MONITORS.....	3/4 6-36
ELECTRIC HYDROGEN RECOMBINERS.....	3/4 6-37
HYDROGEN PURGE CLEANUP SYSTEM.....	3/4 6-38

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.7 PLANT SYSTEMS</u>	
3/4.7.1 TURBINE CYCLE	
SAFETY VALVES.....	3/4 7-1
AUXILIARY FEEDWATER SYSTEM.....	3/4 7-4
CONDENSATE STORAGE TANK.....	3/4 7-6
ACTIVITY.....	3/4 7-7
MAIN STEAM LINE ISOLATION VALVES.....	3/4 7-9
ATMOSPHERIC DUMP VALVES.....	3/4 7-10
3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION.....	3/4 7-11
3/4.7.3 ESSENTIAL COOLING WATER SYSTEM.....	3/4 7-12
3/4.7.4 ESSENTIAL SPRAY POND SYSTEM.....	3/4 7-13
3/4.7.5 ULTIMATE HEAT SINK.....	3/4 7-14
3/4.7.6 ESSENTIAL CHILLED WATER SYSTEM.....	3/4 7-15
3/4.7.7 CONTROL ROOM ESSENTIAL FILTRATION SYSTEM.....	3/4 7-16
3/4.7.8 ESF PUMP ROOM AIR EXHAUST CLEANUP SYSTEM.....	3/4 7-19
3/4.7.9 SNUBBERS.....	3/4 7-21
3/4.7.10 SEALED SOURCE CONTAMINATION.....	3/4 7-27
3/4.7.11 SHUTDOWN COOLING SYSTEM.....	3/4 7-29
3/4.7.12 CONTROL ROOM AIR TEMPERATURE.....	3/4 7-30
<u>3/4.8 ELECTRICAL POWER SYSTEMS</u>	
3/4.8.1 A.C. SOURCES	
OPERATING.....	3/4 8-1
SHUTDOWN.....	3/4 8-8
CATHODIC PROTECTION.....	3/4 8-8a

INDEX

BASES

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.7 PLANT SYSTEMS</u>	
3/4.7.1 TURBINE CYCLE.....	B 3/4 7-1
3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION.....	B 3/4 7-3
3/4.7.3 ESSENTIAL COOLING WATER SYSTEM.....	B 3/4 7-3
3/4.7.4 ESSENTIAL SPRAY POND SYSTEM.....	B 3/4 7-4
3/4.7.5 ULTIMATE HEAT SINK.....	B 3/4 7-4
3/4 7.6 ESSENTIAL CHILLED WATER SYSTEM.....	B 3/4 7-4
3/4.7.7 CONTROL ROOM ESSENTIAL FILTRATION SYSTEM.....	B 3/4 7-5
3/4.7.8 ESF PUMP ROOM AIR EXHAUST CLEANUP SYSTEM.....	B 3/4 7-5
3/4.7.9 SNUBBERS.....	B 3/4 7-5
3/4.7.10 SEALED SOURCE CONTAMINATION.....	B 3/4 7-7
3/4.7.11 SHUTDOWN COOLING SYSTEM.....	B 3/4 7-7
3/4.7.12 CONTROL ROOM AIR TEMPERATURE.....	B 3/4 7-7
<u>3/4.8 ELECTRICAL POWER SYSTEMS</u>	
3/4.8.1, 3/4.8.2, and 3/4.8.3 A.C. SOURCES, D.C. SOURCES, and ONSITE POWER DISTRIBUTION SYSTEMS.....	B 3/4 8-1
3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES.....	B 3/4 8-3
<u>3/4.9 REFUELING OPERATIONS</u>	
3/4.9.1 BORON CONCENTRATION.....	B 3/4 9-1
3/4.9.2 INSTRUMENTATION.....	B 3/4 9-1
3/4.9.3 DECAY TIME.....	B 3/4 9-1
3/4.9.4 CONTAINMENT BUILDING PENETRATIONS.....	B 3/4 9-1
3/4.9.5 COMMUNICATIONS.....	B 3/4 9-1

INDEX

BASES

<u>SECTION</u>	<u>PAGE</u>
3/4.9.6 REFUELING MACHINE.....	B 3/4 9-2
3/4.9.7 CRANE TRAVEL - SPENT FUEL STORAGE POOL BUILDING.....	B 3/4 9-2
3/4.9.8 SHUTDOWN COOLING AND COOLANT CIRCULATION.....	B 3/4 9-2
3/4.9.9 CONTAINMENT PURGE VALVE ISOLATION SYSTEM.....	B 3/4 9-3
3/4.9.10 and 3/4.9.11 WATER LEVEL - REACTOR VESSEL and STORAGE POOL	B 3/4 9-3
3/4.9.12 FUEL BUILDING ESSENTIAL VENTILATION SYSTEM.....	B 3/4 9-3
<u>3/4.10 SPECIAL TEST EXCEPTIONS</u>	
3/4.10.1 SHUTDOWN MARGIN.....	B 3/4 10-1
3/4.10.2 MODERATOR TEMPERATURE COEFFICIENT, GROUP HEIGHT, INSERTION, AND POWER DISTRIBUTION LIMITS.....	B 3/4 10-1
3/4.10.3 REACTOR COOLANT LOOPS.....	B 3/4 10-1
3/4.10.4 CEA POSITION, REGULATING CEA INSERTION LIMITS AND REACTOR COOLANT COLD LEG TEMPERATURE.....	B 3/4 10-1
3/4.10.5 MINIMUM TEMPERATURE AND PRESSURE FOR CRITICALITY.....	B 3/4 10-1
3/4.10.6 SAFETY INJECTION TANKS.....	B 3/4 10-2
3/4.10.7 SPENT FUEL POOL LEVEL.....	B 3/4 10-2
3/4.10.8 SAFETY INJECTION TANK PRESSURE.....	B 3/4 10-2
<u>3/4.11 RADIOACTIVE EFFLUENTS</u>	
3/4.11.1 SECONDARY SYSTEM LIQUID WASTE DISCHARGES TO ONSITE EVAPORATION PONDS.....	B 3/4 11-1
3/4.11.2 GASEOUS EFFLUENTS.....	B 3/4 11-2
3/4.11.3 SOLID RADIOACTIVE WASTE.....	B 3/4 11-5
3/4.11.4 TOTAL DOSE.....	B 3/4 11-6
<u>3/4.12 RADIOLOGICAL ENVIRONMENTAL MONITORING</u>	
3/4.12.1 MONITORING PROGRAM.....	B 3/4 12-1
3/4.12.2 LAND USE CENSUS.....	B 3/4 12-2
3/4.12.3 INTERLABORATORY COMPARISON PROGRAM.....	B 3/4 12-2

INDEX

ADMINISTRATIVE CONTROLS

<u>SECTION</u>	<u>PAGE</u>
6.5.3 NUCLEAR SAFETY GROUP (NSG)	
FUNCTION.....	6-10
COMPOSITION.....	6-10
CONSULTANTS.....	6-10
REVIEW.....	6-10
AUDITS.....	6-11
AUTHORITY.....	6-12
RECORDS.....	6-12
<u>6.6 REPORTABLE EVENT ACTION.....</u>	6-12
<u>6.7 SAFETY LIMIT VIOLATION.....</u>	6-13
<u>6.8 PROCEDURES AND PROGRAMS.....</u>	6-13
<u>6.9 REPORTING REQUIREMENTS</u>	
6.9.1 ROUTINE REPORTS.....	6-16
STARTUP REPORT.....	6-16
ANNUAL REPORTS.....	6-17
MONTHLY OPERATING REPORT.....	6-18
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT.....	6-18
SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT.....	6-19
6.9.2 SPECIAL REPORTS.....	6-20
<u>6.10 RECORD RETENTION.....</u>	6-21
<u>6.11 RADIATION PROTECTION PROGRAM.....</u>	6-22
<u>6.12 HIGH RADIATION AREA.....</u>	6-22
<u>6.13 PROCESS CONTROL PROGRAM (PCP).....</u>	6-23

INDEX

ADMINISTRATIVE CONTROLS

<u>SECTION</u>	<u>PAGE</u>
6.14 <u>OFFSITE DOSE CALCULATION MANUAL.....</u>	6-24
6.15 <u>MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS.....</u>	6-24

INDEX

LIST OF TABLES

	<u>PAGE</u>
3.3-9C REMOTE SHUTDOWN CONTROL CIRCUITS.....	3/4 3-53
4.3-6 REMOTE SHUTDOWN INSTRUMENTATION SURVEILLANCE REQUIREMENTS.....	3/4 3-56
3.3-10 POST-ACCIDENT MONITORING INSTRUMENTATION.....	3/4 3-58
4.3-7 POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS.....	3/4 3-60
3.3-11 LOOSE PARTS SENSOR LOCATIONS.....	3/4 3-62
3.3-12 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION.....	3/4 3-64
4.3-8 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS.....	3/4 3-69
4.4-1 MINIMUM NUMBER OF STEAM GENERATORS TO BE INSPECTED DURING INSERVICE INSPECTION.....	3/4 4-16
4.4-2 STEAM GENERATOR TUBE INSPECTION.....	3/4 4-17
3.4-1 REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES.....	3/4 4-21
3.4-2 REACTOR COOLANT SYSTEM CHEMISTRY.....	3/4 4-23
4.4-3 REACTOR COOLANT SYSTEM CHEMISTRY LIMITS SURVEILLANCE REQUIREMENTS.....	3/4 4-24
4.4-4 PRIMARY COOLANT SPECIFIC ACTIVITY SAMPLE AND ANALYSIS PROGRAM.....	3/4 4-26
4.4-5 REACTOR VESSEL MATERIAL SURVEILLANCE PROGRAM - WITHDRAWAL SCHEDULE.....	3/4 4-30
4.6-1 TENDON SURVEILLANCE - FIRST YEAR.....	3/4 6-12
4.6-2 TENDON LIFT-OFF FORCE - FIRST YEAR.....	3/4 6-13
3.6-1 CONTAINMENT ISOLATION VALVES.....	3/4 6-21
3.7-1 STEAM LINE SAFETY VALVES PER LOOPS.....	3/4 7-2

INDEX

LIST OF TABLES

	<u>PAGE</u>
3.7-2 MAXIMUM ALLOWABLE STEADY STATE POWER LEVEL AND MAXIMUM VARIABLE OVERPOWER TRIP SETPOINT WITH INOPERABLE STEAM LINE SAFETY VALVES.....	3/4 7-3
4.7-1 SECONDARY COOLANT SYSTEM SPECIFIC ACTIVITY SAMPLE AND ANALYSIS PROGRAM.....	3/4 7-8
4.8-1 DIESEL GENERATOR TEST SCHEDULE.....	3/4 8-7
3.8-1 D.C. ELECTRICAL SOURCES.....	3/4 8-11
4.8-2 BATTERY SURVEILLANCE REQUIREMENTS.....	3/4 8-12
3.8-2 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES.....	3/4 8-19
3.8-3 MOTOR-OPERATED VALVES THERMAL OVERLOAD PROTECTION AND/OR BYPASS DEVICES.....	3/4 8-41
4.11-1 RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM..	3/4 11-2
4.11-2 RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM.....	3/4 11-8
3.12-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM.....	3/4 12-3
3.12-2 REPORTING LEVELS FOR RADIOACTIVITY CONCENTRATIONS IN ENVIRONMENTAL SAMPLES.....	3/4 12-7
4.12-1 DETECTION CAPABILITIES FOR ENVIRONMENTAL SAMPLE ANALYSIS.....	3/4 12-8
B 3/4.4-1 REACTOR VESSEL TOUGHNESS.....	B 3/4 4-8
5.7-1 COMPONENT CYCLIC OR TRANSIENT LIMITS.....	5-7
5.7-2 PRESSURIZER SPRAY NOZZLE USAGE FACTOR.....	5-9
6.2-1 MINIMUM SHIFT CREW COMPOSITION.....	6-5

INSTRUMENTATION

LOOSE-PART DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.7 The loose-part detection system shall be OPERABLE with all sensors specified in Table 3.3-11.

APPLICABILITY: MODES 1 and 2.

ACTION:

- a. With one or more loose-part detection system channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.7 Each channel of the loose-part detection system shall be demonstrated OPERABLE by performance of:

- a. a CHANNEL CHECK at least once per 24 hours,
- b. a CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- c. a CHANNEL CALIBRATION at least once per 18 months.

TABLE 3.3-11

LOOSE PARTS SENSOR LOCATIONS

<u>INSTRUMENT NO.</u>	<u>LOCATION</u>
JSVNYE - 1	UPPER VESSEL A (STUD BOLTS)
JSVNYE - 2	UPPER VESSEL B (STUD BOLTS)
JSVNYE - 3	LOWER VESSEL A (INCORE NOZZLE)
JSVNYE - 4	LOWER VESSEL B (INCORE NOZZLE)
JSVNYE - 5	SG-1A (HOT LEG)
JSVNYE - 6	SG-1B (COLD LEG 1A)
JSVNYE - 7	SG-2A (HOT LEG)
JSVNYE - 8	SG-2B (COLD LEG 2A)

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-12 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined and adjusted in accordance with the methodology and parameters in the ODCM.

APPLICABILITY: As shown in Table 3.3-12.

ACTION:

- a. With a low range radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, immediately suspend the release of radioactive gaseous effluents monitored by the affected channel, or declare the channel inoperable, or change the setpoint so it is acceptably conservative.
- b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-12. Restore the inoperable instrumentation to OPERABLE status within 30 days and, if unsuccessful, explain in the next Semi-annual Radioactive Effluent Release Report why this inoperability was not corrected within the time specified.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-8.

TABLE 3.3-12

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>		<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
1.	GASEOUS RADWASTE SYSTEM			
a.	Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release #RU-12	1	#	35
b.	Flow Rate Monitor	1	#	36
2.	GASEOUS RADWASTE SYSTEM EXPLOSIVE GAS MONITORING SYSTEM			
a.	Hydrogen Monitor	2	**	39
b.	Oxygen Monitor	2	**	39

TABLE 3.3-12 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>		<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
3.	CONDENSER EVACUATION SYSTEM			
A.	Low Range Monitors			
a.	Noble Gas Activity Monitor #RU-141	1	1, 2, 3***, 4***	37
b.	Iodine Sampler	1	1, 2, 3***, 4***	40
c.	Particulate Sampler	1	1, 2, 3***, 4***	40
d.	Flow Rate Monitor	1	1, 2, 3***, 4***	36
e.	Sampler Flow Rate Measuring Device	1	1, 2, 3***, 4***	36
B.	High Range Monitors			
a.	Noble Gas Activity Monitor #RU-142	1	1, 2, 3***, 4***	42
b.	Iodine Sampler	1	1, 2, 3***, 4***	42
c.	Particulate Sampler	1	1, 2, 3***, 4***	42
d.	Sampler Flow Rate Measuring Device	1	1, 2, 3***, 4***	42
4.	PLANT VENT SYSTEM			
A.	Low Range Monitors			
a.	Noble Gas Activity Monitor #RU-143	1	*	37
b.	Iodine Sampler	1	*	40
c.	Particulate Sampler	1	*	40
d.	Flow Rate Monitor	1	*	36
e.	Sampler Flow Rate Measuring Device	1	*	36

TABLE 3.3-12 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>		<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
4.	PLANT VENT SYSTEM (Continued)			
	B. High Range Monitors			
	a. Noble Gas Activity Monitor #RU-144	1	*	42
	b. Iodine Sampler	1	*	42
	c. Particulate Sampler	1	*	42
	d. Sampler Flow Rate Measuring Device	1	*	42
5.	FUEL BUILDING VENTILATION SYSTEM			
	A. Low Range Monitors			
	a. Noble Gas Activity Monitor #RU-145	1	##	37,41
	b. Iodine Sampler	1	##	40
	c. Particulate Sampler	1	##	40
	d. Flow Rate Monitor	1	##	36
	e. Sampler Flow Rate Measuring Device	1	##	36
	B. High Range Monitors			
	a. Noble Gas Activity Monitor #RU-146	1	##	41,42
	b. Iodine Sampler	1	##	42
	c. Particulate Sampler	1	##	42
	d. Sampler Flow Rate Measuring Device	1	##	42

TABLE 3.3-12 (Continued)

TABLE NOTATION

- * At all times.
- ** During GASEOUS RADWASTE SYSTEM operation.
- *** Whenever the condenser air removal system is in operation, or whenever turbine glands are being supplied with steam from sources other than the auxiliary boiler(s).
- # During waste gas release.
- ## In MODES 1, 2, 3, and 4 or when irradiated fuel is in the fuel storage pool.

- ACTION 35 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, the contents of the tank(s) may be released to the environment provided that prior to initiating the release:
- a. At least two independent samples of the tank's contents are analyzed, and
 - b. At least two technically qualified members of the facility staff independently verify the release rate calculations and discharge valve lineup;
- Otherwise, suspend release of radioactive effluents via this pathway.
- ACTION 36 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 4 hours.
- ACTION 37 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the actions of (a) or (b) or (c) are performed:
- a. Initiate the Preplanned Alternate Sampling Program to monitor the appropriate parameter(s).
 - b. Place moveable air monitors in-line
 - c. Take grab samples at least once per 12 hours.
- ACTION 38 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, immediately suspend PURGING of radioactive effluents via this pathway.
- ACTION 39 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, operation of the GASEOUS RADWASTE SYSTEM may continue provided grab samples are taken and analyzed daily. With both channels inoperable operation may continue provided grab samples are taken and analyzed (1) every 4 hours during degassing operations, and (2) daily during other operations.

TABLE 3.3-12 (Continued)

TABLE NOTATION

- ACTION 40 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via the effected pathway may continue provided samples are continuously collected with auxiliary sampling equipment as required in Table 4.11-2 within one hour after the channel has been declared inoperable.
- ACTION 41 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirements, comply with the ACTION b of Specification 3.9.12 or operate the fuel building essential ventilation system while moving irradiated fuel.
- ACTION 42 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement restore the channel to OPERABLE status within 72 hours or:
- a. Initiate the Preplanned Alternate Sampling Program to monitor the appropriate parameter(s) when it is needed.
 - b. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the action(s) taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.

TABLE 4.3-8

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE IS REQUIRED</u>
1. GASEOUS RADWASTE SYSTEM					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release RU-12	P	P	R(3)	Q(1),(2),P###	#
b. Flow Rate Monitor	P	N.A.	R	Q,P###	#
2. GASEOUS RADWASTE SYSTEM EXPLOSIVE GAS MONITORING SYSTEM					
a. Hydrogen Monitor (continuous)	D	N.A.	Q(4)	M	**
b. Hydrogen Monitor (sequential)	D	N.A.	Q(4)	M	**
c. Oxygen Monitor (continuous)	D	N.A.	Q(5)	M	**
d. Oxygen Monitor (sequential)	D	N.A.	Q(5)	M	**

TABLE 4.3-8 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE IS REQUIRED</u>
3. CONDENSER EVACUATION SYSTEM (RU-141 and RU-142)					
a. Noble Gas Activity Monitor	D(6)	M	R(3)	Q(2)	1, 2, 3***, 4***
b. Iodine Sampler	N.A.	N.A.	N.A.	N.A.	1, 2, 3***, 4***
c. Particulate Sampler	N.A.	N.A.	N.A.	N.A.	1, 2, 3***, 4***
d. Flow Rate Monitor	D(7)	N.A.	R	Q	1, 2, 3***, 4***
e. Sampler Flow Rate Measuring Device	D(7)	N.A.	R	Q	1, 2, 3***, 4***
4. PLANT VENT SYSTEM (RU-143 and RU-144)					
a. Noble Gas Activity Monitor	D(6)	M	R(3)	Q(2)	*
b. Iodine Sampler	N.A.	N.A.	N.A.	N.A.	*
c. Particulate Sampler	N.A.	N.A.	N.A.	N.A.	*
d. Flow Rate Monitor	D(7)	N.A.	R	Q	*
e. Sampler Flow Rate Measuring Device	D(7)	N.A.	R	Q	*

TABLE 4.3-8 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE IS REQUIRED</u>
5. FUEL BUILDING VENTILATION SYSTEM (RU-145 and RU-146)					
a. Noble Gas Activity Monitor	D(6)	M	R(3)	Q(2)	##
b. Iodine Sampler	N.A.	N.A.	N.A.	N.A.	##
c. Particulate Sampler	N.A.	N.A.	N.A.	N.A.	##
d. Flow Rate Monitor	D(7)	N.A.	R	Q	##
e. Sampler Flow Rate Measuring Device	D(7)	N.A.	R	Q	##

TABLE 4.3-8 (Continued)

TABLE NOTATIONS

- * At all times.
 - ** During GASEOUS RADWASTE SYSTEM operation.
 - *** Whenever the condenser air removal system is in operation, or whenever turbine glands are being supplied with steam from sources other than the auxiliary boiler(s).
 - # During waste gas release.
 - ## During MODES 1, 2, 3 or 4 or with irradiated fuel in the fuel storage pool.
 - ### Functional test should consist of, but not be limited to, a verification of system isolation capability by the insertion of a simulated alarm condition.
- (1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway occurs if the instrument indicates measured levels above the alarm/trip setpoint.
 - (2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm setpoint.
 2. Circuit failure.
 3. Instrument indicates a downscale failure.
 4. Instrument controls not set in operate mode.
 - (3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards (NBS) or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.
 - (4) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:
 1. One volume percent hydrogen, balance nitrogen, and
 2. Four volume percent hydrogen, balance nitrogen.
 - (5) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:
 1. One volume percent oxygen, balance nitrogen, and
 2. Four volume percent oxygen, balance nitrogen.
 - (6) The channel check for channels in standby status shall consist of verification that the channel is "on-line and reachable."
 - (7) Daily channel check not required for flow monitors in standby status.

PLANT SYSTEMS

3/4.7.11 SHUTDOWN COOLING SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.11 Two independent shutdown cooling subsystems shall be OPERABLE, with each subsystem comprised of:

- a. One OPERABLE low pressure safety injection pump, and
- b. An independent OPERABLE flow path capable of taking suction from the RCS hot leg and discharging coolant through the shutdown cooling heat exchanger and back to the RCS through the cold leg injection lines.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With one shutdown cooling subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within 1 hour, be in at least HOT SHUTDOWN within the next 6 hours and be in COLD SHUTDOWN within the next 30 hours and continue action to restore the required subsystem to OPERABLE status.
- b. With both shutdown cooling subsystems inoperable, restore one subsystem to OPERABLE status within 1 hour or be in at least HOT STANDBY within 1 hour and be in HOT SHUTDOWN within the next 6 hours and continue action to restore the required subsystems to OPERABLE status.
- c. With both shutdown cooling subsystems inoperable and both reactor coolant loops inoperable, initiate action to restore the required subsystems to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.7.11 Each shutdown cooling subsystem shall be demonstrated OPERABLE:

- a. At least once per 18 months, during shutdown, by establishing shutdown cooling flow from the RCS hot legs, through the shutdown cooling heat exchangers, and returning to the RCS cold legs.
- b. At least once per 18 months, during shutdown, by testing the automatic and interlock action of the shutdown cooling system connections from the RCS. The shutdown cooling system suction valves shall not open when RCS pressure is greater than 410 psia. The shutdown cooling system suction valves located outside containment shall close automatically when RCS pressure is greater than 500 psia. The shutdown cooling system suction valve located inside containment shall close automatically when RCS pressure is greater than 700 psia.

PLANT SYSTEMS

3/4.7.12 CONTROL ROOM AIR TEMPERATURE

LIMITING CONDITION OF OPERATION

3.7.12 The control room air temperature shall be maintained less than or equal to 80°F.

APPLICABILITY: ALL MODES

ACTION:

With the control room air temperature greater than 80°F, reduce the air temperature to less than or equal to 80°F within 30 days or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.12 At least once per 12 hours, verify that the control room air temperature is less than or equal to 80°F.

RADIOACTIVE EFFLUENTS

GASEOUS RADWASTE TREATMENT

LIMITING CONDITION FOR OPERATION

3.11.2.4 The GASEOUS RADWASTE SYSTEM and the VENTILATION EXHAUST TREATMENT SYSTEM shall be used to reduce radioactive materials in gaseous waste prior to their discharge when the projected gaseous effluent air doses due to gaseous effluent releases, from each reactor unit, from the site (see Figures 5.1-1 and 5.1-3), when averaged over 31 days, would exceed 0.2 mrad for gamma radiation and 0.4 mrad for beta radiation. The VENTILATION EXHAUST TREATMENT SYSTEM shall be used to reduce radioactive materials in gaseous waste prior to their discharge when the projected doses due to gaseous effluent releases, from each reactor unit, to areas at and beyond the SITE BOUNDARY (see Figures 5.1-1 and 5.1-3) when averaged over 31 days would exceed 0.3 mrem to any organ of a MEMBER OF THE PUBLIC.

APPLICABILITY: At all times.

ACTION:

- a. With radioactive gaseous waste being discharged without treatment and in excess of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which includes the following information:
 1. Identification of the inoperable equipment or subsystems and the reason for inoperability,
 2. Action(s) taken to restore the inoperable equipment to OPERABLE status, and
 3. Summary description of action(s) taken to prevent a recurrence.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.4 Doses due to gaseous releases from the site shall be projected at least once per 31 days, in accordance with the methodology and parameters in the ODCM.

RADIOACTIVE EFFLUENTS

EXPLOSIVE GAS MIXTURE

LIMITING CONDITION FOR OPERATION

3.11.2.5 The concentration of oxygen in the waste gas holdup system shall be limited to less than or equal to 2% by volume whenever the hydrogen concentration exceeds 4% by volume.

APPLICABILITY: At all times.

ACTION:

- a. With the concentration of oxygen in the waste gas holdup system greater than 2% by volume but less than or equal to 4% by volume, reduce the oxygen concentration to the above limit within 48 hours.
- b. With the concentration of oxygen in the waste gas holdup system greater than 4% by volume, immediately suspend all additions of waste gases to the system and reduce the concentration of oxygen to less than 4% by volume within 6 hours.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.5 The concentration of hydrogen or oxygen in the waste gas holdup system shall be determined to be within the above limits by monitoring the waste gases in the waste gas holdup system in accordance with Specification 3.3.3.8.

INSTRUMENTATION

BASES

3/4.3.3.7 LOOSE-PART DETECTION INSTRUMENTATION

The OPERABILITY of the loose-part detection instrumentation ensures that sufficient capability is available to detect loose metallic parts in the primary system and avoid or mitigate damage to primary system components. The allowable out-of-service times and surveillance requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

3/4.3.3.8 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases of gaseous effluents. The alarm/trip setpoints for these instruments shall be calculated and adjusted in accordance with the methodology and parameters in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring (and controlling) the concentrations of potentially explosive gas mixtures in the GASEOUS RADWASTE SYSTEM. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

There are two separate radioactive gaseous effluent monitoring systems: the low range effluent monitors for normal plant radioactive gaseous effluents and the high range effluent monitors for post-accident plant radioactive gaseous effluents. The low range monitors operate at all times until the concentration of radioactivity in the effluent becomes too high during post-accident conditions. The high range monitors only operate when the concentration of radioactivity in the effluent is above the setpoint in the low range monitors.

PLANT SYSTEMS

BASES

3/4.7.10 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism (i.e. sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shield mechanism.

3/4.7.11 SHUTDOWN COOLING SYSTEM

The OPERABILITY of two separate and independent shutdown cooling subsystems ensures that the capability of initiating shutdown cooling in the event of an accident exists even assuming the most limiting single failure occurs. The safety analysis assumes that shutdown cooling can be initiated when conditions permit.

The limits of operation with one shutdown cooling inoperable for any reason minimize the time exposure of the plant to an accident event occurring concurrent with the failure of a component on the other shutdown cooling subsystem.

3/4.7.12 CONTROL ROOM AIR TEMPERATURE

Maintaining the control room air temperature less than or equal to 80°F ensures that (1) the ambient air temperature does not exceed the allowable air temperature for continuous duty rating for the equipment and instrumentation in the control room and (2) the control room will remain habitable for operations personnel during plant operation. The 30 days to return the control room air temperature to less than or equal to 80°F in the Action Statement is consistent with the equipment qualification program for the control room.

ADMINISTRATIVE CONTROLS

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT (Continued)

covering all sampling locations keyed to a table giving distances and directions from the centerline of one reactor; the results of licensee participation in the Interlaboratory Comparison Program, required by Specification 3.12.3; discussion of all deviations from the sampling schedule of Table 3.12-1; and discussion of all analyses in which the LLD required by Table 4.12-1 was not achievable.

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT*

6.9.1.8 Routine Semiannual 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 period of the first report shall begin with the date of initial criticality.

The Semiannual Radioactive Effluent Release Reports shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit as outlined in Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," Revision 1, June 1974, with data summarized on a quarterly basis following the format of Appendix B thereof.

The Semiannual Radioactive Effluent Release Report to be submitted within 60 days after January 1 of each year shall include an annual summary of hourly meteorological data collected over the previous year. This annual summary may be either in the form of an hour-by-hour listing on magnetic tape of wind speed, wind direction, atmospheric stability, and precipitation (if measured), or in the form of joint frequency distributions of wind speed, wind direction, and atmospheric stability**. This same report shall include an assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the unit or station during the previous calendar year. This same report shall also include an assessment of the radiation doses from radioactive liquid and gaseous effluents to MEMBERS OF THE PUBLIC due to their activities inside the SITE BOUNDARY (Figure 5.1-1) during the report period. All assumptions used in making these assessments, i.e., specific activity, exposure time and location, shall be included in these reports. The meteorological conditions concurrent with the time of release of radioactive materials in gaseous effluents, as determined by sampling frequency and measurement, shall be used for determining the gaseous pathway doses. The assessment of radiation doses shall be performed in accordance with the methodology and parameters in the OFFSITE DOSE CALCULATION MANUAL.

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

**In lieu of submission with the first half year Semiannual Radioactive Effluent Release Report, the licensee has the option of retaining this summary of required meteorological data on site in a file that shall be provided to the NRC upon request.

ADMINISTRATIVE CONTROLS

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (Continued)

The Semiannual Radioactive Effluent Release Report to be submitted 60 days after January 1 of each year shall also include an assessment of radiation doses to the likely most exposed MEMBER OF THE PUBLIC from reactor releases and other nearby uranium fuel cycle sources, including doses from primary effluent pathways and direct radiation, for the previous calendar year to show conformance with 40 CFR Part 190, Environmental Radiation Protection Standards for Nuclear Power Operation. Acceptable methods for calculating the dose contribution from liquid and gaseous effluents are given in Regulatory Guide 1.109, Rev. 1, October 1977.

The Semiannual Radioactive Effluent Release Reports shall include the following information for each class of solid waste (as defined by 10 CFR Part 61) shipped offsite during the report period:

- a. Container volume,
- b. Total curie quantity (specify whether determined by measurement or estimate),
- c. Principal radionuclides (specify whether determined by measurement or estimate),
- d. Source of waste and processing employed (e.g., dewatered spent resin, compacted dry waste, evaporator bottoms),
- e. Type of container (e.g., LSA, Type A, Type B, Large Quantity), and
- f. Solidification agent or absorbent (e.g., cement, urea formaldehyde).

The Semiannual Radioactive Effluent Release Reports shall include a list and description of unplanned releases from the site to UNRESTRICTED AREAS of radioactive materials in gaseous and liquid effluents made during the reporting period.

The Semiannual Radioactive Effluent Release Reports shall include any changes made during the reporting period to the PROCESS CONTROL PROGRAM and to the OFFSITE DOSE CALCULATION MANUAL, as well as a listing of new locations for dose calculations and/or environmental monitoring identified by the land use census pursuant to Specification 3.12.2.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office of the NRC within the time period specified for each report.

6.9.3 Violations of the requirements of the fire protection program described in the Final Safety Analysis Report which would have adversely affected the ability to achieve and maintain safe shutdown in the event of a fire shall be reported in accordance with 10 CFR 50.73.

ADMINISTRATIVE CONTROLS

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 5 years:

- a. Records and logs of unit 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 submitted to the Commission.
- d. Records of surveillance activities; inspections and calibrations required by these Technical Specifications.
- e. Records of changes made to the procedures of Specification 6.8.1.
- f. Records of radioactive shipments.
- g. Records of sealed source and fission detector leak tests and results.
- h. Records of annual physical inventory of all sealed source material of record.

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

- a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the FSAR.
- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of radiation exposure for all individuals entering radiation control areas.
- d. Records of gaseous and liquid radioactive material released beyond the SITE BOUNDARY.
- e. Records of transient or operational cycles for those unit components identified in Tables 5.7-1 and 5.7-2.
- f. Records of reactor tests and experiments.
- g. Records of training and qualification for current members of the unit staff.

ADMINISTRATIVE CONTROLS

RECORD RETENTION (Continued)

- h. Records of inservice inspections performed pursuant to these Technical Specifications.
- i. Records of quality assurance activities required by the QA Manual not listed in Section 6.10.1.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- k. Records of PRB meetings and of NSG activities.
- l. Records of the service lives of all hydraulic and mechanical snubbers required by Specification 3.7.9 including the date at which the service life commences and associated installation and maintenance records.
- m. Records of audits performed under the requirements of Specifications 6.5.3.5 and 6.8.4.
- n. Records of analyses required by the radiological environmental monitoring program that would permit evaluation of the accuracy of the analysis at a later date. This should include procedures effective at specified times and QA records showing that these procedures were followed.
- o. Meteorological data, summarized and reported in a format consistent with the recommendations of Regulatory Guides 1.21 and 1.23.
- p. Records of secondary water sampling and water quality.

6.11 RADIATION PROTECTION PROGRAM

6.11.1 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 Part 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 Exposure Permit (REP)*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

*Radiation Protection personnel or personnel escorted by Radiation Protection personnel shall be exempt from the REP issuance requirement during the performance of their assigned radiation protection duties, provided they are otherwise following plant radiation protection procedures for entry into high radiation areas.

ADMINISTRATIVE CONTROLS

HIGH RADIATION AREA (Continued)

- 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.
- c. A radiation protection qualified individual (i.e., qualified in radiation protection procedures) with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Radiation Protection Supervisor or his designated alternate in the REP.

6.12.2 In addition to the requirements of Specification 6.12.1, areas accessible to personnel with radiation levels such that a major portion of the body could receive in 1 hour a dose greater than 1000 mrem shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or radiation protection supervision. Doors shall remain locked except during periods of access by personnel under an approved REP which shall specify the dose rate levels in the immediate work area and the maximum allowable stay time for individuals in that area. For individual areas accessible to personnel with radiation levels such that a major portion of the body could receive in 1 hour a dose in excess of 1000 mrems*, that are located within large areas, such as PWR containment, where no enclosure exists for purposes of locking, and no enclosure can be reasonably constructed around the individual areas, then that area shall be roped off, conspicuously posted and a flashing light shall be activated as a warning device. In lieu of the stay time specification of the REP, direct or remote (such as use of closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities within the area.

6.13 PROCESS CONTROL PROGRAM (PCP)

6.13.1 The PCP shall be approved by the Commission prior to implementation.

6.13.2 Licensee-initiated changes to the PCP:

Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made. This submittal shall contain:

- 1) Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information; and
- 2) A determination that the change did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes.

*Measurement made at 18 inches from source of radioactivity.

ADMINISTRATIVE CONTROLS

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.14.1 The ODCM shall be approved by the Commission prior to implementation.

6.14.2 Licensee-initiated changes to the ODCM:

Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:

- 1) Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information. Information submitted should consist of a package of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluations justifying the change(s); and
- 2) A determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations.

6.15 MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS*

6.15.1 Licensee-initiated major changes to the radioactive waste systems (liquid, gaseous, and solid):

Shall be reported to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the evaluation was reviewed by the PRB. The discussion of each change shall contain:

- 1) A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR 50.59.
- 2) Sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information;
- 3) A detailed description of the equipment, components, and processes involved and the interfaces with other plant systems;
- 4) An evaluation of the change, which shows the predicted releases of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the license application and amendments thereto;

*Licensees may chose to submit the information called for in this specification as part of the annual FSAR update.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 14 TO FACILITY OPERATING LICENSE NO. NPF-41
AND AMENDMENT NO. 8 TO FACILITY OPERATING LICENSE NO. NPF-51
ARIZONA PUBLIC SERVICE COMPANY, ET AL.
PALO VERDE NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2
DOCKET NOS. STN 50-528 AND STN 50-529

1.0 INTRODUCTION

By letter dated July 14, 1986, as supplemented by letters dated December 2, 1986 and February 9, 1987, the Arizona Public Service Company (APS) on behalf of itself, the Salt River Project Agricultural Improvement and Power District, Southern California Edison Company, El Paso Electric Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), requested changes to the Technical Specifications for Palo Verde Nuclear Generating Station, Units 1 and 2 (Appendices A to Facility Operating License Nos. NPF-41 and NPF-51, respectively). In accordance with the guidance issued in Generic Letter 86-10, the application requests the deletion of certain sections in the Technical Specifications pertaining to the fire protection program.

2.0 DISCUSSION

In Generic Letter 86-10, the staff indicated that those licensees whose documented fire protection program is included in the FSAR may request an amendment to their operating licenses to substitute the standard fire protection license condition identified in the generic letter and delete certain technical specifications related to the fire protection program. Accordingly, the licensees have proposed to delete the following sections of the plant Technical Specifications and their corresponding bases since the Fire Protection Program is currently included in the Palo Verde FSAR:

(1) Section 3/4.3.3 - Monitoring Instrumentation

- (a) Specification LCO 3.3.3.7 and Surveillance Requirements 4.3.3.7.1 and 4.3.3.7.2 - Fire Detection Instrumentation

(2) Section 3/4.7.11 - Fire Suppression Systems

- (a) Specification LCO 3.7.11.1 and Surveillance Requirements 4.7.11.1.1, 4.7.11.1.2., and 4.7.11.1.3 - Fire Suppression Water System

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- (b) Specification LCO 3.7.11.2 and Surveillance Requirement 4.7.11.2 - Spray and/or Sprinkler Systems
 - (c) Specification LCO 3.7.11.3 and Surveillance Requirements 4.7.11.3.1 and 4.7.11.3.2 - CO₂ Systems
 - (d) Specification LCO 3.7.11.4 and Surveillance Requirement 4.7.11.4 - Fire Hose Stations
 - (e) Specification LCO 3.7.11.5 and Surveillance Requirement 4.7.11.5 - Yard Fire Hydrants and Associated Hydrant Hose Houses
 - (f) Specification LCO 3.7.11.6 and Surveillance Requirement 4.7.11.6 - Halon Systems
- (3) Section 3/4.7.12, Specification LCO 3.7.12 and Surveillance Requirements 4.7.12.1 and 4.7.12.2 - Fire Rated Assemblies

The licensees have also proposed to amend the operating license for Palo Verde, Unit 1 to substitute the standard fire protection license condition delineated in Generic Letter 86-10. The operating license for Palo Verde, Unit 2 already has the standard condition.

3.0 EVALUATION

During the review of the license amendment requests, the staff raised certain issues regarding the licensees' proposal. The first concern was that by deleting the fire protection technical specifications, the audit requirements and fire brigade manning requirements would be removed. However, the licensees have not proposed to delete the requirements for annual fire protection audits from the Administrative Controls Section of the Technical Specifications or change the requirements for the fire brigade. Thus, this staff concern was resolved.

The staff was also concerned that deletion of the fire protection technical specifications would mean that any degradation of fire protection systems and fire barriers would not be properly reported to the staff. By letter dated December 2, 1986, the licensees have proposed to report such conditions to the staff in accordance with the provisions of 10 CFR 50.73, which is acceptable to the staff. This requirement will be included as Paragraph 6.9.3 under the Special Reports provisions of the Technical Specifications.

The staff further questioned whether the limiting conditions for operation, the surveillance requirements, and the action statements of the current technical specifications would be maintained in the new plant fire protection procedures once the fire protection technical specifications were deleted. By letter dated February 9, 1987, the licensees affirmed that with one exception, the above provisions of the Technical Specifications will be reflected in the plant procedures. The exception concerns use of video camera(s) in high radiation areas in lieu of fire watches when certain fire protection systems or fire barriers are inoperable or degraded. The staff finds that the licensees' response acceptably resolves this concern.

Based on the above evaluation, the staff concludes that the proposed changes to the fire protection technical specifications and substitute provisions are in accordance with the guidance contained in Generic Letter 86-10 and are, therefore, acceptable.

4.0 CONTACT WITH STATE OFFICIAL

The Arizona Radiation Regulatory Agency has been advised of the proposed determination of no significant hazards consideration with regard to this amendment request. No comments were received.

5.0 ENVIRONMENTAL CONSIDERATIONS

These amendments involve changes in recordkeeping, reporting, or administrative procedures or requirements. The Commission has previously issued proposed findings that the amendments involve no significant hazards consideration, and there has been no public comment on such findings. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Sec. 51.22(c)(10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need to be prepared in connection with the issuance of these amendments.

6.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public. We, therefore, conclude that the proposed changes are acceptable.

Principal Contributor: D. Kubicki

Dated: April 8, 1987

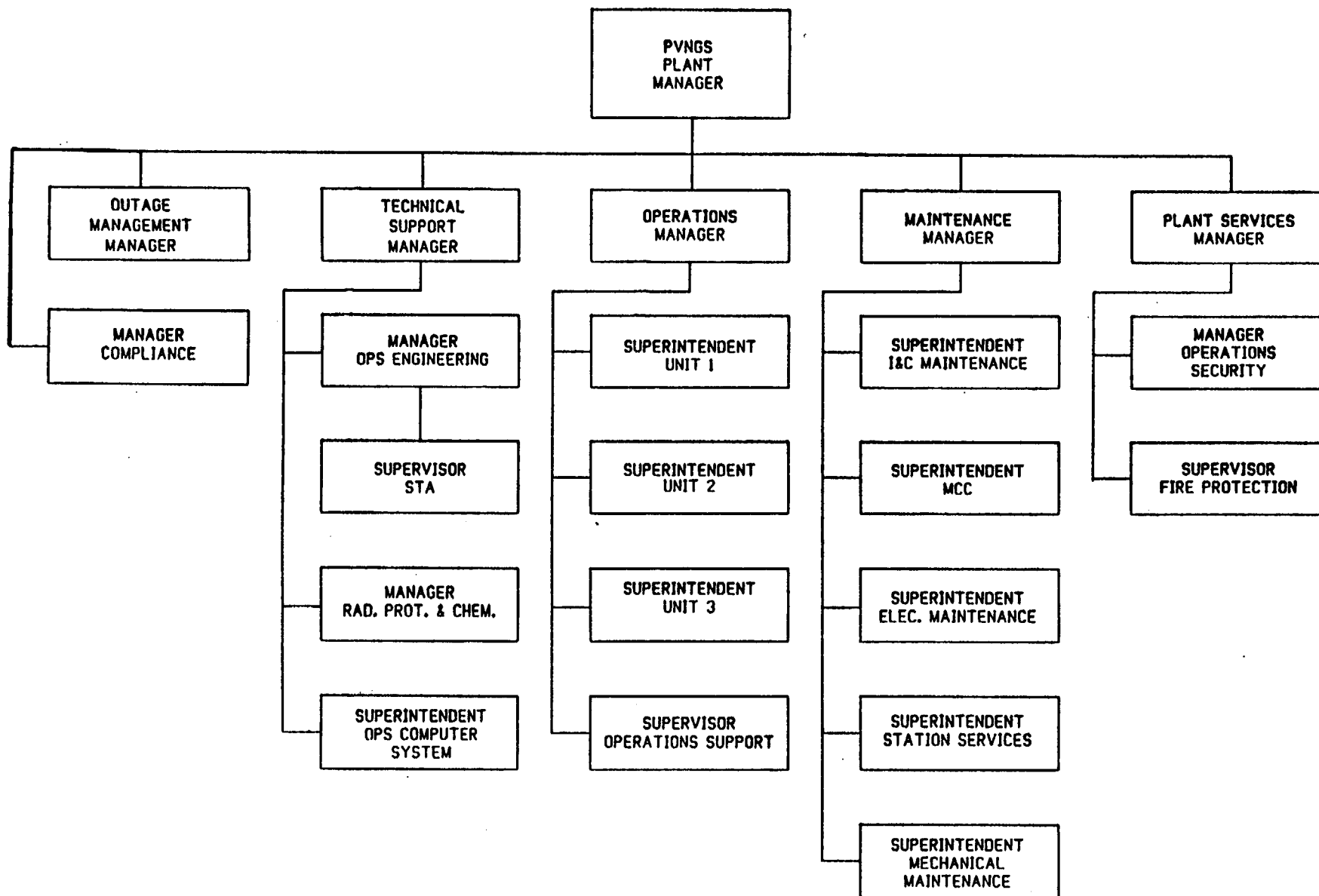


FIGURE 6.2-2
ONSITE ORGANIZATION

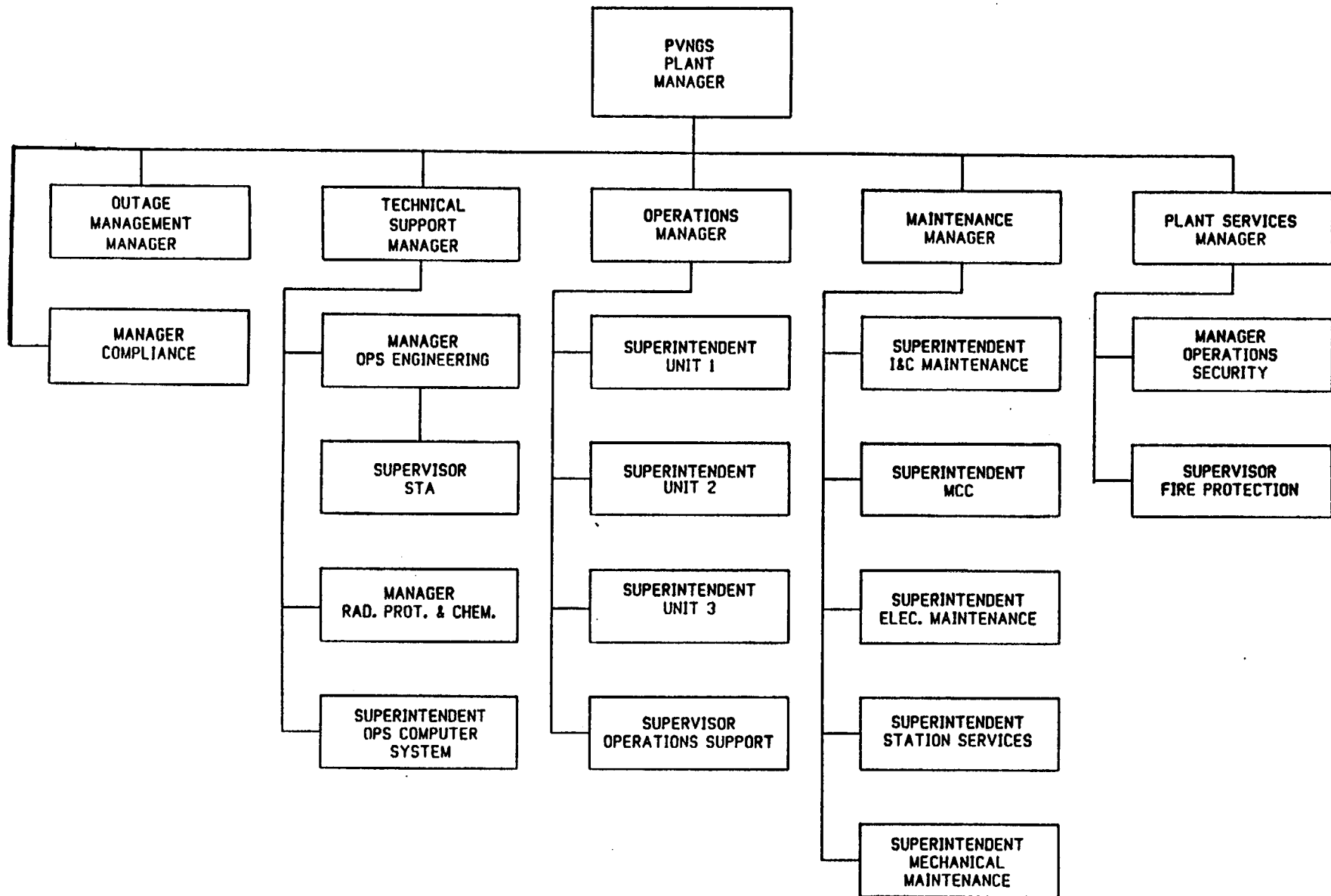


FIGURE 6.2-2
ONSITE ORGANIZATION