DOCKET NO. 50-133

APPENDIX A

LICENSE NO. DPR-7

TECHNICAL SPECIFICATIONS

FOR

HUMBOLDT BAY POWER PLANT

UNIT 3

PACIFIC GAS AND ELECTRIC COMPANY

DATE: March 16, 1988

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## TABLES



## FIGURES

# I. INTRODUCTION

## A. SCOPE

These Technical Specifications set forth the principal DESIGN FEATURES and OPERATING LIMITS AND REQUIREMENTS for Unit 3 (the Unit) at Pacific Gas and Electric Company's (the Company's) Humboldt Bay Power Plant (the Plant).

The Unit originally operated as a nuclear power plant with a single-cycle, natural circulation, boiling water reactor and associated turbine generator. As part of the decommissioning of the Unit, most systems have been removed from service. Systems still in operation are used for the storage of spent reactor fuel, the monitoring and surveillance of the Unit during SAFSTOR and the processing of radioactive wastes generated during SAFSTOR. Systems and components that have been removed from service are not described in these Technical Specifications.

Section II of these Technical Specifications describes the site. Sections III through VI describe structures, systems, and components used during SAFSTOR and specify the conditions under which they shall be controlled and monitored. Each of Sections III through VI consists of:

- A description of significant DESIGN FEATURES. Where thermal, hydraulic, and nuclear characteristics of various systems are given, they are subject to normal manufacturing tolerances unless specific tolerances are stated.

- A list of the OPERATING LIMITS AND REQUIREMENTS. Whenever a condition occurs that requires corrective action to ensure operation or maintenance within these limits and requirements, such action shall be taken in a timely manner.

Section VII of these Technical Specifications covers administrative and procedural requirements, including the review of proposed changes in DESIGN AND OPERATING LIMITS, REQUIREMENTS, and procedures. It also requires procedures for normal and emergency conditions during SAFSTOR.

B. DEFINITIONS

1. ADMINISTRATIVE CONTROLS: The provisions relating to the organization, management, procedures, record keeping, reviews and audits, and reporting that are necessary to ensure maintenance of the Plant in a safe condition during SAFSTOR.

2. DESIGN FEATURES: Those features of the Plant which, if altered or modified, could have a significant effect on the ability of a system, component, or structure to perform its intended function.

3. ELEVATION: All elevations shall apply to a datum of mean lower low water (MLLW) level except where noted.

4. OFFSITE DOSE CALCULATION MANUAL: The offsite dose calculation manual (ODCM) follows the applicable portions of the Regulatory Guide

1.109 and shall contain the methodology and parameters used in the calculation of offsite doses and concentrations due to radioactive gaseous and liquid effluents and in the calculation of gaseous and liquid effluent monitoring alarm setpoints.

5. OPERABLE, OPERABILITY: A system, subsystem, train, component, or device may be considered OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electric power sources, cooling or seal water, lubrication, or other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its function(s) are also capable of performing their related support function(s).

6. OPERATING LIMITS: The lowest functional capability, performance levels, or safety limits of structures, systems, or components required during SAFSTOR.

7. OPERATING REQUIREMENTS: Those requirements relating to operation, test, calibration, surveillance, or inspection to ensure that operating limits will be met.

8. SAFSTOR: The period of time during which the Unit is maintained in a condition of monitored protective storage until the final decommissioning of the Unit.

9. SPENT FUEL: Nuclear fuel that has been removed from the reactor vessel after having been used in critical power generation.

10. STAGGERED TEST BASIS: (a) A test schedule for n (where n is equal to a number) systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into n equal subintervals, and (b) the testing of one system, subsystem, train, or other designated component at the beginning of each subinterval.

# II. SITE

## A. LOCATION

The Unit is located in Humboldt County, California, approximately 4 miles southwest of the center of the city of Eureka, on a site owned and controlled by the Company.

## B. PLANT AREAS

The unrestricted area used in the offsite dose calculations for gaseous and liquid effluent is shown in Figure II-1. Ingress and egress are controlled by the Company. The restricted area, as defined in 10 CFR 20.3(a)(14), is shown in Figure II-2.

## C. PRINCIPAL ACTIVITIES

The principal activities of the Plant are those related to the generation and transmission of electric power and the associated service activities. Activities associated with the Unit consist of storage and surveillance of SPENT FUEL, monitoring and surveillance of the decommissioned facility, and operations and maintenance to support the above-mentioned activities in accordance with Regulatory Guide 1.86, Section C.5.

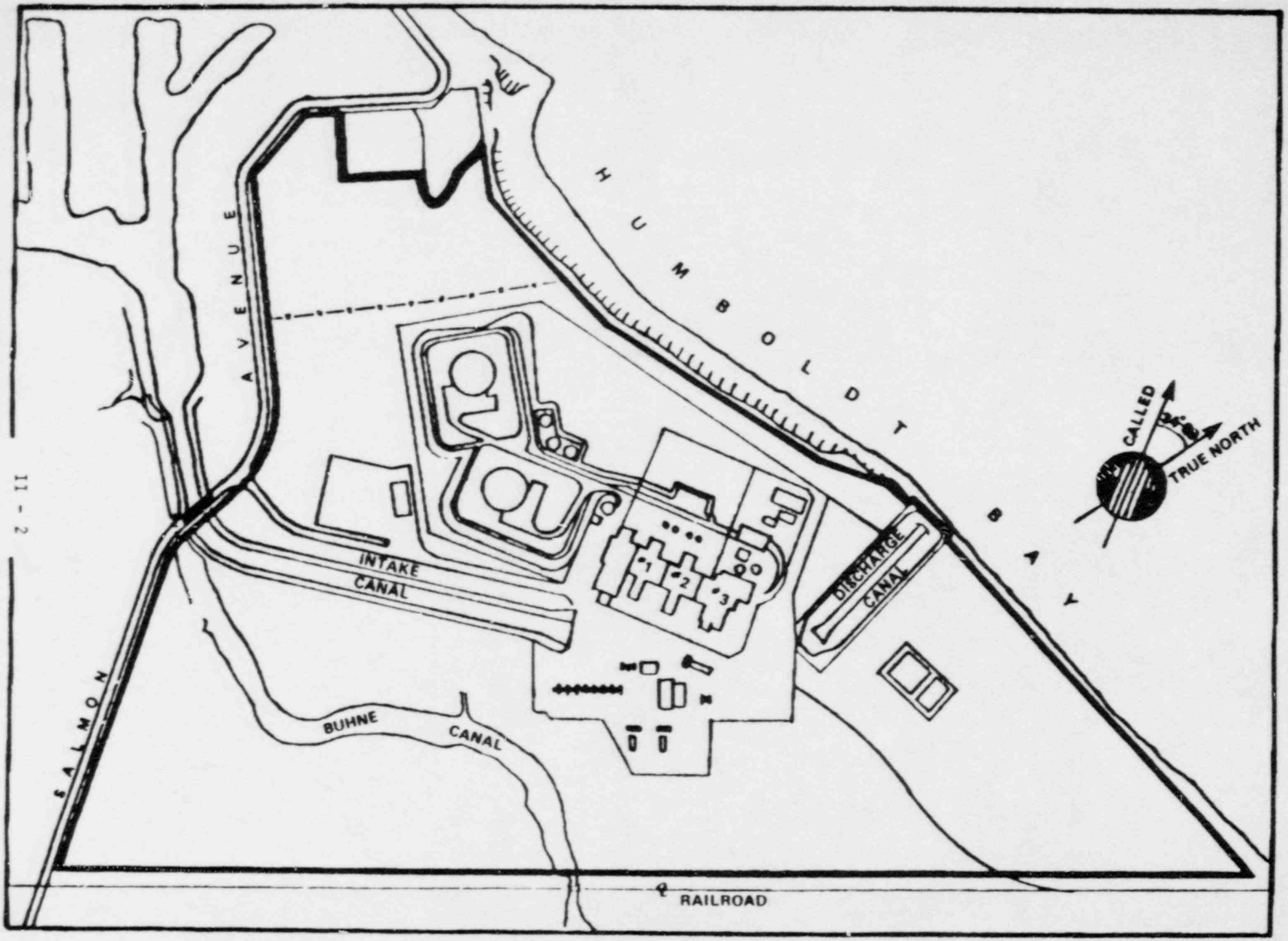


Fig. II-1 Unrestricted Area used for Offsite Dose Calculations for Gaseous and Liquid Effluents

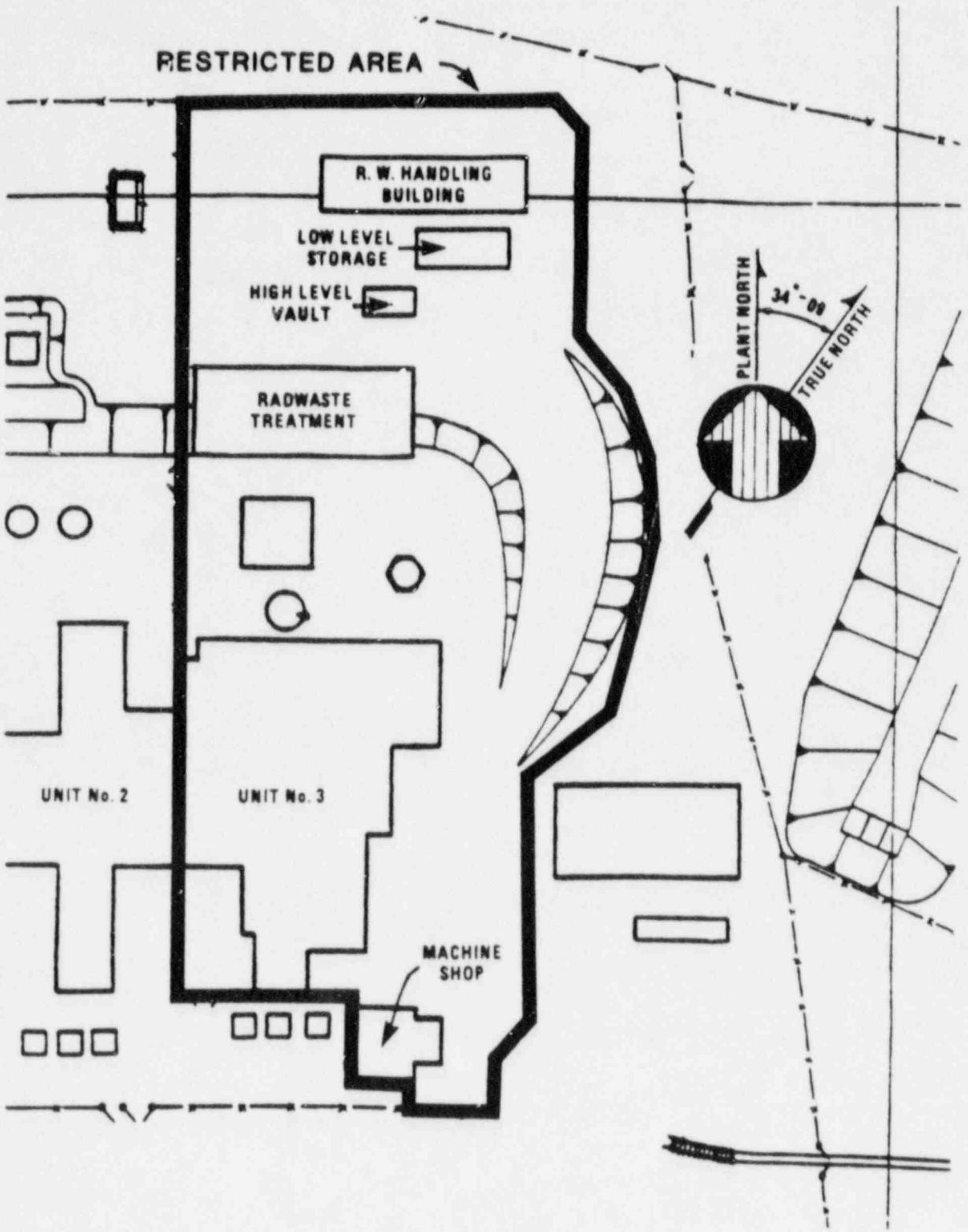


Fig. II-2 Restricted Area Per 10 CFR 20, 3(a)(14)

# III. STRUCTURES

The refueling building and the spent fuel storage pool will contain the SPENT FUEL during SAFSTOR. This section describes the DESIGN FEATURES and OPERATING LIMITS AND REQUIREMENTS that will continue through SAFSTOR.

## A. DESIGN FEATURES

### 1. Refueling Building

The refueling building is a reinforced concrete structure located immediately above the reactor caisson. The spent fuel storage pool is located in the refueling building.

The building functions as a weather enclosure, contamination control barrier, and radiation shield.

Refueling building penetrations for personnel and equipment entry and for ventilation systems are described in Table III-1.

### 2. Spent Fuel Storage Pool

The spent fuel storage pool is a reinforced concrete structure integral to the reactor caisson. It is 26 feet deep except for a cask loading pit in one corner, which is 36 feet deep. The water in the pool provides shielding and contamination control. A stainless

steel liner shall completely cover the inside surfaces of the spent fuel storage pool with a nominal gap of 1/4 inch between the liner and the walls and the floor.

Each spent fuel assembly except assembly UD-6N shall be stored in containers made of neutron absorbing material. If the spent fuel racks were to fail, the containers would prevent criticality.

A cover shall normally be installed over the spent fuel storage pool to prevent objects from falling into the pool and to serve as a contamination control barrier.

B. OPERATING LIMITS AND REQUIREMENTS

1. Refueling Building

A thorough visual inspection of the refueling building shall be conducted at least quarterly. Evidence of deterioration shall be evaluated with regard to the function of the building as a weather enclosure, contamination control barrier, and radiation shield.

2. Spent Fuel Storage Pool

a. Water Level - Pool water level shall be maintained at an ELEVATION greater than 10.5 feet (within 1.5 feet below the main floor of the refueling building). The water level between

the liner and the concrete walls shall be maintained below ELEVATION +9 inches (11.25 feet or greater below the main floor of the refueling building). The main floor of the refueling building is at ELEVATION +12 feet.

b. Water Quality - Water quality in the spent fuel storage pool shall be maintained within the limits specified in Table III-2. Spent fuel storage pool water shall be sampled and analyzed at least once per month. If water quality limits are exceeded, action shall be taken to restore the water quality to within limits and an evaluation shall be conducted to determine the cause. If water quality cannot be restored within the limits specified before the next required sampling, a report shall be submitted to the Regional Administrator, NRC Region V, within the following 30 days.

3. Neutron Absorber Surveillance Program

Samples of the neutron-absorbing material used to fabricate the spent fuel assembly containers shall be suspended in the spent fuel storage pool in the vicinity of the spent fuel assemblies. A program shall be established to remove representative samples at specified intervals for examination and analysis to verify that the Boron-10 loading is greater than 0.005 grams per square centimeter.

TABLE III-1

REFUELING BUILDING PENETRATIONS FOR PERSONNEL AND EQUIPMENT ENTRY AND FOR VENTILATION SYSTEMS

| Penetration[a] | No. | Size | Type of Closure |
|---|---|---|---|
| Railroad door entry | 1 | 15 ft x 16 ft | Normally locked entry |
| Personnel air locks | 2 | 25-1/2 in. x 66 in. | Two mechanically interlocked doors in series |
| Caisson personnel emergency exit shaft | 1 | 3 ft dia | Hatch and doors in series[b] |
| Main ventilation system supply duct | 1 | 16 in. dia | One 16-in. air-operated isolation valve |
| Main ventilation system exhaust ducts | 2 | 16 in. dia | Two 16-in. air-operated isolation valves[c] |
| Dry well purge system exhaust duct | 1 | 14 in. dia | Two 8-in. air-operated isolation valves |

(a) In addition to the ventilation system penetrations listed above, two ducts associated with the gas treatment system are considered building penetrations. Valves in the ducts shall normally be closed, but shall be opened when the refueling building ventilation exhaust is through the gas treatment system.

(b) Hatch is locked and cannot be opened from outside the exit shaft except with key. The lock will not prevent emergency exit from the caisson.

(c) Two 16-inch exhaust ducts from the refueling building join together to form a single duct. The two isolation valves are in series in this duct.

TABLE III-2

LIMITS FOR SPENT FUEL STORAGE POOL WATER CHEMISTRY

AND ACTIVITY DURING SAFSTOR

| | Parameter | Limits[a] |
|---|---|---|
| 1. | pH | 5.3 to 6.5 |
| 2. | Chlorides[b] | 0.5 ppm (maximum) |
| 3. | Conductivity | 10.0 mmho/cm (maximum) |
| 4. | Total spent fuel pool dissolved activity[c] | $1.0 \times 10^{-4}$ mCi/ml (maximum) |

(a) Verification shall be accomplished by analysis of samples taken at least once each month.

(b) Chloride analysis is required only if conductivity exceeds 2.0 mmho/cm (Reference NRC Regulatory Guide 1.56, Figure 2).

(c) By proportional counter calibrated with Cs-137.

# IV. SERVICE SYSTEMS

The refueling building ventilation system, the spent fuel pool service system, the fire protection system, and several electrical systems provide services that maintain habitability and safe conditions within the Plant during SAFSTOR. This section describes the DESIGN FEATURES and the OPERATING LIMITS AND REQUIREMENTS that are important to the continued operation of these systems.

## A. DESIGN FEATURES

### 1. Refueling Building Ventilation System

The refueling building ventilation system shall provide normal ventilation to the refueling building. The system shall exhaust to the main ventilation exhaust stack. Isolation valves shall be provided to permit isolation of the refueling building.

### 2. Spent Fuel Storage Pool Service System

Makeup water for the spent fuel storage pool shall be provided from the demineralized water system. The capacity of the demineralized water tank shall be 5,000 gallons. Water to the demineralized water tank shall normally be supplied from the Units 1 and 2 condensate storage tanks. Emergency makeup water to the spent fuel storage pool shall be available from the plant fire system.

Spent fuel storage pool water quality shall be maintained by circulation of pool water through a demineralizer by either of two spent fuel pool circulating water pumps.

Water level in the gap between the spent fuel pool liner and the concrete wall shall be maintained by using a liner gap pump, which discharges to the liquid radioactive waste collection system.

3. Fire Protection System

The fire protection system consists of the fire water system, fire hose stations, and penetration fire barriers:

a. The fire water system shall consist of three plant fire pumps each rated for 500 gpm at a discharge pressure of 120 psig. These pumps shall take suction from the 300,000-gallon raw water storage tank. The raw water storage tank shall have a low level alarm set at 200,000 gallons. Two of these pumps shall be powered from separate Unit 1 and 2 480 volt ac systems. The third pump shall be diesel powered. The pumps shall start automatically to maintain system pressure.

b. Fire hose stations in the Unit shall consist of those stations and equipment listed in Table IV-1.

c. Penetration fire barriers shall be provided for penetrations between the control room and the feed pump room, between the feed pump room and the refueling building, and between the control room and the refueling building. Penetration fire barriers shall be passive devices that ensure that a fire will be confined or adequately retarded from spreading to other portions of the facility.

4. Electrical Systems

Switchgear shall be provided so that the Unit's electrical equipment can receive power from any one of three independent power sources: Unit 1, Unit 2, or the Plant 60 kV bus.

B. OPERATING LIMITS AND REQUIREMENTS

1. Refueling Building Ventilation System

a. The refueling building ventilation system shall be operated to maintain a negative pressure of at least 1/4 inch of water whenever SPENT FUEL is being moved or whenever work that might potentially damage SPENT FUEL assemblies is in progress.

b. The capability of the refueling building ventilation system to maintain a negative pressure of 1/4 inch of water in the refueling building shall be tested at the following times:

(1) Before removal of the SPENT FUEL pool cover

(2) After any opening of the railroad door (Penetration #1)

(3) After maintenance that may have affected any of the refueling building penetration closure seals.

If not required for these reasons, the test shall be performed at least once each quarter.

2. Spent Fuel Storage Pool Service Systems

a. A minimum of 2,000 gallons shall be maintained in the demineralized water tank.

b. At least once per 31 days, the operability of the spent fuel storage pool liner gap pump shall be verified.

3. Fire Protection System

a. The fire protection system shall be OPERABLE with:

(1) Two plant fire pumps, each with a rated capacity of 500 gpm, with their discharge aligned to the fire suppression header.

(2) A minimum of 200,000 gallons in the raw water storage tank.

(3) An OPERABLE flow path capable of taking suction from the water supply tank and transferring the water through the distribution piping (with OPERABLE sectionalizing control or isolation valves) to the yard hydrant curb valves and the front valve in each hose standpipe listed in Table IV-1.

b. If the fire water system is inoperable, the system shall be restored to OPERABLE status within 7 days or a Special Report shall be prepared and submitted to the NRC Regional Administrator for Region V within 30 days outlining the compensatory measures taken and a schedule of corrective action.

c. The following inspections and tests shall be performed:

(1) At least once per 7 days, the raw water supply tank volume shall be verified to be at least 200,000 gallons.

(2) At least once per 31 days, on a STAGGERED TEST BASIS, each OPERABLE pump shall be started and operated for at least 15 minutes on recirculation flow.

(3) At least once per 31 days, it shall be verified that each valve (manual, power-operated, or automatic) in the flow path is in its correct position.

(4) At least once per 12 months, each testable valve in the flow path shall be cycled through at least one complete cycle of full travel.

(5) At least once per 18 months:

a) A system functional test shall be performed which includes simulated automatic actuation of the system throughout its operating sequence.

b) Each pump shall be verified to develop at least 450 gpm flow at a total head of 240 feet.

c) Each fire pump shall be verified to start (sequentially) at a sustained fire suppression water system pressure no less than 45 psig.

(6) At least every 2 years, the raw water storage tank low level alarm shall be calibrated to 200,000 gallons ±5%.

(7) At least once per 3 years, flow tests of the system shall be performed in accordance with Chapter 5, Section 11, "Fire Protection Handbook," 14th edition, published by National Fire Protection Association.

(8) The fire pump diesel engine shall be demonstrated OPERABLE as follows:

a) At least once per 31 days:

(i) The fuel storage tank shall be verified to contain at least 150 gallons of fuel.

(ii) The diesel shall be verified to start from ambient conditions and operate for at least 20 minutes.

(b) At least once per 92 days, a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-65, shall be verified to be within the acceptable limits specified in Table 1 of ASTM D-975-74 with respect to viscosity, water content, and sediment.

(c) At least once per 18 months, the diesel shall be verified to start from ambient conditions on the autostart signal and operate for at least 15 minutes while loaded with the fire pump.

(d) The diesel shall be subjected to manufacturer's recommended servicing.

(9) The fire pump diesel starting 12-volt batteries and chargers shall be demonstrated OPERABLE as follows:

a) At least once per 31 days:

(i) The electrolyte level of each battery shall be verified to be above the plates.

(ii) Each battery's overall voltage shall be verified to be no less than 12 volts.

b) At least once per 92 days, specific gravity shall be verified to be 1.19 or greater.

c) At least once per 18 months:

(i) The batteries, cell plates, and battery racks shall be verified to show no visual indication of physical damage or abnormal deterioration.

(ii) The battery-to-battery and terminal connections shall be verified to be clean, tight, free of corrosion, and coated with anticorrosion material.

4. Fire Hose Stations

a. The fire hose stations listed on Table IV-1 shall be OPERABLE whenever equipment in the area is required to be OPERABLE.

b. When a hose station required to be OPERABLE is inoperable, an additional equivalent capacity hose shall be routed to the unprotected area from an OPERABLE hose station within 1 hour.

c. Each fire hose station shall be verified OPERABLE:

(1) At least once per 31 days by visual inspection of the station to ensure that all equipment is available.

(2) At least once per 18 months by removing the hose for inspection and reracking and by replacing all gaskets in the couplings that are degraded.

(3) At least once per 3 years by partially opening each hose station valve to verify valve operability and no blockage.

(4) At least once per 3 years by conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at that hose station.

5. Penetration Fire Barriers

a. Penetration fire barriers shall be functional at all times.

b. When a penetration fire barrier is inoperable, a continuous fire detection capability shall be established on at least one side of the affected penetration within 1 hour and shall be maintained for as long as equipment on either side of the barrier is required to be OPERABLE.

c. Penetration Fire Barriers shall be verified to be functional by a visual inspection:

- At least once per 18 months
- Prior to declaring a penetration fire barrier functional following repairs or maintenance

6. Electrical Systems

a. The emergency section of the 480 volt ac system normally shall be supplied from one of the Unit's two 480 volt ac buses. Provision shall be made for transferring the emergency section to a 480 volt ac source from Unit 1 or 2 and subsequently to an emergency generator rated at 60 kW. These transfers shall be initiated automatically by undervoltage relays on the emergency section. The emergency section shall supply the following loads:

(1) Emergency lighting

(2) Main annunciator system

(3) The following radiation monitoring systems:

- stack gas
- process monitor
- area monitors

b. The transfer of the emergency 480 volt ac shall be tested for proper operation at least quarterly. This transfer shall be functionally tested annually with all loads connected to simulate emergency operation.

TABLE IV-1

FIRE HOSE STATIONS

| Fire Hose Station Location | Size | Type |
|---|---|---|
| West wall of the reactor feed pump room opposite the motor-generator sets | 1.5 in. x 50 ft. | Hose reel spray nozzle |
| Reactor feed pump room at foot of stairs | 1.5 in. x 50 ft. | Hose reel spray nozzle |
| Refueling building north wall near air lock | 1.5 in. x 50 ft. | Hose reel spray nozzle |
| Refueling building top of stairs air lock | 1.5 in. x 50 ft. | Hose reel spray nozzle |
| North wall of makeup demineralizer room | 1.5 in. x 50 ft. | Hose reel spray nozzle |
| East wall of control room | 1.5 in. x 100 ft. | Hose reel fog nozzle |
| North wall of turbine wash-down | 1.5 in. x 100 ft. | Hose reel fog nozzle |
| Roof of refueling building | 1.5 in. x 100 ft. | Hose reel fog nozzle |

# V. MONITORING SYSTEMS

## A. DESIGN FEATURES

### 1. Stack Gas Monitoring System

A system shall be provided to determine routine releases of particulate radioactivity and to provide monitoring and annunciation of nonroutine releases of radioactive noble gases. The stack gas monitoring system shall consist of a particulate filter holder, a beta-sensitive detector system, and a sample pump to produce a sample flow controlled at approximately 2 cfm. The particulate filters shall be removed for laboratory counting. The detector system shall have two detectors (one as an operating spare) to respond to radioactive (beta-emitting) gases that pass through the system. The detector system shall be designed to be sensitive to Kr-85 in the stack gas from approximately $5 \times 10^{-7}$ to approximately $2 \times 10^{-2}$ mCi/cc.

### 2. Process Water Monitor

A process water radiation monitoring system employing a gamma-sensitive scintillation detector shall be provided to indicate, record, and annunciate high radiation levels in the radwaste discharge line to the circulating water system. The range of the monitor shall be from 10 to $10^6$ cpm with a typical

sensitivity of 200 cpm per pCi/ml for Cs-137 and 450 cpm per pCi/ml for Co-60.

3. Area Monitors and Portable Monitoring Equipment

Fixed gamma monitors with ranges of 0.01 to 100 mr/hr or 0.01 mr/hr to 10 r/hr shall be installed at various locations throughout the Unit. The outputs of these monitors shall be recorded in the control room. Each channel shall have an adjustable high radiation alarm which is annunciated.

One area monitor shall be located in each of the following locations:

- Refueling building, south wall access door
- Refueling building, northwest access door

A high radiation signal from either of these channels shall provide a "Building Above Normal Radiation" signal which is annunciated in the control room. These two area monitoring channels shall also provide gamma monitoring of the fuel storage areas. A high radiation level signal from either of these channels shall sound the evacuation horns in the refueling building.

In addition to the area monitoring system, suitable portable and fixed, alpha and beta-gamma detection instruments and beta-gamma

dose rate instruments shall be provided for use of personnel entering the Unit radiation areas and radioactive materials areas and for analyzing samples.

4. Offsite Environmental Monitoring Stations

Four offsite environmental monitoring stations shall be maintained through the SAFSTOR period. These represent a series downwind from the plant in the prevailing wind direction ranging from 0.25 mile to 11.6 miles from Unit 3 (Figure V-1). These stations shall be equipped with dosimetry devices that can be compared with those used onsite.

5. Spent Fuel Storage Pool Water Level Monitors

Two water level indicating devices shall be installed in the SPENT FUEL storage pool. The outputs of these monitors shall be indicated in the control room. Annunciation (visual and audible) of low water level shall be provided in the control room.

6. Onsite Environmental Monitoring Stations

On-site monitoring stations shall include a continuous sampler for water in the discharge canal, dosimeters at or within the site perimeter fence line, and groundwater monitoring wells. The

locations of the dosimeters and the wells are shown by Figures V-2 and V-3, respectively. The onsite groundwater monitoring program shall consist of five wells constructed in the vicinity of Unit 3. Two wells (MW-1 and MW-11) shall serve as background (upgradient) monitoring wells. Three wells (MW-2, MW-4, and MW-6) are located downgradient of Unit 3 and shall serve as groundwater contamination detection wells.

B. OPERATING LIMITS AND REQUIREMENTS

1. Stack Gas Monitoring System

a. The stack gas monitoring system shall be OPERABLE and capable of initiating the stack gas high radiation level alarm whenever the ventilation system is in operation. It may be taken out of service for calibration or maintenance, but shall be returned to service as soon as practicable. The monitors shall be set to alarm at or below the level where the noble gas release rate would result in an instantaneous offsite concentration of airborne radioactive material equal to the appropriate value given in 10 CFR 20, Appendix B, Table II, column 1. This alarm setpoint shall be calculated in accordance with the ODCM.

b. The calibration of these monitors shall be checked at least once each year. Alarm functions shall be checked weekly for OPERABILITY.

c. The stack particulate filter will normally be removed for laboratory counting on a weekly schedule.

d. The vent header that collects all vents from the liquid radwaste treatment facility shall be connected to the plant ventilation exhaust system to permit monitoring by the stack gas monitoring system.

2. Process Water Monitor

a. The monitor shall normally be OPERABLE to detect inadvertent discharge of radwaste. It may be taken out of service for calibration and maintenance but shall be returned to service as soon as practicable. When the monitor is out of service, any release shall be verified by analysis of duplicate independent samples and independent verification of the valve lineup before the activity is released.

b. The monitor shall be source-checked quarterly and shall be calibrated annually. The monitor shall be set to alarm at or below a Cs-137 concentration in the discharge line of $1 \times 10^{-4}$ mCi/ml. Alarm functions and background readings shall be checked weekly. If a background reading exceeds the equivalent of $5 \times 10^{-5}$ mCi/ml, the cause will be investigated and remedial measures taken to reduce the background reading.

3. Area Monitors and Portable Monitoring Equipment

a. The area monitors shall normally be in service at all times. They may be taken out of service for maintenance purposes but shall be returned to service as soon as practicable.

b. The two area monitors in the refueling building shall alarm at 15 mr/hr. At least one of these channels shall be available to monitor the fuel storage area and sound the evacuation horns in the refueling building. If this condition cannot be met, monitoring shall be accomplished with portable instruments whenever personnel are in the refueling building.

c. The remainder of the area monitors shall be set to alarm either at 1 mr/hr or at a radiation level within a factor of 2 of the normal maximum indicated radiation level.

d. The calibration of area monitors shall be checked at least once each quarter. The monitors shall be source-checked at least once each month and shall be calibrated annually.

e. Portable radiation detection instruments shall be calibrated at least annually.

f. Fixed and portable equipment will be used to support the following survey and sampling program: A gross beta-gamma

radiation survey and a contamination survey of the Plant shall be conducted at least quarterly to verify that no radioactive material is escaping or being transported through containment barriers. Contamination samples shall be taken along the most probable path by which radioactive material (such as that stored in the inner containment regions) could be transported to the outer regions of the Plant and ultimately to the environs.

4. Offsite Environmental Monitoring Stations

If stray radiation chambers are used, they shall be monitored every 14 to 15 days, with average and maximum values reported annually. If film packs are used, they shall be monitored monthly, with average and maximum values reported annually. If thermoluminescent dosimeters (TLDs) are used, they shall be monitored at least quarterly, with average and maximum values reported annually.

If the results from any station indicate that the total radiation dose would be 25 mr/year or more above background, an investigation shall be conducted and necessary mitigative actions taken.

5. Spent Fuel Storage Pool Water Level Monitors

At least one water level monitor shall normally be OPERABLE at all times. One water level monitor at a time may be taken out of

service for maintenance purposes but shall be returned to service as soon as practicable. At any time when both spent fuel pool water level monitors are inoperable, the water level shall be visually checked at least once each day.

The monitors shall be set to annunciate a low level condition whenever the water level in the spent fuel storage pool drops below ELEVATION 10 feet, 8 inches. Level indication of the spent fuel storage pool water level monitors shall be verified monthly. The level monitors shall be calibrated and the alarm setpoints verified annually.

6. Onsite Environmental Monitoring Stations

a. The discharge canal continuous sampler shall normally be operating. Composite samples shall be analyzed weekly when the sampler has been operating. If the sampler is inoperable, dip samples shall be taken. Average and maximum activity and concentrations shall be reported annually. Dip samples shall not be used in determination of average and maximum concentrations.

b. Onsite dosimeter stations shall be monitored at least quarterly. Average and maximum dosimetry values will be reported annually.

c. The groundwater monitoring wells shall be sampled quarterly for total gross alpha, total gross beta, total gamma activity, and tritium. Average and maximum sample results shall be prepared annually. A report will be submitted within 30 days if any of the parameters listed in Table V-1 are exceeded.

7. Sealed Source Leak Testing

a. Each sealed source containing radioactive material in excess of 100 µCi of beta-and/or gamma-emitting material or 10 µCi of alpha-emitting material shall be tested for leakage and contamination.

If the test reveals the presence of contamination in excess of 0.005 µCi of removable contamination, the source shall be immediately removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. A report shall be prepared and submitted to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region V, within 30 days of the date the leak test result greater than 0.005 µCi is discovered. The report shall specify the source involved, the test results, and corrective action taken. Records of leak test results shall be kept in units of microcuries.

b. Each sealed source shall be tested for leakage and contamination by the licensee or other persons specifically authorized by the Commission or an Agreement State. The test method shall have a detection sensitivity of at least 0.005 mCi.

c. Each sealed source described in a. above (excluding startup sources and fission detectors previously subject to core flux) shall be tested for leakage and contamination as follows:

(1) Sources in Use - At least once per 6 months for all sources containing radioactive material, other than hydrogen 3, with a half-life greater than 30 days and in any form other than gas.

(2) Stored Sources Not in Use - Each sealed source and fission detector shall be tested prior to use or transfer to another licensee unless tested within the previous 6 months. Sealed sources and fission detectors transferred without a certificate indicating the last test date shall be tested prior to being placed into use.

TABLE V-1

OPERATING LIMITS FOR GROUNDWATER ACTIVITY DURING SAFSTOR

| Parameter | Limit | Basis |
|---|---|---|
| Gross alpha | 15 pCi/l | Drinking water standard |
| Gross beta | 50 pCi/l | Drinking water standard |
| Tritium | $3 \times 10^{-5}$ mCi/ml | 1% of 10 CFR 20, Appendix B, Table II, Column 2 |
| Gamma emitters | --- | 1% of 10 CFR 20, Appendix B, Table II, Column 2 for individual isotopes |

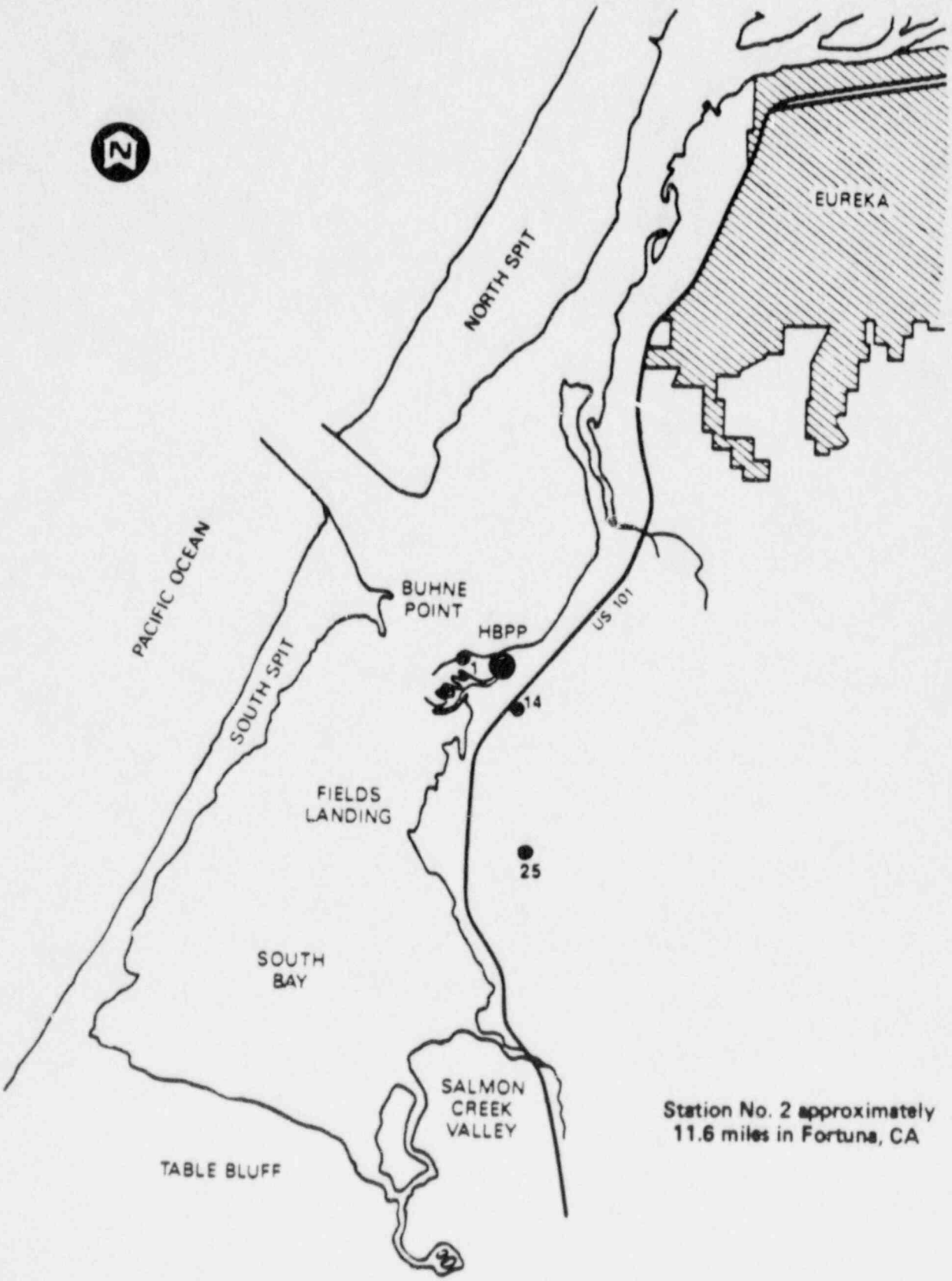


**Fig. V-1 Dosimeter Locations for Stations near HBPP**

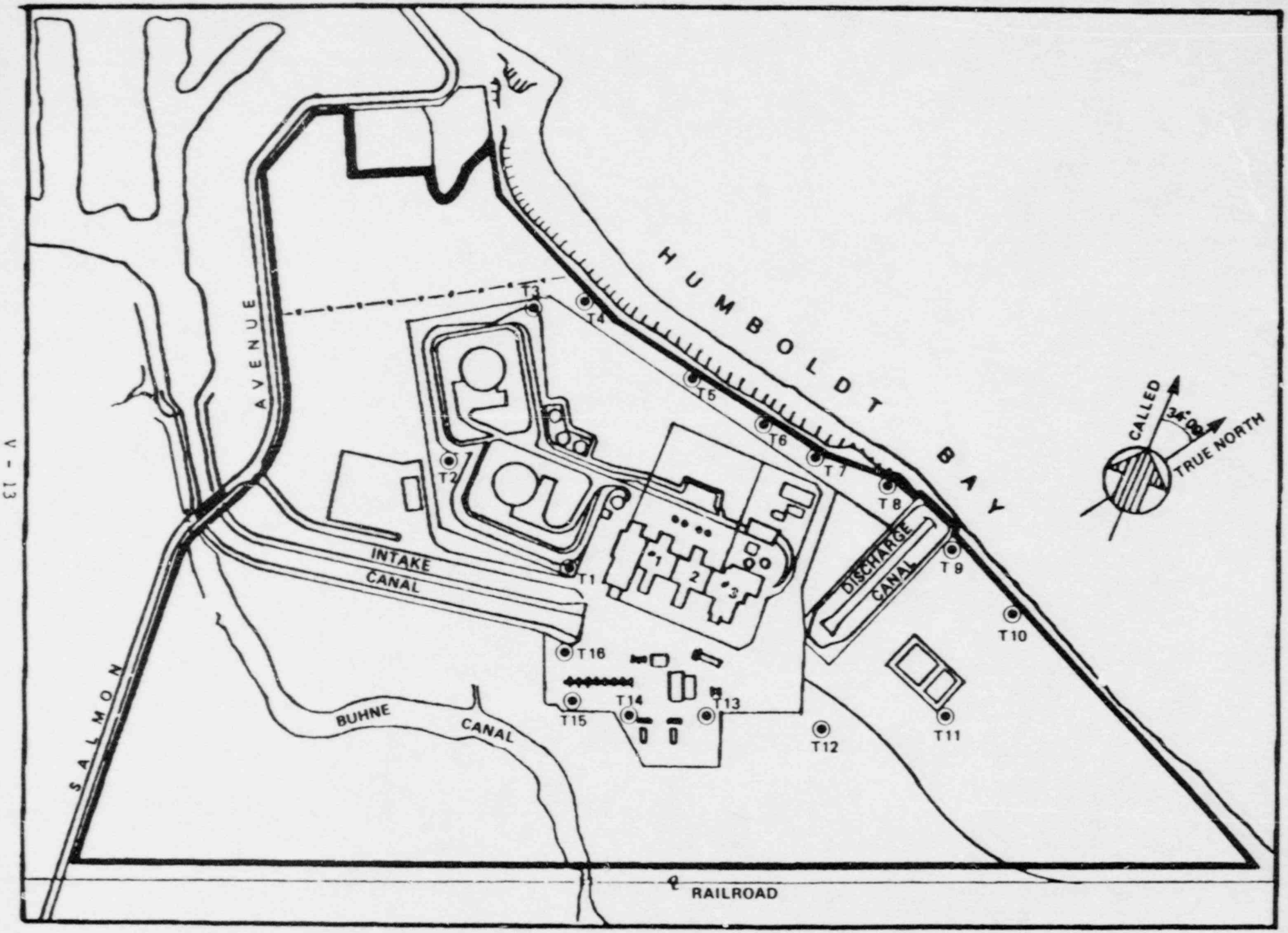


Fig. V-2 Humboldt Bay Onsite Dosimetry Stations

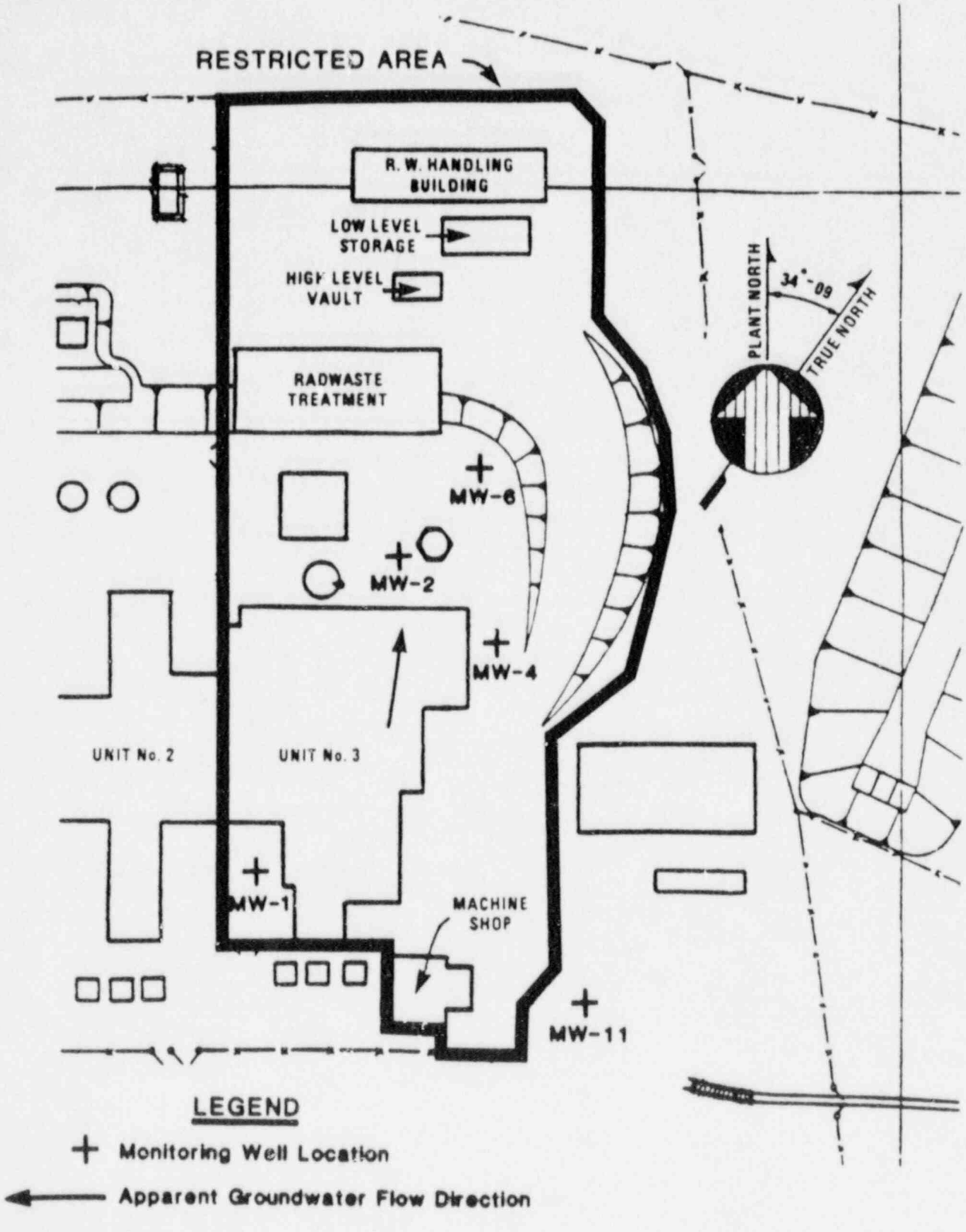


Fig. V-3 HBPP Groundwater Monitoring Wells

# VI. WASTE DISPOSAL SYSTEMS

## A. DESIGN FEATURES

### 1. Liquid Radioactive Waste System

Contaminated or potentially contaminated liquid waste shall be collected in one of the following waste collection tanks or sumps:

- Turbine building drain tank - 3,000-gallon capacity
- Reactor equipment drain tank - 500-gallon capacity
- Reactor caisson sump - 50-gallon capacity
- Radwaste sump - 250-gallon capacity

If the radwaste discharge process monitor is OPERABLE, the contents of the reactor caisson sump may be automatically pumped to the outfall canal if periodic sample results determine that the water is not contaminated and if contamination is not suspected. Otherwise, the caisson sump shall be pumped to the liquid radwaste treatment facility. The contents of the remaining waste collection tanks or sumps shall be pumped to the liquid radwaste treatment facility.

The liquid radwaste treatment system shall consist of the following principal equipment:

- Waste receiver tanks (three) - 7,500-gallon capacity each
- Treated waste hold tank (two) - 7,500-gallon capacity each
- Radwaste filters (two) - maximum 25 microns with a capacity of 50 gpm each
- Mixed bed radwaste demineralizer - 20-gpm nominal capacity
- Radwaste concentrator and auxiliaries - designed to concentrate 7,500 gallons per week
- Shielded concentrated waste storage tanks (two) - 5,000-gallon capacity each

Minimum treatment for any waste batch shall consist of filtration. Where further treatment is required, the following methods shall be available:

- Removal of radioactivity by ion exchange
- Concentration of radioactivity by evaporation

2. Solid Radioactive Waste System

Spent demineralizer resin shall be sluiced to a shielded tank of 10,000-gallon capacity for long-term storage before ultimate offsite disposal. The excess liquid from this tank shall be drawn off periodically and treated in the liquid waste treatment facilities.

Other solid radioactive wastes shall be packaged and stored onsite for ultimate disposal offsite at an authorized disposal facility. Generally, solid radioactive wastes will be stored in either the 1,200-cubic-foot underground vault or in the radwaste handling building or in the low level storage building.

B. OPERATING LIMITS AND REQUIREMENTS

1. Liquid Radioactive Waste System

a. Radioactive waste discharges to Humboldt Bay shall not exceed the limits given in 10 CFR 20, Appendix B, Table II, column 2, on an instantaneous basis.

b. The radiological inventory of wastes within the liquid radioactive waste treatment system shall not exceed 300 Ci.

c. Water from the reactor caisson sump shall be sampled and analyzed monthly for total alpha, beta, and gamma activity. Average and maximum values shall be reported annually.

d. Each batch of wastes shall be sampled and analyzed before release to the discharge canal.

e. Before a radioactive waste discharge is started, it shall be verified that the radioactive waste discharge line is connected to a unit with at least one circulating water pump in operation.

f. The radiological inventory of wastes in outdoor tanks that are not capable of retaining or treating tank overflows shall not exceed 0.25 Ci.

2. Solid Radioactive Waste System

a. The radiological inventory of wastes within the solid radioactive waste system shall not exceed 1000 Ci.

b. Disposal of solid waste to a licensed burial site shall be performed in accordance with the requirements of 10 CFR Parts 20, 61, and 71, and other applicable requirements for transportation and disposal.

c. Prior to shipment to a licensed burial site, liquid waste will be processed (e.g., solidified or absorbed) in accordance with a process control program which specifies acceptance criteria, test batch frequency, and remedial actions.

3. Gaseous Effluents

Gaseous effluents shall not result in offsite ground level concentrations exceeding the limits given in 10 CFR 20, Appendix B, Table II, column 1, on an instantaneous basis.

# VII. ADMINISTRATIVE CONTROLS

## A. RESPONSIBILITY

The Plant Manager shall have the overall onsite responsibility for activities associated with Unit 3. He shall be accountable for adherence to the operating limits and requirements contained in these Technical Specifications. He shall delegate these responsibilities to other specified members of the Plant staff during his absence.

## B. OFFSITE ORGANIZATION

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

## C. PLANT ORGANIZATION

The basic plant staff organization shall be as shown in Figure VII-2.

### 1. Requirements for the Shift Operating Organization

a. The operating shift organization shall consist of a minimum of five persons, directed by a Shift Foreman. In addition to the Shift Foreman, the other four normal shift positions are as follows:

- Senior Control Operator

- o Control Operator

- o Assistant Control Operator

- o At least one Auxiliary Operator

b. At least one Certified Fuel Handler (CFH) shall be onsite when fuel is in the spent fuel storage pool.

c. The Unit 3 control room shall be continuously manned or, as an alternative, audible and visual annunciation of all alarms in Unit 3 shall be provided at a continuously manned control station in Units 1 or 2. A common annunciator may be used for all such alarms.

d. SPENT FUEL shall only be handled under the following conditions:

- o SPENT FUEL handling operations shall be under the direct supervision of a member of the plant management staff who is a Certified Fuel Handler.

- o At least one Certified Fuel Handler shall be present at the location of each fuel movement.

2. Plant Staff Qualifications

The minimum qualifications[1/] for members of the plant staff shall be the following:

a. Plant Manager

(1) Ten years of responsible power plant experience, of which 1 year shall be nuclear power plant experience.[2/] A maximum of 4 years of the remaining 9 years of experience may be fulfilled on a one-for-one time basis by academic training in an engineering or scientific field generally associated with power production.

(2) Certified Fuel Handler in accordance with the Humboldt Bay Power Plant (HBPP) certified fuel handler training program.

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1/ An individual may be assigned to any of these positions without meeting the requirements if a sufficient number of other persons who meet those requirements are assigned to the plant full time to assist the individual until the minimum qualifications are met.

2/ Nuclear experience includes experience at HBPP during operations or during SAFSTOR.

b. Supervisor of Operations

(1) Eight years of responsible power plant experience, of which 1 year shall be nuclear power plant experience. A maximum of 4 years of expe-ience may be fulfilled on a one-for-one time basis by academic training in an engineering or scientific field generally associated with power production.

(2) Certified Fuel Handler in accordance with the HBPP certified fuel handler training program.

c. Power Plant Engineer (Technical Manager)

(1) Bachelor's degree or the equivalent in an engineering or scientific field.

(2) Four years in responsible positions related to power generation, of which 1 year shall be nuclear industry experience.

(3) Thorough knowledge of radiation and criticality safety requirements and practices, including safety requirements specifically related to maintenance and operations under radioactive contamination conditions.

(4) Certified Fuel Handler in accordance with the HBPP certified fuel handler training program.

d. Senior Chemical and Radiological Engineer (Radiation Protection Manager)

(1) Bachelor's degree or the equivalent in engineering or a scientific field including some formal training in radiation protection.

(2) At least 5 years of professional experience in applied radiation protection. (A master's degree may be considered equivalent to 1 year of professional experience, and a doctorate may be considered equivalent to 2 years of professional experience where course work related to radiation protection is involved.) At least 3 years of this experience should be in applied radiation protection in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power stations.

(3) Specialized knowledge of health physics, thorough knowledge of radiation and criticality requirements and practices, and knowledge of related regulatory requirements and practices.

e. Supervisor of Maintenance

(1) Seven years of responsible power plant experience or applicable industrial experience, of which a minimum of

1 year shall be nuclear power plant experience. A maximum of 2 years of the remaining 6 years of power plant or industrial experience may be fulfilled by satisfactory completion of academic or related technical training on a one-for-one time basis.

(2) Thorough knowledge of safety requirements specifically related to maintenance under radioactive contamination conditions.

f. Quality Control Supervisor

(1) Five years of responsible power plant experience or applicable industrial experience, of which a minimum of 1 year shall be experience in the nuclear field. A maximum of 2 years of the remaining 4 years of power plant or applicable industrial experience may be fulfilled by satisfactory completion of academic or related technical training on a one-for-one time basis.

(2) Thorough knowledge of nuclear materials handling, safeguards, and quality assurance methods and procedures.

g. Shift Foreman

(1) High school diploma or equivalent.

(2) At least 4 years of power plant experience including at least 1 year of nuclear power plant experience.

(3) Certified Fuel Handler in accordance with the HBPP certified fuel handler training program.

h. Certified Fuel Handler

(1) High school diploma or equivalent.

(2) At least 1 year of experience at HBPP.

(3) Satisfactory completion of HBPP certified fuel handler training program.

3. Fire Protection Program

a. The Plant Manager is responsible for the fire protection program. A member of the Engineering Staff serves as Fire Marshal with responsibilities for periodic evaluation of equipment provided for fire fighting, brigade training, and maintaining a current and effective fire protection program.

b. At least three members of the shift operating organization shall be trained members of the fire brigade. These individuals shall be available to respond in the event of a fire emergency in the

unit. The fire brigade shall not include any personnel required for other essential functions during a fire emergency.

4. Training

a. A training program shall be administered to certify members of the Plant staff as fuel handlers. The training program shall include the following:

(1) Reactor theory (as it applies to storage of spent reactor fuel)
(2) Spent fuel handling and storage equipment - design and operating characteristics
(3) Monitoring and control systems
(4) Radiation protection
(5) Normal and emergency procedures
(6) Administrative controls applicable during SAFSTOR period

Successful completion of the training program shall be certified by the Plant Manager or his delegate.

b. The Fuel Handler Certification Training Program shall include a continuing requalification program which shall include training in each of the above areas on at least a 2-year cycle.

c. A training program for the fire brigade shall be maintained under the direction of the Fire Marshal and shall meet or exceed the requirements of Section 27 of the NFPA Code-1976.

d. An initial training program shall be administered for radiation and process monitors (RPMs) which will include the following:

(1) Nuclear technology
(2) Plant design and operation (as related to SAFSTOR conditions)
(3) Chemistry
(4) Radiochemistry
(5) Emergency plan and procedures
(6) Radiation protection
(7) Review of 10 CFR 19, 20, 61, and 71.

A retraining program covering the above topics shall be administered on a 2-year cycle.

D. REVIEW AND AUDIT

1. Plant Staff Review Committee

a. Purpose

The Plant Staff Review Committee (PSRC) shall meet on a regular

basis to review overall operating and maintenance experience, proposed changes and tests, adequacy of procedures, and other matters that may have a bearing on nuclear or radiological safety at the plant.

b. Membership

The PSRC shall be composed of members of the Plant staff who have responsibility in the areas of:

- Operations
- Electrical maintenance
- Mechanical maintenance
- Instrument and control maintenance
- Radiation protection
- Nuclear engineering
- Quality control.

Minimum membership shall include:

- Plant Manager (Chairman)
- Supervisor of Operations
- Supervisor of Maintenance
- Power Plant Engineer
- Senior Chemical and Radiological Engineer
- Quality Control Supervisor

c. Alternates

(1) In the absence of a regular member, the Chairman may designate an alternate from the plant staff to carry out review functions.

(2) The Chairman shall designate a regular member to serve as chairman in his absence.

d. Meeting Frequency

Once per calendar quarter and at other times at the discretion of the Chairman.

e. Quorum

A quorum shall consist of four regular members or three regular members and an alternate.

f. Responsibilities

(1) The PSRC shall review the following items prior to implementation to determine if a change in the Technical Specifications or an unreviewed safety question as defined in 10 CFR 50.59 is involved, and shall render such determinations in writing:

a) Proposed tests and experiments determined by a Committee member to have nuclear safety significance.

b) Proposed changes or modifications to Unit 3 systems or equipment.

c) Proposed normal, abnormal, and emergency operating procedures, maintenance procedures, security procedures, administrative procedures, and other procedures determined by a Committee member to be significant to the maintenance of Unit 3 in SAFSTOR.

d) Proposed changes to approved procedures of the type described in item c) above.

e) Proposed changes to the Technical Specifications.

(2) The PSRC shall periodically review:

a) Approved procedures of the type described in item (1)c) above for currentness and applicability.

b) Maintenance and surveillance testing experience to ensure safe and efficient maintenance of the Unit and to determine if changes to equipment or procedures are needed.

(3) The PSRC shall investigate any violation of these Technical Specifications and prepare and forward a report to the Vice President, Nuclear Power Generation and the General Office Nuclear Plant Review and Audit Committee (GONPRAC) covering their evaluation and recommendations to prevent recurrence.

(4) The Plant Staff Review Committee shall conduct a biennial review of:

a The Plant Security Plan and implementing procedures to determine the need for changes in the plan or its implementing procedures.

b) The Site Emergency Plan and its implementing procedures to determine the need for changes in the plan or its implementing procedures.

g. Authority

(1) The PSRC shall recommend to the Plant Manager approval or disapproval of proposals reviewed under items f.(1) through (3) above.

(2) The PSRC shall render written determinations regarding to whether or not a proposed change or test or other such matter which has been reviewed involves an "unreviewed

safety question" as defined in 10 CFR 50.59(c) or a change in the Technical Specifications.

(3) In the event of disagreement between PSRC members on a matter affecting nuclear or radiological safety, a conservative course shall be followed as determined by the Plant Manager. Records of such disagreements shall be included in the meeting minutes, described in item h. below, and distributed promptly.

h. Records

Minutes of each PSRC meeting shall be prepared and maintained at the Plant. Copies of minutes shall be sent to the Vice President, Nuclear Power Generation and to GONPRAC.

2. General Office Nuclear Plant Review and Audit Committee

a. Purpose

The General Office Nuclear Plant Review and Audit Committee (GONPRAC) shall function to provide independent review and audit of designated activities in the areas of:

- Nuclear power plant operations
- Nuclear engineering

- Chemistry and radiochemistry
- Metallurgy
- Instrumentation and controls
- Radiological safety
- Mechanical and electrical engineering
- Quality assurance practices

GONPRAC shall report to and advise the President on those areas of responsibility specified in Items 2.g. and 2.h. below.

b. Composition

GONPRAC shall be composed of the following:

- Vice President, Nuclear Power Generation (Chairman)
- Assistant to the Vice President, Nuclear Power Generation (Vice Chairman)
- Manager, Nuclear Operations Support
- Manager, Nuclear Engineering and Construction Services
- Manager, Station Construction
- Chief Mechanical and Nuclear Engineer

- Manager, Quality Assurance
- Director, Nuclear Administration and Support Services
- Director, Nuclear Regulatory Affairs

c. Alternates

All alternate members shall be appointed in writing by the GONPRAC Chairman to serve on a temporary basis; however, no more than two alternates shall participate as voting members in GONPRAC activities at any one time.

d. Consultants

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

e. Meeting Frequency

GONPRAC shall meet at least once per 6 months.

f. Quorum

A quorum for the GONPRAC review and audit of these Technical Specifications shall consist of the Chairman or Vice Chairman and at least four GONPRAC members, including alternates.

g. Review

GONPRAC shall review:

(1) The safety evaluations for (1) changes to procedures, equipment, or systems, and (2) tests or experiments completed under the provisions of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question.

(2) Proposed changes to procedures, equipment, or systems that involve an unreviewed safety question as defined in 10 CFR 50.59.

(3) Proposed tests or experiments that involve an unreviewed safety question as defined in 10 CFR 50.59.

(4) Proposed changes to Technical Specifications or the License.

(5) Violations of codes, regulations, orders, Technical Specifications, license requirements, or internal procedures or instructions having nuclear safety significance.

(6) Significant operating abnormalities or deviations from normal and expected performance of Unit equipment.

(7) Events requiring written notification to the Commission.

(8) All recognized indications of an unanticipated deficiency in some aspect of design or operation of structures, systems, or components that could affect nuclear safety.

(9) PSRC reports and meeting minutes.

h. Audits

Audits of Unit activities shall be performed under the cognizance of GONPRAC. These audits shall encompass:

(1) The conformance of Unit operation to provisions contained within the Technical Specifications and applicable license conditions - at least once per 12 months.

(2) The performance, training, and qualifications of the entire Unit staff - at least once per 12 months.

(3) The results of actions taken to correct significant deficiencies occurring in Unit equipment, structures, systems, or methods of operation - at least once per 6 months.

(4) The performance of activities required by the Quality Assurance Program - at least once per 24 months.

(5) The Emergency Plan and implementing procedures - at least once per 24 months.

(6) The Security Plan and implementing procedures - at least once per 24 months.

(7) The Fire Protection Program and implementing procedures - at least once per 24 months.

(8) An independent inspection and audit of the Fire Protection and Loss Prevention Program by qualified offsite licensee personnel or an outside fire protection firm - at least once per 12 months.

(9) An inspection and audit of the Fire Protection and Loss Prevention Program by a qualified outside fire consultant - at least once per 36 months.

i. Records

Records of GONPRAC activities, including minutes of meetings, reports of reviews, and audit reports shall be prepared, approved, and distributed as required by the approved GONPRAC Charter.

E. PROCEDURES

1. Detailed Procedures

Detailed written procedures, including applicable checkoff lists and instructions, shall be established, implemented, and maintained for significant activities associated with the maintenance of Unit 3 in SAFSTOR, including:

a. Fuel handling operations (including removal and reinstallation of the spent fuel storage pool cover)

b. Normal startup, operation, and shutdown of systems and components required during SAFSTOR

c. Actions to be taken to correct specific and foreseen potential malfunctions of systems or components

d. Actions to be taken during emergency conditions involving unplanned releases of radioactivity

e. Abnormal and emergency operation of all systems and components required to maintain the SAFSTOR condition of the Plant

f. Plant Security Plan implementation

g. Surveillance activities required to demonstrate compliance with the Technical Specifications

h. Calibration of instrumentation used to demonstrate compliance with Technical Specifications

2. Procedure Review

All procedures described in item 1 above, and changes thereto, shall be reviewed by the PSRC and approved by the Plant Manager prior to implementation, except as provided in items 3 and 4 below.

3. Procedure Changes

Rules shall be established that provide methods by which temporary changes can be made to approved procedures, including the designation of those persons authorized to approve such changes. Temporary changes that clearly do not change the intent of the approved procedure from the standpoint of nuclear safety may be approved by two members of the plant management staff, at least one of whom is a Certified Fuel Handler. Such changes shall be documented and, if appropriate, incorporated into the next revision of the affected procedure.

4. Emergencies Not Covered by a Procedure

In the event of an emergency not covered by an approved procedure, operations personnel shall be instructed to take action to minimize personnel injury and damage to the facility.

F. SITE EMERGENCY PLAN

The Site Emergency Plan shall provide the necessary prearrangement and organization of personnel to deal effectively with emergencies at the Plant so as to minimize radiation exposure to Plant personnel and the general public. The plan shall describe the specific duties of Plant personnel in the event of an accident or any unplanned incident producing high radiation levels. Drills and exercises described in the Emergency Plan shall be performed to ensure that all Plant personnel are thoroughly familiar with the plan.

G. SURVEILLANCE TESTING

Testing of system components, monitors, and other equipment to which these Technical Specifications apply shall be as described in Sections III through VI. Each surveillance test shall be performed within the specified time interval with:

- A maximum allowable extension not to exceed 25% of the test interval

- A total interval time for any three consecutive test intervals not to exceed 3.25 times the specified test interval

Appropriate tests shall also be performed following maintenance on these systems that could impair their operation.

H. REPORTING REQUIREMENTS

In addition to the applicable reporting requirements of 10 CFR, the following reports shall be submitted:

1. Annual Report

An annual report to the Regional Administrator, NRC Region V, with a copy to the NRC Document Control Desk, shall describe the results of the environmental and facility radiation surveys and the status of the facility within 90 days of January 1 of each year.

2. Nonroutine Reports

a. The NRC Operations Center shall be notified of emergency and nonemergency events in accordance with 10 CFR 50.72.

b. Reportable events shall be reported in accordance with 10 CFR 50.73.

3. Semiannual Effluent Release Report

Paragraph (a)(2) of 10 CFR 50.36, "Technical Specifications on Effluents from Nuclear Power Reactors," requires that a report be submitted to the Regional Administrator, NRC Region V, within 60 days after January 1 and July 1 of each year which specifies the quantity of each of the principal radionuclides released to unrestricted areas in liquid and gaseous effluents during the previous 6 months of operation. The information submitted in the Semiannual Effluent Release Report shall be in accordance with Regulatory Guide 1.21 (Revision 1), dated June 1974, and Regulatory Guide 4.1 (Revision 1), dated April 1975.

4. Special Reports

If the calculated dose to any member of the general public exceeds the 40 CFR 190 limits, a Special Report shall be made to the Regional Administrator, NRC Region V, within 30 days. This report shall include an analysis of the estimated dose received by a member of the public from uranium fuel cycle sources for the applicable consecutive 12-month period. The report shall also describe the corrective actions planned to reduce subsequent exposures and to prevent recurrence of the event. The Special Report shall include a request for a variance in accordance with the provisions of 40 CFR 190 and include the information specified in 40 CFR 190.11(b). Submittal of the report is considered a timely request, and a variance is granted until Staff action on the request is complete.

I. RECORD RETENTION

1. Five-Year Retention

All records and logs relative to the following areas shall be retained for at least 5 years:

a. Records and logs of normal SAFSTOR operations.

b. Records and logs of principal maintenance activities, including inspection, repair, substitution, or replacement of principal items of equipment described in the Technical Specifications.

c. Reportable Occurrence Reports

d. Records of periodic checks, inspections, and calibrations performed to verify that surveillance requirements are being met.

e. Records of radioactive shipments.

f. Records of sealed source leak tests and results.

g. Records of the annual physical inventory of all source material of record.

h. Records of tests or experiments associated with SPENT FUEL storage.

i. Records of changes made in operating procedures.

2. SAFSTOR Duration

All records relative to the following areas shall be retained for the duration of SAFSTOR:

a. Records and prints of changes made to the Plant.

b. Records of spent fuel inventory, transfers of fuel, and assembly histories.

c. Records of plant radiation and contamination surveys.

d. Records of offsite environmental monitoring surveys.

e. Records of radiation exposure for all plant personnel, including all contractors and visitors to the plant, in accordance with 10 CFR 20.

f. Records of radioactivity in liquid and gaseous wastes released to the environment.

g. Records of training and qualification for current members of the plant staff.

h. Minutes of meetings of the PSRC and GONPRAC.

i. Records of Quality Assurance activities required by the SAFSTOR Quality Assurance Plan.

j. Records of reviews performed for changes made to procedures or equipment, or reviews of tests and experiments pursuant to the Final Hazard Summary Report (FHSR).

J. RADIATION PROTECTION PROGRAM

Radiation control procedures shall be prepared, approved, adhered to, and made available to all plant personnel. These procedures shall show permissible radiation exposure and shall be consistent with the requirements of 10 CFR 20. The radiation protection program shall be organized to meet the requirements of 10 CFR 20.

K. HIGH RADIATION AREA

1. Less Than or Equal to 1000 mr/hr

Pursuant to paragraph 20.203(c)(5) of 10 CFR Part 20, in lieu of the "control device" or "alarm signal" required by paragraph

20.203(c)(2), each high radiation area, as defined in 10 CFR Part 20, in which the intensity of radiation is equal to or less than 1000 mr/hr at 45 cm (18 in.) from the radiation source or from any surface that the radiation penetrates, shall be barricaded and conspicuously posted as a high radiation area, and entrance thereto shall be controlled by requiring issuance of special work permits (SWPs). Individuals qualified in radiation protection procedures (e.g., Health Physics Technician) or personnel continuously escorted by such individuals may be exempt from the SWP issuance requirement during the performance of their assigned duties in high radiation areas with exposure rates equal to or less than 1000 mr/hr, provided they are otherwise following plant radiation protection procedures for entry into such high radiation areas. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

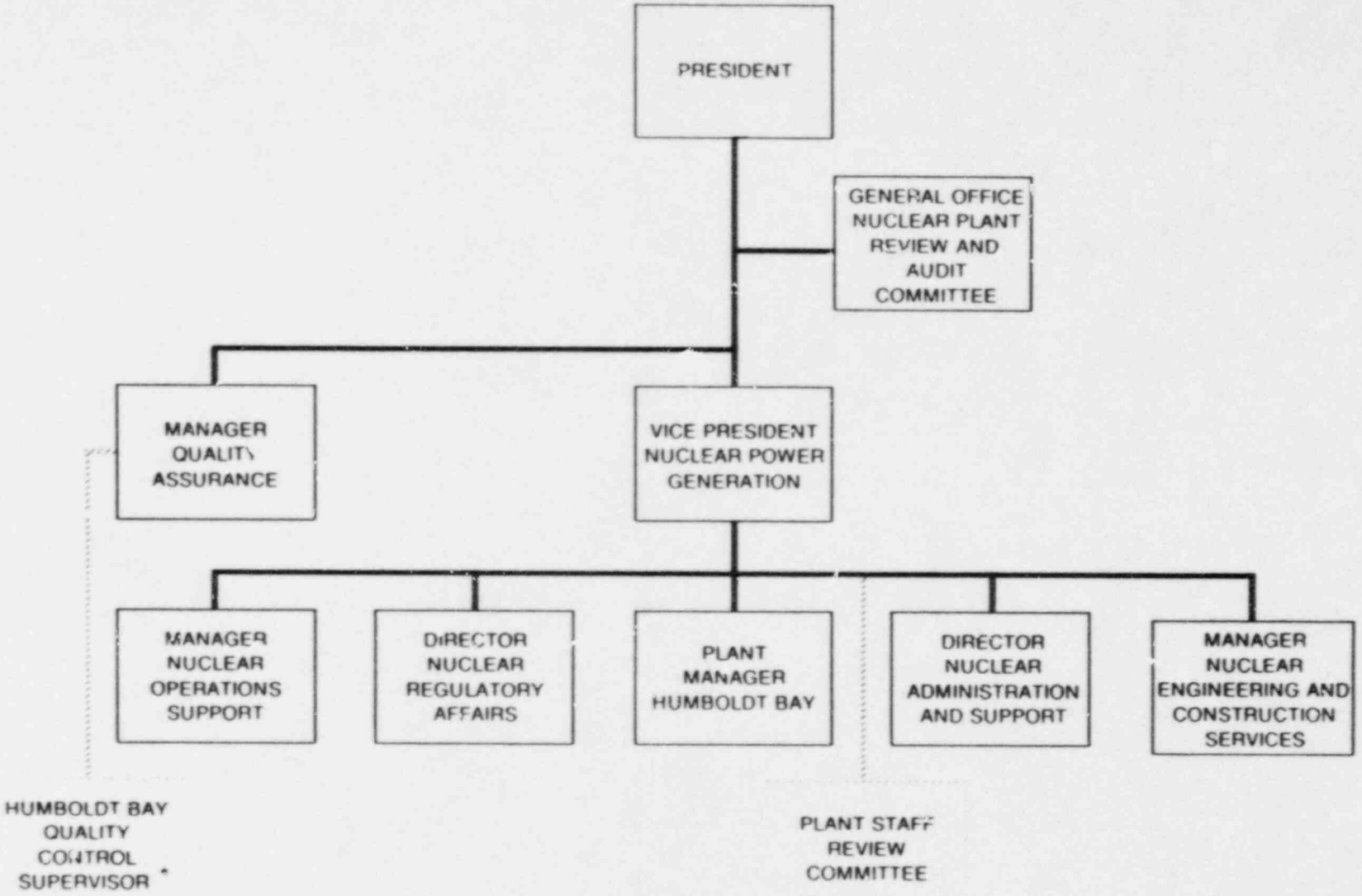
a. A radiation monitoring device that continuously indicates the radiation dose rate in the area:

b. A radiation monitoring device that continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel have been made knowledgeable of them.

c. An individual qualified in radiation protection procedures with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified.

2. Greater Than 1000 mr/hr

In addition to the requirements of Specification VII.K.1, areas accessible to personnel with radiation levels greater than 1000 mr/hr at 45 cm (18 in.) from the radiation source or from any surface that the radiation penetrates shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Foreman on duty or Health Physics supervision. Doors shall remain locked except during periods of access by personnel under an approved SWP which shall specify the dose rate levels in the immediate work areas and the maximum allowable stay time for individuals in that area. In lieu of the stay time specification of the SWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.




* *The Quality Control Supervisor functions as an onsite member of the Quality Assurance Organization. In this capacity, he reports to the Manager, Quality Assurance.*

**Fig. VII-1 OFFSITE STAFF ORGANIZATION**

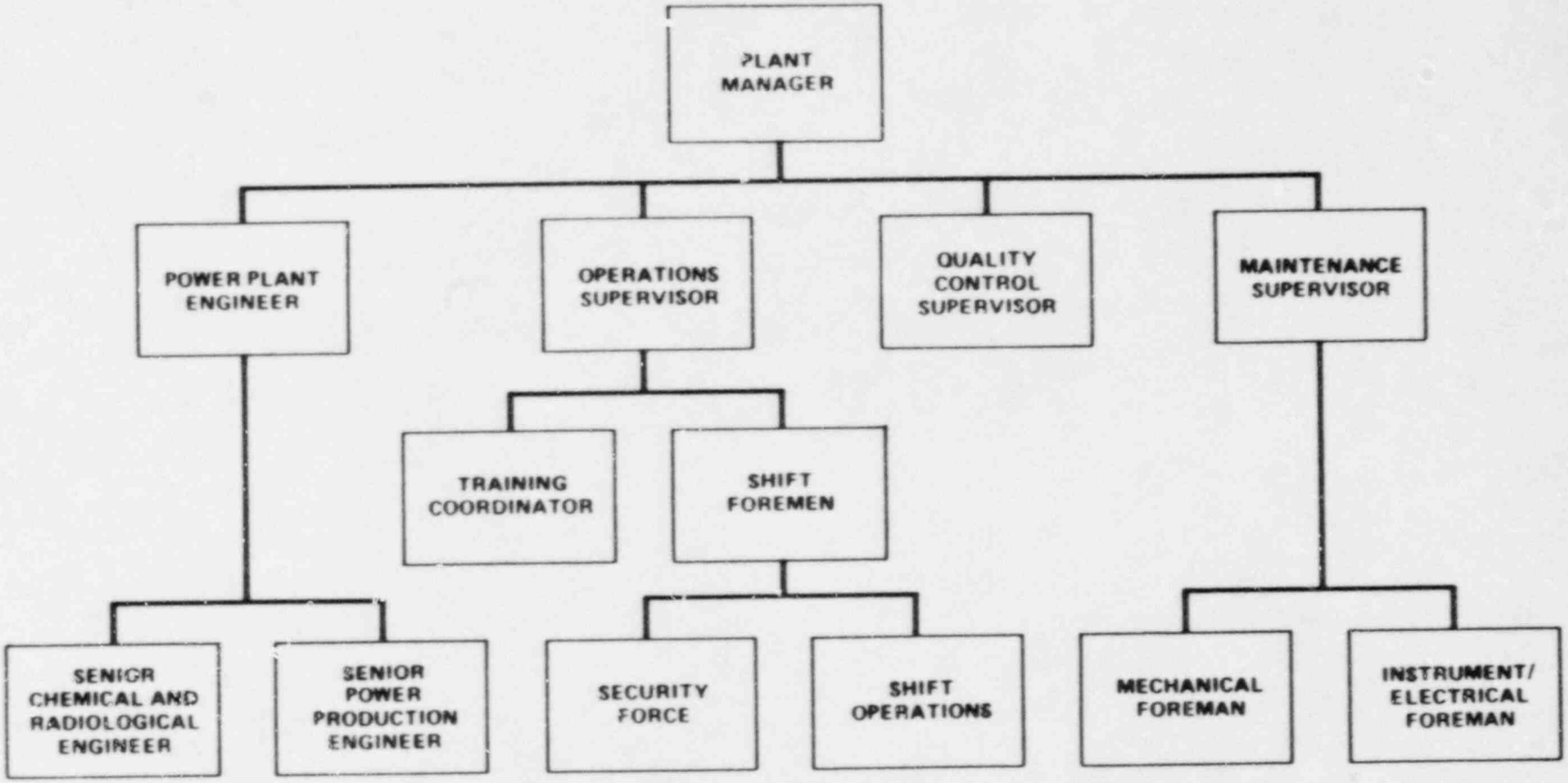



Fig. VII-2 PLANT STAFF ORGANIZATION