



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

PORTLAND GENERAL ELECTRIC COMPANY

THE CITY OF EUGENE, OREGON

PACIFIC POWER AND LIGHT COMPANY

DOCKET NO. 50-344

TROJAN NUCLEAR PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 50  
License No. NPF-1

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The applications for amendment by Portland General Electric Company, the City of Eugene, Oregon, and Pacific Power and Light Company (the licensee) dated June 19, 1980, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the applications, the provisions of the Act, and the rules and 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; and
  - 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.

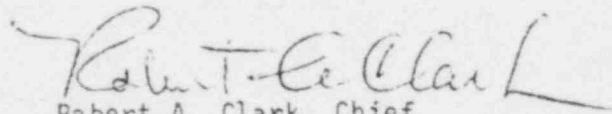
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-1 is hereby amended to read as follows:

"(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 50, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, except as noted in paragraph 2.C.(10) through 2.C.(12) below."

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Clark, Chief  
Operating Reactors Branch #3  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: October 6, 1980

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 50 TO FACILITY OPERATING LICENSE NO. NPF-1

DOCKET NO. 50-344

Revise Appendix A as follows:

Remove Pages

VII  
3/4 1-24  
3/4 3-48  
3/4 3-49  
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3/4 7-23  
3/4 7-25  
3/4 7-27  
3/4 7-29  
3/4 7-30  
3/4 7-31  
B3/4 3-3  
6-1  
6-4

Insert Pages

VII  
3/4 1-24  
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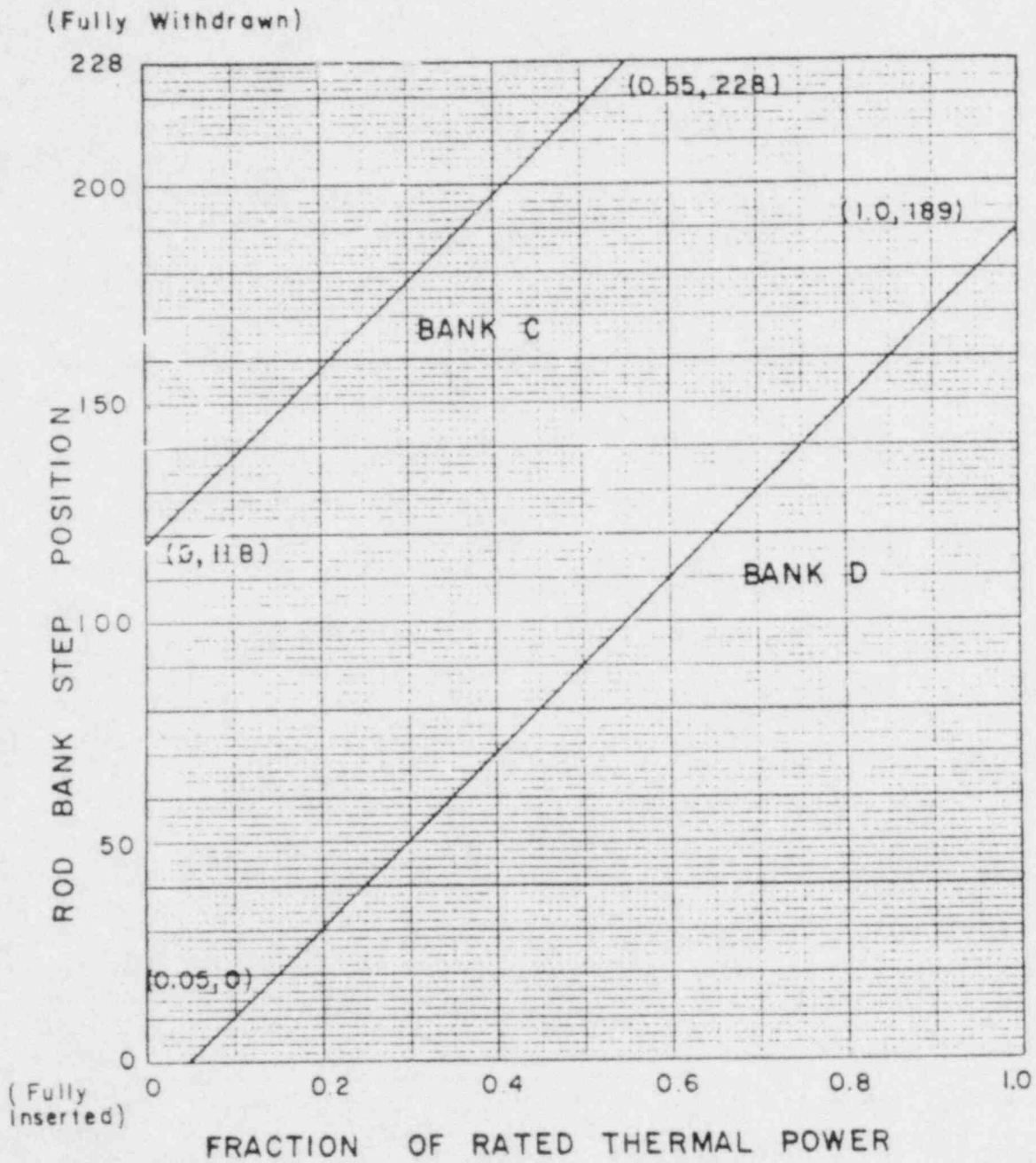


Figure 3.i-1  
 Rod Bank Insertion Limits Versus Thermal Power  
 Four Loop Operation

## INSTRUMENTATION

### FIRE PROTECTION INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

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3.3.3.7 As a minimum, the fire protection instrumentation for each fire detection zone shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: Whenever equipment in that fire detection zone is required to be OPERABLE.

ACTION: With one or more of the fire detection instrument(s) shown in Table 3.3-10 inoperable:

- a. Within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour unless the instrument(s) is located inside the Containment, then inspect the Containment at least once per 8 hours, and
- b. Restore the inoperable instrument(s) to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Social Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the instrument(s) to OPERABLE status.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.3.3.7.1 Each of the above required fire protection instruments shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during plant operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.3.7.2 The NFPA Code 72D Class B supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

TABLE 3.3-10

FIRE DETECTION INSTRUMENTS

<u>INSTRUMENT LOCATION</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>
	<u>Smoke</u>
1. Control Room	5
2. Cable Spreading Room	12
3. Electrical Penetration Area (outside Containment)	2
4. Switchgear Room	
Train A Elevation 69 ft	6
Train B Elevation 61 ft	5
5. Station Battery Rooms	
Train A Elevation 63 ft	1
Train B Elevation 63 ft	1
6. Containment	3

\* The fire detection instruments located within the Containment are not required to be OPERABLE during the performance of Type A Containment leakage Rate Tests.

## INSTRUMENTATION

### DECOUPLE SWITCHES

#### LIMITING CONDITION FOR OPERATION

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3.3.3.8 All decouple switches in either train A or train B and those common to both trains shall be OPERABLE.

APPLICABILITY: whenever the applicable equipment is required to be OPERABLE.

ACTION:

- a) With one or more of the decouple switches inoperable, establish a fire watch in the cable spreading room until OPERABILITY is restored. Restore the inoperable switch to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
- b) The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.3.3.8 Each of the above required decouple switches shall be demonstrated OPERABLE at least once per 18 months by performing a system functional test by:

- a) Verifying that the connected equipment will start in the decoupled mode either by cycling the breaker or actually starting the equipment. This test may substitute for other surveillance testing requirements for applicable components.
- b) Verifying the control room alarm when the decouple switch is placed in the decouple mode.



PLANT SYSTEMS

3/4.7.8 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

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3.7.8.1 The fire suppression water system shall be OPERABLE with:

- a. One 2000 gpm fire pump capable of being powered by an OPERABLE diesel engine,
- b. One 2000 gpm motor-driven fire pump capable of being powered by an OPERABLE power supply, and
- c. An OPERABLE flow path capable of taking suction from the Columbia River and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves and the first valve ahead of the water flow alarm device on each sprinkler/spray/deluge or hose standpipe riser required to be OPERABLE per Specifications 3.7.8.2 and 3.7.8.3.

APPLICABILITY: At all times.

ACTION:

- a. With one pump inoperable, restore the inoperable equipment to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- b. With the fire suppression water system otherwise inoperable:
  1. Establish a backup fire suppression water system within 24 hours, and
  2. Submit a Special Report in accordance with Specification 6.9.2:
    - a) By telephone within 24 hours,
    - b) Confirmed by telegraph, mailgram or facsimile transmission no later than the first working day following the event, and

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- f. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

4.7.8.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying:
  - 1. The fuel storage tank contains at least 200 gallons of fuel, and
  - 2. The diesel starts from ambient conditions and operates for at least 20 minutes.
- b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM D975-78 when checked for water, viscosity and sediment.
- c. At least once per 18 months, during shutdown, by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

4.7.8.1.3 The fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that:
  - 1. The electrolyte level of each battery is above the plates, and
  - 2. The overall battery voltage is  $\geq$  24 volts.

## PLANT SYSTEMS

### SPRAY, SPRINKLER, AND/OR DELUGE SYSTEMS

#### LIMITING CONDITION FOR OPERATION

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3.7.8.2 The following spray, sprinkler, and/or deluge systems shall be OPERABLE:

- a. Emergency diesel generator rooms,
- b. Auxiliary feedwater pump room,
- c. Electrical penetration areas,
- d. Diesel fire pump room, and
- e. Cable spreading room.

APPLICABILITY: Whenever equipment in the spray, sprinkler, and/or deluge protected areas is required to be OPERABLE.

#### ACTION:

- a. With one or more of the above required spray, sprinkler, and/or deluge systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.7.8.2 Each of the above required spray, sprinkler, and/or deluge systems shall be demonstrated OPERABLE:

- a. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- b. At least once per 18 months:
  1. By performing a system functional test which includes simulated automatic actuation of the system, and:
    - a) Verifying that the automatic valves in the flow path actuate to their correct positions on a test signal, and

PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITIONS FOR OPERATION

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3.7.8.3 The fire hose stations shown in Table 3.7-4 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

- a. With one or more of the fire hose stations shown in Table 3.7-4 inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose station within 1 hour. Restore the fire hose station to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability, and plans and schedule for restoring the station to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.7.8.3 Each of the fire hose stations shown in Table 3.7-4 shall be demonstrated OPERABLE:

- a. At least once per 31 days by visual inspection of the station to assure all required equipment is at the station.
- b. At least once per 18 months by:
  1. Removing the hose for inspection and re-racking, and
  2. Inspecting all gaskets and replacing any degraded gaskets in the couplings.
- c. At least once per 3 years by:
  1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.
  2. Conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at that hose station.

TABLE 3.7-4

FIRE HOSE STATIONS

	<u>LOCATION</u>	<u>ELEVATION</u>	<u>HOSE STATION</u>
1.	Auxiliary Building	5 ft.	HS-34
2.	Auxiliary Building	25 ft.	HS-33
3.	Auxiliary Building	45 ft.	HS-19, 38
4.	Auxiliary Building	63 ft.	HS-29
5.	Auxiliary Building	77 ft.	HS-28
6.	Turbine Building	45 ft.	HS-3, 5
7.	Turbine Building	69 ft.	HS-27
8.	Turbine Building	93 ft.	HS-15
9.	Control Building	63 ft.	HC-2
10.	Control Building	77 ft.	HS-26
11.	Containment	45 ft.	CHS-A*
12.	Containment	93 ft.	CHS-B*
13.	Containment	93 ft.	CHS-C*

\* From Demineralized Water System

## PLANT SYSTEMS

### 3/4.7.9 PENETRATION FIRE BARRIERS

#### LIMITING CONDITIONS FOR OPERATION

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3.7.9 All 3-hour penetration fire barriers protecting safety related areas shall be functional.

APPLICABILITY: At all times.

#### ACTION:

- a. With one or more of the above required penetration fire barriers nonfunctional in areas with a combustable loading greater than 1 lb/sq ft equivalent wood, provide either a continuous fire watch on at least one side of the affected penetration within 1 hour or verify the OPERABILITY of fire detectors on at least one side of the nonfunctional fire barrier and establish an hourly firewatch patrol. Restore the nonfunctional fire barrier penetration(s) to functional status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the nonfunctional penetrations and plans and schedule for restoring the fire barrier penetration(s) to functional status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.7.9 Each of the above required penetration fire barriers shall be verified to be functional:

- a. At least once per 18 months, by a visual inspection.
- b. Prior to returning a penetration fire barrier to functional status following repairs or maintenance by performance of a visual inspection of the affected penetration fire barrier(s).

## INSTRUMENTATION

### BASES

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#### 3/4.3.3.6 CHLORINE DETECTION SYSTEMS

The OPERABILITY of the chlorine detection system ensures that sufficient capability is available to promptly detect and initiate protective action in the event of an accidental chlorine release. This capability is required to protect control room personnel and is consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," February 1975.

#### 3/4.3.3.7 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

#### 3/4.3.3.8 DECOUPLE SWITCHES

OPERABILITY of the decouple switches in the cable spreading room (CSR) ensures that the control cables passing through the CSR to certain equipment required for safe shutdown of the plant will be isolated and local operation of the equipment can be achieved. In the event that a portion of the decouple switches becomes inoperable, a fire watch will be established in the CSR until the inoperable equipment is restored to OPERABILITY.

## 6.0 ADMINISTRATIVE CONTROLS

### 6.1 RESPONSIBILITY

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

### 6.2 ORGANIZATION

#### OFFSITE

6.2.1 The offsite organization for facility management and technical support shall be as shown on Figure 6.2-1.

#### FACILITY STAFF

6.2.2 The Facility organization shall be as shown on Figure 6.2 2 and:

- a. Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1. The minimum shift crew necessary for safe shutdown is five.
- b. At least one licensed Operator shall be in the control room when fuel is in the reactor.
- c. At least two licensed Operators shall be present in the control room during reactor start-up, scheduled reactor shutdown and during recovery from reactor trips.
- d. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor.
- e. All CORE ALTERATIONS after the initial fuel loading shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
- f. A Fire Brigade of at least 5 members shall be maintained onsite at all times. The Fire Brigade shall not include members of the minimum shift crew necessary for safe shutdown of the unit or any personnel required for other essential functions during a fire emergency. Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absences of on duty members provided immediate action is taken to restore the Fire Brigade composition to within the minimum requirement of 5.



TABLE 6.2-1

MINIMUM SHIFT CREW COMPOSITION#

LICENSE CATEGORY	APPLICABLE MODES	
	1, 2, 3 & 4	5 & 6
SOL	1	1*
OL	2	1
Non-Licensed	3	1

\*Does not include the licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling supervising CORE ALTERATIONS after the initial fuel loading.

#Shift crew composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements of Table 6.2-1.