



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. 77
License No. NPF-1

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Portland General Electric Company, the City of Eugene, Oregon, and Pacific Power and Light Company (the licensee) dated May 6, 1982 complies 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 application, 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. 77, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, except where otherwise stated in specific license conditions.

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

FOR THE NUCLEAR REGULATORY COMMISSION

for *Charles M. Trammell III*
Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 10, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 77
TO FACILITY OPERATING LICENSE NO. NPF-1

DOCKET NO. 50-344

Revise Appendix A as follows:

Remove Pages

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Insert Pages

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TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. AREA MONITORS				
a. Fuel Storage Pool Area	S	R	M	*
2. PROCESS MONITORS				
a. Containment				
i. Gaseous Activity				
Iodine	S	R	M	1, 2, 3, 4 & 6**
High Level Noble Gas	S	R	M	1, 2, 3, 4 & 6**
Low Level Noble Gas	S	R	M	1, 2, 3, 4 & 6**
ii. Particulate Activity	S	R	M	1, 2, 3, 4 & 6**

*With fuel in the storage pool or building

**CHANNEL FUNCTIONAL TEST does not include testing for containment purge supply and exhaust valve closure in Modes 1-4.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. Verifying that on a Containment Ventilation isolation signal, each Containment purge and hydrogen vent supply and exhaust valve actuates to its isolation position.
- c. Verifying that upon a Containment High Radiation signal, each Containment purge and hydrogen vent supply and exhaust valve actuates to its isolation position.

4.6.3.1.3 The isolation time of each power operated or automatic valve of Table 3.6-1 shall be determined to be within its limits when tested pursuant to Specification 4.0.5.

4.6.3.1.4 Containment purge supply and exhaust valves shall be verified to be inoperable (electric power or air supplies removed from their respective operators) every 31 days while in Operating Modes 1 through 4.

4.6.3.1.5 The Containment purge supply and exhaust valves shall be verified OPERABLE at least once per 9 months by performing a leak rate test. In addition, prior to entering Mode 4 from a COLD SHUTDOWN condition, Containment purge supply and exhaust valves shall be verified OPERABLE, if valves have been cycled in Modes 5 or 6, by performing a leak rate test. Leakage rate acceptance criteria will be such that when the measured leakage rate is added to the leakage rates determined pursuant to Technical Specification 4.6.1.2.d for all other Type B and C penetrations, the combined leakage will be less than or equal to .60La. The leakage rate for the Containment purge supply and exhaust valves shall also be compared to their previously measured leakage rate to detect excessive valve degradation. The Containment purge supply and exhaust valves shall not be cycled after final leak testing prior to entering Mode 4 from Mode 5, except as necessary to perform repairs following an unsuccessful leak test during operation in Modes 1-4.

TABLE 3.6-1
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>TESTABLE DURING PLANT OPERATION</u>	<u>ISOLATION TIME (seconds)</u>
A. Containment Isolation			
MO 5676	Containment atmosphere sample return - outside	yes	10
MO 5671	Containment atmosphere sample supply - outside	yes	10
MO 5673	Containment atmosphere sample return - inside	yes	10
MO 5663	Containment atmosphere sample return - outside	yes	10
CV 8026	Pressurizer relief tank gas analyzer - inside	yes	10
CV 8025	Pressurizer relief tank gas analyzer - outside	yes	10
MO 5660	RCDT gas analyzer - inside	yes	10
CV 5661	RCDT gas analyzer - outside	yes	10
CV 4000	RCDT N ₂ supply - outside	yes	10
MO 4005	RCDT discharge - inside	yes	10
CV 4006	RCDT discharge - outside	yes	10
CV 8028	Pressurizer relief tank makeup - outside	yes	10
MO 5677	Containment atmosphere sample supply - outside	yes	10
MO 5678	Containment atmosphere sample return - outside	yes	10

TABLE 3.6-1

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>TESTABLE DURING PLANT OPERATION</u>	<u>ISOLATION TIME (seconds)</u>
A. Containment Isolation			
CV 8033	Pressurizer relief tank N ₂ supply - outside	yes	10
CV 8880	Accumulator N ₂ supply - outside	yes	10
MO 4300	Gas collection header - inside	yes	10
CV 4301	Gas collection header - outside	yes	10
MO 10016	Chilled water supply - inside	yes	5
CV 10015	Chilled water supply - outside	yes	3
MO 10013	Chilled water return - inside	yes	5
CV 10014	Chilled water return - outside	yes	3
MO 4180	Containment sump discharge - inside	yes	10
CV 4181	Containment sump discharge - outside	yes	10
CV 8871	SIS test line - inside	yes	10
CV 8964	SIS test line - outside	yes	10
CV 8888	SIS test line - outside	yes	10
CV 8149A	CVCS letdown - inside	yes	10
CV 8149B	CVCS letdown - inside	yes	10
CV 8149C	CVCS letdown - inside	yes	10
CV 8152	CVCS letdown - outside	yes	10
MO 8112	RC Pump seal water return - inside	no	10
MO 8100	RC Pump seal water return - outside	no	10
SV 5642	Containment atmosphere sample supply drain - inside	yes	3
SV 5643	Containment atmosphere sample supply drain - inside	yes	3
SV 5679	Containment atmosphere sample return - inside	yes	3

TABLE 3.6-1
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>TESTABLE DURING PLANT OPERATION</u>	<u>ISOLATION TIME (seconds)</u>
A. Containment Isolation			
MO 8105#	CVCS charging - outside	yes	N.A.
MO 8106#	CVCS charging - outside	yes	N.A.
CV 4470	Service air supply - outside	yes	10
CV 4471	Instrument air supply - outside	no	10
MO 3291#	CCW train "A" supply - outside	no	N.A.
MO 3292#	CCW train "A" discharge - outside	no	N.A.
MO 3346#	CCW train "B" supply - outside	no	N.A.
MO 3290#	CCW train "B" discharge - outside	no	N.A.
B. Containment Ventilation Isolation			
MO 10002**	Containment purge supply - inside	no	5
CV 10001**	Containment purge supply - outside	no	3
MO 10003**	Containment purge exhaust - inside	no	5
CV 10004**	Containment purge exhaust - outside	no	3
MO 10005***	Hydrogen vent supply - outside	yes	5
MO 10006***	Hydrogen vent supply - outside	yes	5
MO 10011***	Hydrogen vent exhaust - outside	yes	5
MO 10012***	Hydrogen vent exhaust - outside	yes	5
MO 10007***	Hydrogen vent supply - inside	yes	5
MO 10008***	Hydrogen vent supply - inside	yes	5
MO 10009***	Hydrogen vent exhaust - inside	yes	5
MO 10010***	Hydrogen vent exhaust - inside	yes	5

TABLE 3.6-1
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>TESTABLE DURING PLANT OPERATION</u>	<u>ISOLATION TIME (seconds)</u>
F. Manual Valves Continued			
FW079#-FW086#	Feedwater Line Drains	no	N.A.
MS013#-MS016#*	Main Steam Line Drains	no	N.A.
G. Check Valves			
8047	PRT N ₂ Supply - inside	no	N.A.
8046	PMU Water to Press. Relief Tank - inside	no	N.A.
5180	RCP Seal Water Rrn. - inside	no	N.A.
8968	N ₂ to Accumulators - inside	no	N.A.
Check valve	Demin. Water to Washdown Sta. - inside	no	N.A.
Check valve	RCDT N ₂ Supply - inside	no	N.A.
Check valve downstream of CV 4470	Service Air - inside	no	N.A.
Check valve downstream of CV 4471	Instrument Air - inside	no	N.A.

* May be opened on an intermittent basis under administrative control.

** The Containment purge supply and exhaust valves shall be made inoperable (electric power or air supplies removed from their respective operators) during Modes 1 through 4.

*** The Hydrogen vent supply and exhaust valves shall be normally closed, and opened only when and for the duration of time actually necessary.

Not subject to Type C leakage tests.

CONTAINMENT SYSTEMS

BASES

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

The containment purge supply and exhaust valves are maintained shut with their power supplies removed during Operating Modes 1-4, since they have not been qualified under Design Basis Accident LOCA conditions. Because the plant is in an inherently safer condition with containment ventilation valves shut, hydrogen vent supply and exhaust valves are normally shut and opened only when and for the duration of time actually necessary.

The containment purge supply and exhaust valves have resilient seat material which may be subject to leakage past the seats. For this reason leak testing on these valves is performed at least once per 9 months. In addition, leak testing is performed prior to entering Mode 4 from Mode 5, provided the purge valves had been cycled while in Modes 5 or 6.

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit or the purge system is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water and 3) corrosion of metals within containment. These hydrogen control systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA", March 1971.

The hydrogen mixing systems are provided to ensure adequate mixing of the containment atmosphere following a LOCA. This mixing action will prevent localized accumulations of hydrogen from exceeding the flammable limit.