

January 14, 1986

Docket No. 50-344

LICENSEE: Portland General Electric Company

FACILITY: Trojan Nuclear Plant

SUBJECT: SUMMARY OF NOVEMBER 26, 1985 MEETING WITH PGE AND NRC  
REGARDING FIVE REQUESTED EXEMPTIONS FROM THE SPECIFIC  
REQUIREMENTS OF SECTION III.G OF APPENDIX R (FIRE PROTECTION)

#### INTRODUCTION

A meeting was held on November 26, 1985 at the Trojan Nuclear Plant, Columbia County, Oregon. The purpose of the meeting was to discuss exemptions requested from the specific requirements of Section III.G of Appendix R (Fire Protection) and to tour the affected fire areas. The details of the fire exemption requests can be found in the licensee's submittal dated July 31, 1984, as supplemented by letter dated May 31, 1985. The meeting was chaired by the NRC Project Manager for Trojan. Enclosure 1 identifies the meeting attendees. A summary of the meeting follows.

#### SUMMARY

Fire areas Y1, T1, E1, A4, and A4a were discussed in detail and toured. Various questions were asked regarding these fire areas. The questions are contained in Enclosure 2. The licensee responded to the questions and agreed to docket the answers by December 15, 1985.

Fire area Y1 is an area external to the plant proper, and is subject to external weather conditions. The part of the area that was discussed for exemption was the location of two buried 40,000 gallon capacity diesel fuel oil storage tanks. Redundant trains of diesel fuel oil storage and transfer equipment and cables are not separated by a horizontal distance greater than 20 feet with no intervening combustibles or fire hazards, and the location is not protected with fire detectors and an automatic fire suppression system. The only fire hazard in this location appeared to be from transient combustibles. We told the licensee that we were inclined to recommend that an exemption be granted for this location in the fire area.

Fire area T1 includes the general area of the Turbine Building at the 45-ft, 69-ft and 93-ft elevation. The part of this area discussed for exemption was the 45-ft. elevation, and specifically, the location of the normal and alternate air intakes for the redundant emergency diesel generators, and the location between the air intake and Train A safe shutdown cables. The components at these locations do not have greater than twenty foot separation with no intervening combustibles or fire hazards. Fire detection is provided and a sprinkler system will be

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installed. We told the licensee that we were inclined to recommend that an exemption be granted for these locations in the fire area.

The open area between the Auxiliary, Control, Turbine, and Containment Buildings, Elevations 45-ft. and above, constitutes Fire Area E1. The area is partially open to the atmosphere. The area contains the cables to and from the Containment and the main steam support structure (MSSS). The MSSS contains the main steam and feedwater lines that run between the containment and the turbine building. There is a shield wall in the area that extends from elevation 45-ft. to 84-ft. This area does not have 20 ft. of horizontal separation free of intervening combustibles for redundant trains of safe shutdown equipment and cable. The combustibles consist primarily of cable insulation. We were concerned that no fire barriers protected one horizontal plane of cables from an above horizontal plane of cables. We told the licensee that we would have to consult with other NRC staff members before we could provide a recommendation for exemption.

Fire areas A4 and A4a form multiple elevation fire areas which include most of the 45-ft., 61-ft., and 77-ft. levels of the auxiliary and fuel buildings. Fire area A4a is within fire area A4. Area A4a does not contain any redundant safe shutdown cables. The only safe shutdown cables in this area are for train B equipment. The valve gallery on the 77-ft level contains manual reactor coolant pump (RCP) seal injection valves. Areas A4 contains redundant safe shutdown equipment and cables. The specific equipment includes the component cooling water (CCW) pumps and the service water booster pumps. The specific cables include the cables for the above equipment plus cables for other safe shutdown equipment not located in area A4. These areas do not have greater than 20-ft of horizontal separation free of intervening combustibles or fire hazards for redundant trains of safe shutdown equipment and cables. We told the licensee that we were inclined to recommend that an exemption be not needed for fire area A4a. Regarding fire area A4, we told the licensee that because of the complexity of fire area A4, we would have to consult with other NRC staff members before we can provide a recommendation for exemption.

#### FUTURE WORK

The NRC consultants will develop a technical evaluation report addressing the requested exemptions based upon the meeting and the licensee's submittals. The NRR staff will then write a safety evaluation addressing the requested exemptions. Additional conversations may be needed with the licensee. The licensee agreed to provide a submittal formally answering the questions contained in Enclosure 2.

ORIGINAL PREPARED BY

Ed Tourigny, Senior Project Manager  
PWR Project Directorate #8  
Division of PWR Licensing-B

Enclosures:  
As stated

PAD#3 CW  
CParrish  
12/1/85  
1/8/86

JStallan  
12/8/85  
1/8/86

PAD#8 ENT  
ETourigny  
12/9/85  
1

PAD#3 AGH  
KJohnston  
12/1/85  
1 3 86

DABAD#3  
SVanna  
12/1/85  
1/1/86

Portland General Electric Company

Trojan Nuclear Plant

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Regional Administrator, Region V  
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Office of Executive Director for Operations  
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Walnut Creek, California 94596

NRC-PRE MEETING  
FIRE PROTECTION MEETING  
NOVEMBER 26, 1985

<u>Name</u>	<u>Organization</u>
Gary A. Zimmerman	PGE
Don R. Swanson	PGE
Jack Seibel	PGE
Mike Gandert	PGE
Ken Dungan	PLC
Ariel Sanchez	PGE
Pete Phelan	NRC
Phil Qualls	NRC
Ed Tourigny	NRC
Jack Klevan	Rolf Jensen & Assoc., Inc.
Shahid Ahmed	Franklin Research Center
John P. Lina	PGE
Stuart Richards	USNRC Resident Inspector
Lief Erickson	PGE
David Harvey	PGE
Herb Caballero	PGE
Robert Dodds	NRC

Request for Information (RFI)  
Appendix R Exemption Requests  
Trojan Nuclear Plant  
Docket No. 50-344

The following information is needed to perform an evaluation of the Appendix R exemption requests made in the Licensee's July 1984 submittal titled "Trojan Nuclear Plant, 10CFR50 Appendix R Review," and Amendment 1 thereto dated May 31, 1985

(Note: Page and figure numbers in this RFI refer to those of the Licensee submittal.)

- 280.1 Describe the intervening combustibles and fire hazards between redundant safe shutdown systems located in fire areas A-4, A-4a, E-1, and T-1 for which exemptions have been requested in Section 5.
- 280.2 Provide the design details and design criteria for the water curtain proposed to be installed between fire areas A-4 and A-4a on elevation 61 ft described on pages 2-15 and 2-16. Indicate how this water curtain provides "3-hour barrier protection to train B cables" as claimed on page 5-12.
- 280.3 Provide plant fire area drawings to show room numbers corresponding to Table 2-2. This table lists a room-by-room summary of plant fire protection features but is not keyed to Section 5 where exemption requests are discussed. The drawings attached to the licensee submittal do not provide the above information.
- 280.4 On page 5-16 (and others), reference is made to the analysis of structural steel fire resistance in Appendix c. Provide an evaluation which describes the results of a sensitivity analysis in terms of the need for the protection of structural steel. Include the evaluation of localized fire plume effects on the steel fire resistance.
- 280.5 Provide drawing(s) showing the layout and arrangement of the diesel fuel oil storage tanks discussed on page 5-29.
- 280.6 Provide additional design information for the emergency diesel generator air intakes in the form of drawings showing duct layouts, damper locations, and fans to augment the information provided on pages 3-48 and 5-26.
- 280.7 For the wall between fire areas E-1 and T-1, describe the type of sealant, wall construction details, grout,

penetration seal, rating of labeled fire door, and design criteria for the proposed sprinkler system. Particular emphasis should be placed on the ability of the materials to achieve the desired fire rating. This wall is described in Section 2.3.3.1.1 (page 2-35) and Section 5.2.2 (page 5-18).

MEETING SUMMARY DISTRIBUTION  
OPERATING REACTORS BRANCH NO. 1

Docket or Central file

~~NRC PDR~~

Local PDR

PAD#3 RDG

J. Partlow (Emergency Preparedness only)

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OELD

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B. Grimes

ACRS (10)

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NRC Participants

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