

# REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

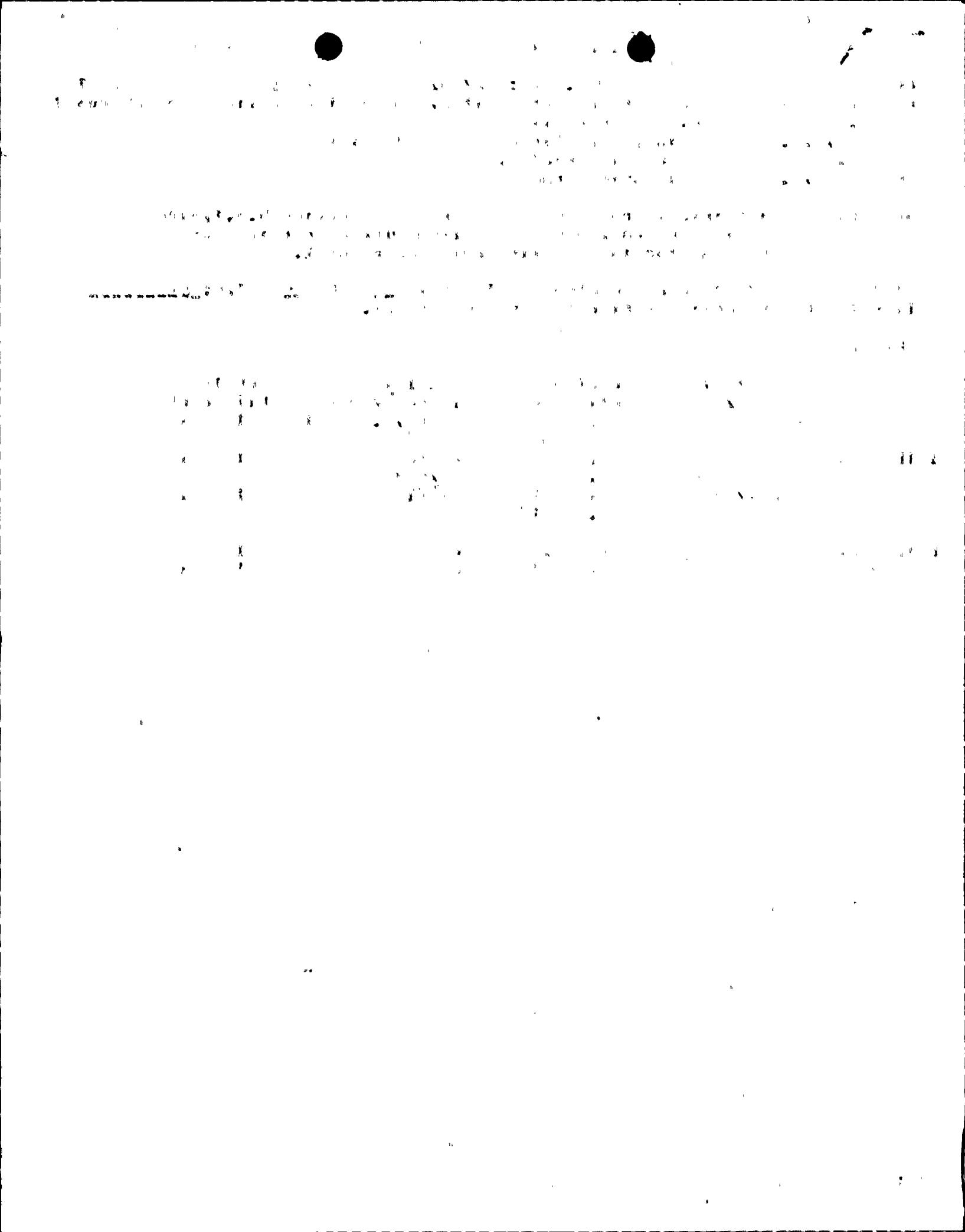
ACCESSION NBR: 8204300331 DOC. DATE: 82/04/22 NOTARIZED: NO DOCKET #  
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Power 05000397  
 AUTH. NAME AUTHOR AFFILIATION  
 BOUCHEY, G. D. Washington Public Power Supply System  
 RECIP. NAME RECIPIENT AFFILIATION  
 SCHWENCER, A. Licensing Branch 2

SUBJECT: Submits info in response to SER re FSAR Section 9.5.1, fire protection program, Keene Corp 811030 ltr concerning Burns & Roe request for info on fire rated doors encl.

DISTRIBUTION CODE: 80025 COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6  
 TITLE: Fire Protection (Prior to Issuance of OL).

## NOTES:

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INTERNAL:	ELD	1 0	IE FILE	07 1 1
	NRR/DE/ADMQE	1 0	NRR/DE/CFB	06 4 4
	NRR/DSI/ASB	1 1	REG FILE	04 1 1
	RGNS	1 1		
EXTERNAL:	ACRS	10 16 16	LPDR	03 1 1
	NRC PDR	02 1 1	NSIC	05 1 1
	NTIS	1 1		



## Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

April 22, 1982  
G02-82-396

Docket No. 50-397

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Schwencer:

Subject: NUCLEAR PROJECT NO. 2  
RESPONSE TO SER ON  
FSAR SECTION 9.5.1  
FIRE PROTECTION PROGRAM



- Reference:
- (a) Letter, G02-81-511, dated December 9, 1981  
GD Bouchey, Supply System, to A. Schwencer, NRC,  
subject, "Response to Request for Information"
  - (b) Letter, G02-82-100, dated January 21, 1982,  
GD Bouchey, Supply System, to A. Schwencer, NRC,  
subject, "Use of One Hour Fire Barriers Without  
Automatic Fire Suppression Systems"
  - (c) Telecon, DT Evans, Supply System, to Greg Harrison,  
NRC, on January 13, 1982
  - (d) Telecon, DT Evans, Supply System, to Pat Sears and  
Greg Harrison on January 12, 1982
  - (e) Letter of Understanding, G02-81-553, dated  
December 28, 1981, subject, "Three-hour Rated Fire  
Barrier for Cable Systems"
  - (f) Telecon, RM Nelson and DT Evans, Supply System to  
Greg Harrison, NRC, on December 11, 1981
  - (g) Letter, G02-82-116, dated January 27, 1982,  
GD Bouchey, Supply System, to A. Schwencer, NRC,  
subject, "Response to Request for Commitment on  
Open Fire Protection Issues"
  - (h) Telecon, RM Nelson and DT Evans, Supply System, to  
Pat Sears, NRC, on January 25, 1982

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The following is submitted in response to the subject SER section:

1. In regard to the issue of fire rating of air tight doors as stated on pages 9-29 and 9-38 of the SER and in reference (a), attachment 1 is a letter of qualification from the manufacturer. Additional data will be made available during the NRC site visit as previously stated in reference (a).
2. On page 9-33, in the third paragraph, it is noted that the guidelines of BTP CMEB 9.5-1, Section C.6.b.(11) now allow for basing the largest expected flow rate on 500 gpm for manual hose streams, instead of the previous 750 gpm requirement. This would result in a water demand of 2326 gpm, including 500 gpm for hose streams, for the largest single fire suppression system. The fire pumps can provide this demand with any two pumps out of service.
3. In regard to the statement on valve supervision in the fifth paragraph on page 9-33, sectional control valves on looped interior headers and control valves 3 inches or less in size are also locked open under administrative controls. This is in conformance with the guidelines of BTP CMEB 9.5-1, Section C.6.c.
4. On page 9-33 under Sprinkler and Standpipe Systems, the apparent typographical error in the third sentence of the fourth paragraph should be revised to read, "They range from 2,575 to 33,320 Btu/ft<sup>2</sup>".
5. On pages 9-33 and 9-34, the referenced letter (b) of January 21, 1982, is discussed. An ongoing cable analysis by Burns and Roe, Inc. has indicated that several of the original 15 fire areas concerned will no longer require cable protection, as redundant post-fire shutdown capability has been established in separate fire areas. Of the remaining fire areas requiring cable protection to ensure post-fire shutdown capability, three have existing sprinkler protection, and specific cable systems and equipment will be provided with an ANI approved one-hour fire rated barrier/enclosure (i.e., envelope). This barrier/enclosure will comply with the ANI/MAERP STANDARD FIRE ENDURANCE TEST METHOD TO QUALIFY A PROTECTIVE ENVELOPE FOR CLASS 1E ELECTRICAL CIRCUITS (7/79).

Those fire areas requiring cable protection, with fire loadings less than 20,000 Btu/ft<sup>2</sup>, will be provided with an ANI approved one-hour fire rated barrier/enclosure without sprinklers, subject to the stated staff site visit verification.



Other fire areas requiring cable protection with fire loadings greater than 20,000 Btu/ft<sup>2</sup>, and not having existing sprinkler systems, will have specific cable systems and equipment provided with an ANI approved three-hour fire rated barrier/-enclosure complying with the same ANI/MAERP Standard, as previously established with the NRC in references (c), (d), (e), and (f). A proposed engineering test plan has been approved by ANI to perform fire endurance, ampacity derating, and chemical tests on TSI Thermo-Lag 330-1 Subliming Coating Envelope Systems for both one-hour and three-hour rated application. Formal testing sponsored by the Supply System with TSI, Inc., and witnessed by representatives from ANI, Industrial Testing Laboratories, Inc., Burns and Roe, Incorporated, and Bechtel Power Corporation is currently scheduled to begin in May 1982. This will be followed by a formal report to be issued by Industrial Testing Laboratories, Inc.

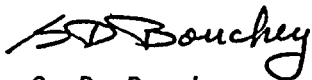
6. On page 9-34, under the fourth paragraph, the referenced letter (g) stated that the Supply System agreed to modify the existing interior manual fire hose installation to provide standpipes with hose connections equipped with a maximum of 100 (not 75) feet of 1½ inch fire hose. The modified arrangement will enable any location that contains, or could present a fire exposure hazard to, safety related equipment to be reached with at least one effective hose stream, in conformance with the guidelines of BTP CMEB 9.51, Section C.6.c and NFPA 14. The referenced letter also stated that the standpipe hose system would be modified before or during the first refueling outage, as agreed to in reference (h).
7. On page 9-35, under Control Room Complex, the last sentence in the third paragraph should be revised to read, "All cable in the raised floor extending beyond the PGCC cabinets are either in covered metal troughs or in flexible metal conduit." This is in conformance with the guidelines of BTP CMEB 9.5-1, Section C.7.b.
8. On page 9-36, the last sentence in the first paragraph should read, "Either a manual trip from a local station or an automatic trip from the locally mounted ionization detectors is required to actuate the pre-action type system automatic control valve".

The first sentence in the third paragraph should read, "The cable spreading room is separated from other areas of the plant by walls having a minimum fire resistance of 3 hours". This is in conformance with the guidelines of BTP CMEB 9.5-1, Section C.7.c.

A. Schwencer  
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9. On Page 9-38, under 9.5.1.8, Summary of Deviation from CMEB 9.5-1, it appears that the third sentence in the first paragraph should read, "deletion" instead of "detector".
10. On page 9-38 under both 9.5.1.8, Summary of Deviation from CMEB 9.5-1 and 9.5.1.9, Conclusion, it appears that the second open fire protection item should read, "deletion of a fire suppression system in seven fire areas", rather than "five" or "fire". As previously stated under item 4 of this letter, several of the fire areas concerned will no longer require cable protection as redundant post-fire shutdown capability has been established in separate fire areas. Additional data to substantiate this position will be formally submitted to the NRC by means of a FSAR amendment at a later date.

Very truly yours,



G. D. Bouchey  
Deputy Director, Safety and Security

DTE:cph

Attachment: (1) Letter from Keene Corporation,  
Ray Proof Division, dated Oct. 30, 1981

cc: R. Auluck - NRC  
EF Beckett - NPI  
ML Bursztein - B&R Site  
WS Chin - BPA  
R. Feil - NRC Site  
R. Ferguson - NRC  
SA Giusti - BPC  
G. Harrison - NRC  
H. Plagge - BPC  
J. Plunkett - NUS  
NS Reynolds - D&L  
J. Rogoza - BPC  
S. Satpute - B&R Site  
P. Sears - NRC  
RE Snaith - B&R NY  
JJ Verderber - B&R NY  
J. Zalavadia - B&R Site  
WNP-2 Files - 917Y



KEELER  
CORPORATION

## RAY PROOF DIVISION

50 KEELER AVENUE, NORWALK, CONNECTICUT 06856 : PHONE: (203)838-4555 : TELEX-96-5812

30 October 1981

Our Job N-1782  
RK-316

Peter Kiewit Sons' Company  
P.O. Box 279  
Richland, WA 99352

Attention: Mr. Tom Allen

Reference: WPPSS Nuclear Power Plant, Hanford No. 2  
Contract 2808-210

Subject: B&R Request on Fire Rated Doors

Dear Tom,

The following information has been requested by Ray Snaith of Burns & Roe, copy of which is being forwarded to his office.

A typical 3 hour fire rated hollow metal door manufactured by "Allied Steel" is constructed of 18 gage facing plate with a 20 gage continuous vertical stiffener and void filled with mineral rock wool insulation for sound deadening.

Facing is tack welded not more than 6" on center. The top of the door is flush so that no water can accumulate. Hardware is field mounted (factory mortised).

The fire rated doors supplied by Ray Proof per Hanford Nuclear Plant No. 2, Contract 2808-210, Section 8K, are constructed with 11 gage steel facing plates with a continuous 11 gage steel tube stiffener and void filled with "Thermak" horizontal 8 lb. density class 2 for the 1½ hour rated doors and "Pyro-felt" 10 lb. density class 4 for the 3 hour rated doors.

Facings are plug welded to horizontal stiffeners and perimeter of doors 6" on center. All edges of doors are flush to restrict any foreign objects. All hardware is factory installed.

(ATTACHMENT 1)



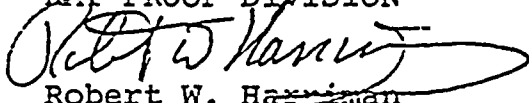
RAY PROOF DIVISION

PAGE 2  
DATE 30 October 1981

These doors are equivalent to, or better than, similar fire rated products that are commercially available.

Very truly yours,

KEENE CORPORATION  
RAY PROOF DIVISION

  
Robert W. Hanniman  
Q.A. Manager

RWH:cm

cc: KRP/ J. Solis

B&R/ R. Snaith  
185 Troffways Park Drive  
Woodbury, N.Y. 19797

