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 AUTH. NAME AUTHOR AFFILIATION  
 CONWAY, W.F. Arizona Public Service Co. (formerly Arizona Nuclear Power  
 RECIP. NAME RECIPIENT AFFILIATION  
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SUBJECT: Forwards response to NRC Bulletin 92-001, Suppl 1 re addl  
 apparent failures in fire endurance testing associated w/  
 Thermo-Lag 330 fire barrier sys. Program being coordinated by  
 NUMARC to restore fire barriers operability.

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**Arizona Public Service Company**

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WILLIAM F. CONWAY  
EXECUTIVE VICE PRESIDENT  
NUCLEAR

9210080238 920928  
PDR ADOCK 05000528  
Q PDR

102-02286-WFC/JNI  
September 28, 1992

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
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Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)**  
**Units 1, 2, and 3**  
**Docket Nos. 50-528/529/530**  
**Response to NRC Bulletin 92-01, Supplement 1,**  
**File: 92-056-026**

On June 24, 1992, the NRC issued Bulletin 92-01 to identify failures of fire endurance tests for small conduits and wide cable trays enclosed with Thermo-Lag 330 fire barrier systems. Arizona Public Service Company (APS) responded to the requested actions by letter dated July 24, 1992. On August 28, 1992, the NRC issued Bulletin 92-01, Supplement 1 to identify additional apparent failures in fire endurance testing associated with the Thermo-Lag 330 fire barrier system. The enclosure to this letter provides APS' status of the requested actions.

If you have any questions regarding this matter, please contact Thomas R. Bradish at (602) 393-5421.

Sincerely,



WFC/JNI/jni

Enclosure

cc: J. B. Martin  
J. A. Sloan  
B. Bradley (NUMARC)

050121

IF49  
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STATE OF ARIZONA       )  
                                      ) ss.  
COUNTY OF MARICOPA   )

I, W. F. Conway, represent that I am Executive Vice President - Nuclear, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, that I have read such document and know its contents, and that to the best of my knowledge and belief, the statements made therein are true and correct.

W. F. Conway  
W. F. Conway

Sworn To Before Me This 28 Day Of September, 1992.

Linda B. Spell  
Notary Public

My Commission Expires

March 31, 1996



**ENCLOSURE**

**ARIZONA PUBLIC SERVICE COMPANY STATUS OF  
NRC BULLETIN 92-01, SUPPLEMENT 1  
REQUESTED ACTIONS**





**Arizona Public Service Company (APS) Status of**  
**NRC Bulletin 92-01, Supplement 1**  
**Requested Actions**

On June 24, 1992, the NRC issued Bulletin 92-01 to identify failures of fire endurance tests for small conduits and wide cable trays enclosed with Thermo-Lag 330 fire barrier systems. Arizona Public Service Company (APS) responded to the requested actions by letter dated July 24, 1992. On August 28, 1992, the NRC issued Bulletin 92-01, Supplement 1 to identify additional apparent failures in fire endurance testing associated with the Thermo-Lag 330 fire barrier system.

**Requested Action 1:**

"For those plants that use either 1- or 3-hour pre-formed Thermo-Lag 330 panels and conduit shapes, identify the areas of the plant which have Thermo-Lag 330 fire barrier material installed and determine the plant areas which use this material for the protection and separation of the safe shutdown capability."

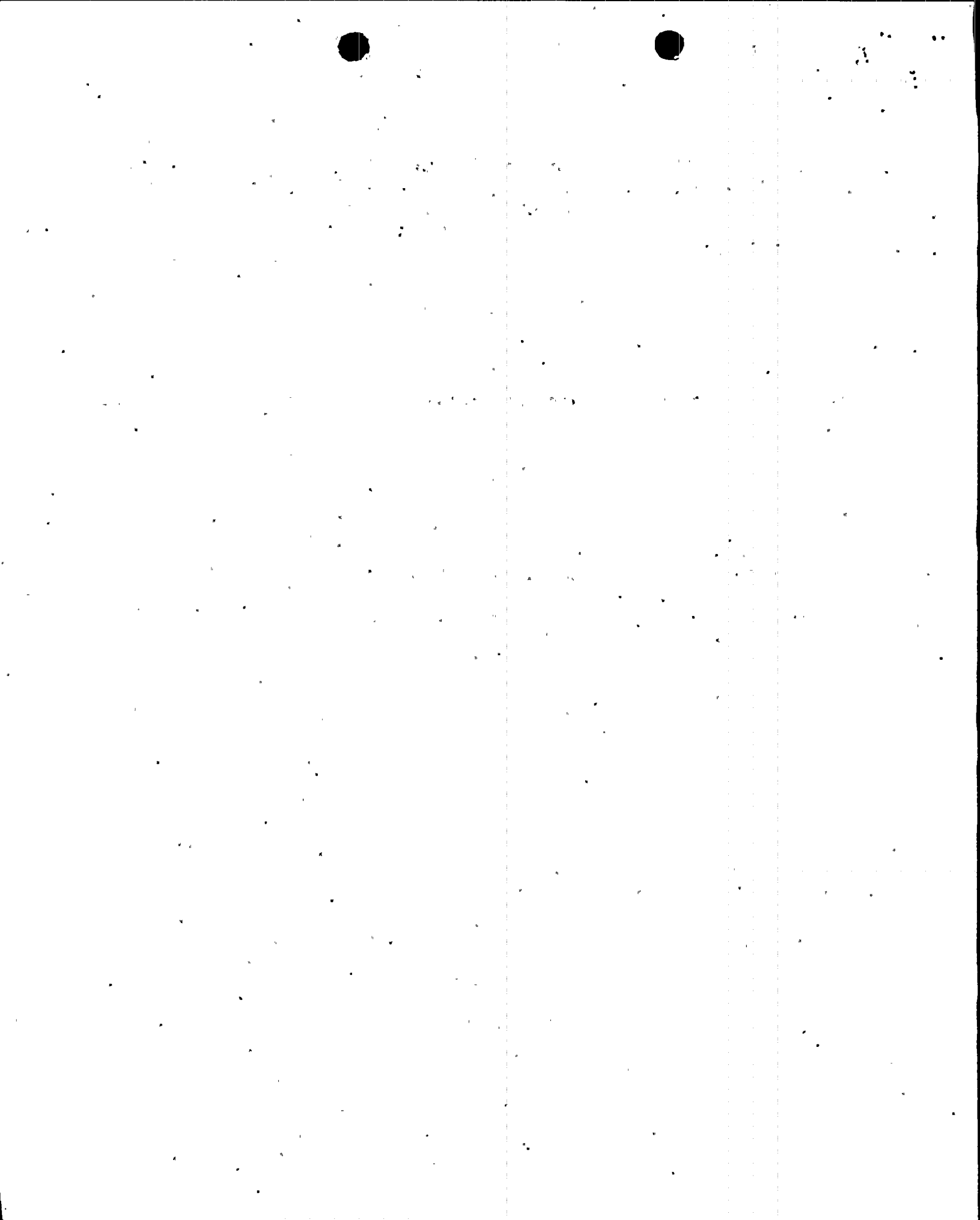
**APS Response:**

In preparing the response to Bulletin 92-01, APS reviewed the Appendix R installation drawings to identify all areas containing Thermo-Lag 330 fire barrier material. Table A lists the fire zones containing Appendix R Thermo-Lag 330 installations used for the protection and separation of the safe shutdown capability.

Thermo-Lag 330 installations (wraps) inside Containment serve as a radiant energy heat shield, and are not required to have an hourly rating, as indicated in PVNGS UFSAR Appendix 9B paragraph 9B.2.11.1.B and Appendix 9A, question 9A-130.

**Requested Action 2:**

"In those plant areas in which Thermo-Lag fire barriers are used in raceways, walls, ceilings, equipment enclosures, or other areas to protect cable trays, conduits, or separate redundant safe shutdown functions, the licensee should implement, in accordance with plant procedures, the appropriate compensatory measures, such as fire watches, consistent with those that would be implemented by either the plant technical specifications or the operating license for an inoperable fire barrier. These compensatory measures should remain in place until the licensee can declare the fire barriers operable on the basis of applicable tests which demonstrate successful 1- or 3-hour barrier performance."



**APS Response:**

As stated in the APS response to Bulletin 92-01, fire system impairments were initiated to ensure that fire watches were implemented for the 24-inch cable tray located in Fire Zone 42C on the 100 foot elevation of the Auxiliary Building. At the same time, as a conservative measure, fire system impairments were initiated to ensure fire watches were implemented for those fire zones containing 1- or 3-hour Appendix R Thermo-Lag, without regard for the size or shape of Thermo-Lag installations existing in each zone. These previous actions satisfy Bulletin 92-01, Supplement 1, requested actions. These compensatory measures were implemented in accordance with the requirements of PVNGS administrative control procedures and are consistent with those actions required by the PVNGS operating license for inoperable fire barriers.

The Thermo-Lag installations inside containment are not considered as 1- or 3-hour rated barriers as indicated in the PVNGS UFSAR. These barriers are radiant energy shields as required/permitted by 10 CFR 50, Appendix R, Section III.G.2.f, and PVNGS Safety Evaluation Report (SER), Supplement 6. Based on these considerations, APS did not implement compensatory measures for these containment installations.

As stated in the response to Bulletin 92-01, APS is working with the Nuclear Utility Management And Resource Council (NUMARC) to assure that APS actions are in accordance with the industry's approach to the issues. Appropriate actions to ensure fire barrier operability are being developed through an industry program being coordinated by NUMARC. When completed, APS will apply the results of these efforts to the PVNGS Thermo-Lag 330 installations, as appropriate.

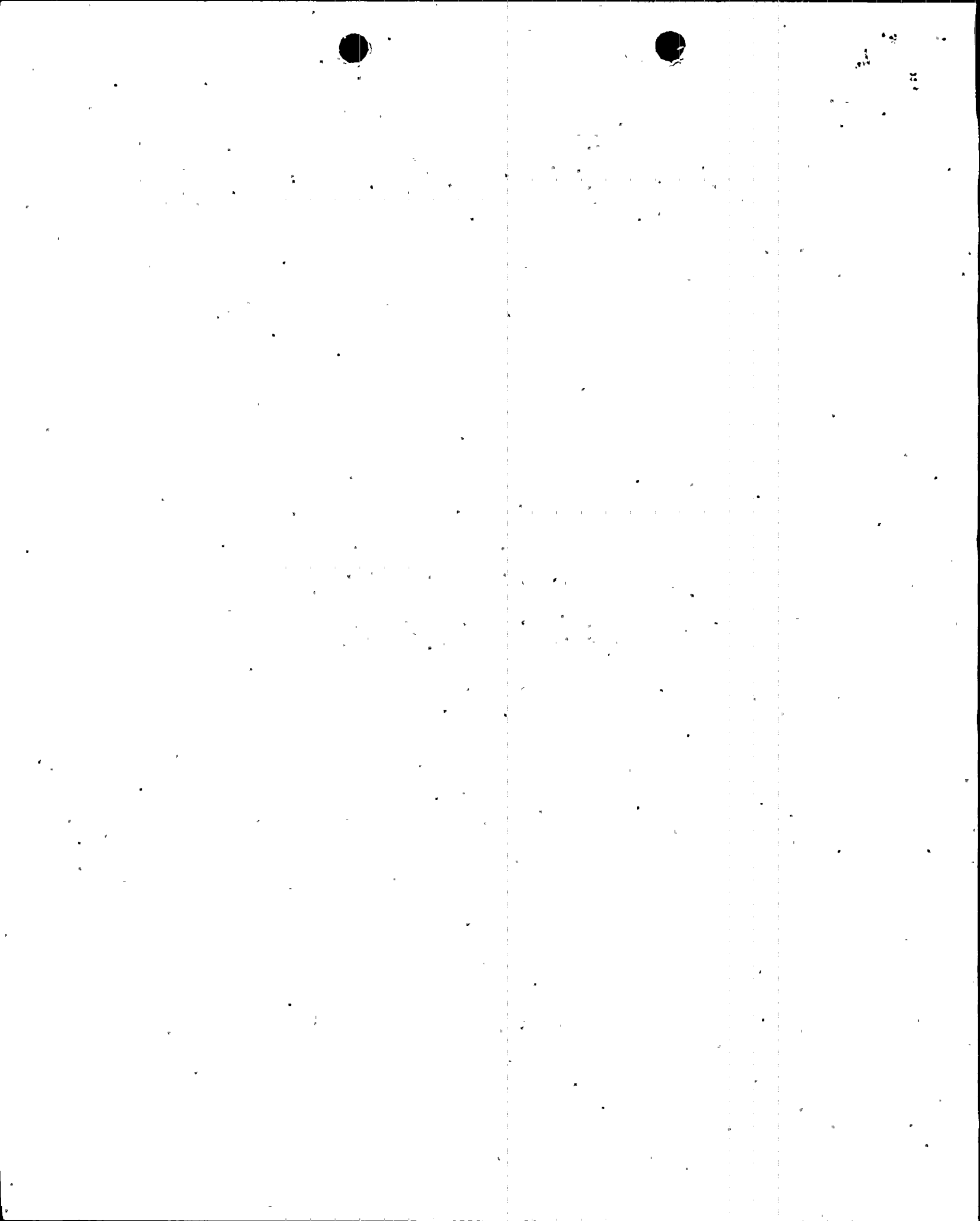


TABLE A  
PVNGS THERMO-LAG INSTALLATIONS

FIRE ZONE	ROOM/AREA	BLDG/ELEV	Appendix R Thermo-Lag Installations ?	ZONE FIRE LOADING	COMPENSATORY MEASURE
10B	TRAIN B REMOTE SHUTDOWN RM	CONTROL BLDG 100'	Yes	MODERATE	FIRE WATCH
37B	EAST CORRIDORS/ ELECTRICAL CHASES	AUX BLDG 70/88'	Yes	LOW	FIRE WATCH
37D	TRAIN B PIPE PEN RM	AUX BLDG 70/88'	Yes	LOW	FIRE WATCH
39B	TRAIN B PIPEWAY	AUX BLDG 88'	Yes	LOW	FIRE WATCH
42B	TRAIN B CHANNEL B ELECTRICAL PEN RM	AUX BLDG 100'	Yes	MODERATE	FIRE WATCH
42C	EAST CORRIDORS	AUX BLDG 100'	Yes	LOW	FIRE WATCH
46A	TRAIN A CHARGING PUMP/VALVE GALLERY RM	AUX BLDG 100'	Yes	LOW	FIRE WATCH
46B	TRAIN B CHARGING PUMP/VALVE GALLERY RM	AUX BLDG 100'	Yes	LOW	FIRE WATCH
46E	STANDBY CHRQ PMP/VALVE GALLERY RM	AUX BLDG 100'	Yes	LOW	FIRE WATCH
47B	TRAIN B CHANNEL D ELECTRICAL PEN RM	AUX BLDG 120'	Yes	LOW	FIRE WATCH
52D	EAST CORRIDORS	AUX BLDG 120'	Yes	MODERATE	FIRE WATCH



TABLE A

## PVNGS THERMO-LAG INSTALLATIONS

FIRE ZONE	ROOM/AREA	BLDG/ELEV	Appendix R Thermo-Lag Installations ?	ZONE FIRE LOADING	COMPENSATORY MEASURE
65	PRESSURIZER RM	CNTMNT BLDG 100/120'	Yes Radiant energy heat shield	LOW	N/A
67A	NW PERIMETER	CNTMNT BLDG 80-140'	Yes Radiant energy heat shield	LOW	N/A
73	MOTOR DRIVEN AFW PUMP RM	MSSS 81'	Yes	LOW	FIRE WATCH
74A	MAIN STEAM ISOLATION/ DUMP VALVE AREA	MSSS 100/120/140'	Yes	LOW	FIRE WATCH
74B	MAIN STEAM ISOLATION/ DUMP VALVE AREA	MSSS 100/120/140'	Yes	LOW	FIRE WATCH

