NAC FOR	U. S. NUCLEAR REGULATORY COMMISSION
(7-77)	LICENSEE EVENT REPORT
	CONTROL BLOCK
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CON'T	REPORT L 6 0 5 0 0 0 2 8 9 0 1 0 0 5 8 2 8 1 1 0 4 8 2 9 SOURCE 50 61 DOCKET NUMBER 58 69 EVENT DATE 74 75 REPORT DATE 80
02	While in long term cold shutdown, plant personnel identified fire barrier pene-
03	tration seal (No. 275) as being defective. Silicone foam seal material had
04	separated from the edges of fire barrier penetration after curing. Public health]
0 5	and safety remain unaffected. Reportable per T.S. 6.9.2.B(2), as a result of
06	violating T.S. 4.18.7.
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018	80
	SYSTEM CAUSE CAUSE CAUSE COMPONENT CODE SUBCODE SUBCOD
	IT REPORT LAL OCCURRENCE REPORT NO.
	NUMBER 21 22 23 24 26 27 28 29 30 31 32 ACTION EUTURE EFFECT SHUTDOWN CALLENT NPRO4 PRIME COMP. COMPONENT COMPONENT
	TAKEN ACTION ON PLANT METHOD HOURS (2) SUBMITTED FORM SUB. SUPPLIER (3) (3) (3) (3) (3) (3) (3) (3) (3) (3)
10	A fire watch was posted and the fire barrier penetration seal was repaired on the
11	2nd shift October 5, 1982. No other corrective action is required. Silicone
112	foam shrinkage has not been observed in TMI-1 because of the corrective action
13	in 1978 when foam shrinkage was observed in TMI-2. T.S. required surveillances
14	will continue.
15	FACILITY STATUS * POWER OTHER STATUS 30 METHOD OF DISCOVERY DISCOVERY DESCRIPTION 32 X (28) 0 0 (29) NRC Order B (31) Personnel Observation 30
7 8	ACTIVITY CONTENT AMOUNT OF ACTIVITY 35 LOCATION OF RELEASE 36
1 6	2 (33) Z (34) N/A 9 PERSONNEL EXPOSURES (20) 80
17	NUMBER 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 4	PERSONNEL INJURIES NUMBER DESCRIPTION (4) 0 0 0 (40) N/A
, 8	9 11 12 HIT
1 9	2 (42) 9 PUBLICITY (8211180316 821104 NBC USE CAUX
20	ISSUED DESCRIPTION (45) PDR ADDCK 05000289 S PDR
	NAME OF PREPARER C. J. Stephenson PHONE (717) 948-8554

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LER 82-014/03L-0

I. Current Activities at Time of Occurrence:

TMI-1 was in a long term cold shutdown condition. Restart modifications involving changes to fire barriers were in progress. The seal problem was identified on 9/17/82 during a Quality Control inspection. A field questionnaire (FQ) on this and several other fire barriers were forwarded to Plant Engineering on 9/27/82. Engineering determined that the seal was non-functional as discussed below.

II. Circumstances Leading to Occurrence:

Plant personnel were in the process of inspecting fire barrier penetration seals to determine their acceptability following modifications. This inspection was in addition to the 18 month and post-maintenance inspections required by T.S. 4.18.7.

III. Description:

Fire barrier penetration seal #275 located in the west wall of the Relay room, 338' elevation Control building, was one of the seals identified as having potential deficiencies. The following engineering review on Oct. 5, 1982 of the inspection results determined that seal #275 was in a nonfunctional condition. When this condition was identified, the requirements of T.S. 3.18.7.2 were implemented by establishing a fire watch in the Relay room. Seal failure was the result of silicone foam shrinkage at the perimeter of the seal in excess of the separation limits qualified by fire tests and used in seal inspection procedures. Repairs were performed on the 2nd shift 5 Oct. 82 and the fire watch secured. The item is considered reportable under T.S. 6.9.2.B.2 since T.S. 3.18.7 requires seals to be functional "at all times" with no operation in a degraded mode (fire watch) allowed without being reportable. TSCR No. 97 which was submitted to the NRC staff January 26, 1981 provides, among other things, more specific guidance on the reportability of fire barrier penetration seal degradation.

IV. Significant Events as a Result of the Occurrence:

None.

V. Previous Events of a Similar Nature:

There have been previous events concerning failed fire barrier penetration seals, however, the causes have been different (See LER 81-003/03L-0).

VI. Root Cause of the Occurrence:

Cases of foam shrinkage at TMI-1 are rare because fire barrier penetration seal installation procedures require the silicone foam density to be between 17 and 23 lbs/ft³. If the foam density is outside this range shrinkage of the seal may take place over an extended period of time (i.e. 6 months or more). Seal No. 275 was installed in November of 1981 and was inspected again in January 1982 with no deficiences noted.

VII. Immediate Corrective Action:

Operations was immediately informed of the non-functional status when the determination was made by Plant Engineering on 5 October 1982 at approximately 1100. Operations immediately established a fire watch in the Relay Room in accordance with T.S. 3.18.7.2 since the Relay Room equipment is considered to be required as functional for this plant condition (primary parameter monitoring capabilities). A Job Ticket was issued and the seal was restored to a functional status on the 2nd shift, 5 October 82 and the fire watch secured.

VIII. Long Term Corrective Action:

No other corrective action is required. Silicone foam shrinkage has not been observed in TMI-1 because of the corrective action taken in 1978 when foam shrinkage was observed in TMI-2. We consider this an isolated case. We will continue our 18 month and post-maintenance inspections of the fire barrier penetration seals.