NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
THREE MILE ISLAND, UNIT 1	0 5 0 0 0 2 8 9	1 OF 0 5

TITLE (4)

MISSING FIRE BARRIER PENETRATION SEALS

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
										0 5 0 0 0
0 7	0 2	8 4	8 4	— 0 0 3	— 0 0	0 8	0 1	8 4		0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	X OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
SUSAN M. OTTO, TMI-1 Licensing Engineer	AREA CODE 7 1 7 — 9 4 8 - 8 3 5 5

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		1 1	3 0	8 4

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 2, 1984, two penetrations in the Instrument Shop Floor (355 ft. elevation of the Control Building, fire area CB4A) were identified as not having fire-rated penetration seals. Plant Engineering conducted a survey of fire area CB4A as a followup. Ten additional penetrations were found to be missing fire-rated seals. The missing seals identified on July 2 are reportable per 10 CFR 50.73 (a)(2)(i)(B) because the condition existed longer than the time allowed by the Action Statement of T.S. 3.18.7.2 before a firewatch was established. The other seals identified are reportable per condition 4 of the TMI-1 Operating License which requires compliance with the Fire Protection Safety Evaluation Report. The SER of September 19, 1979 required these seals to be installed in penetrations by April 27, 1979.

The seals identified as missing were part of the initial seal installation program. The installation program was performed by a contractor. Inadequate supervision of the workers installing seals is being identified as the cause of the missing seals.

The missing seals did not present significant threats to the integrity of the fire barrier. There was no effect on the health and safety of the public as a result of this condition.

An inspection of the other conduit penetrating fire barriers is planned as corrective action. The inspection and any necessary seal work will be documented in a follow-up report to be submitted by November 30, 1984.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
THREE MILE ISLAND, UNIT 1	0 5 0 0 0 2 8 9	8 4	— 0 0 3	— 0 0	0 2 OF 0 5

TEXT (If more space is required, use additional NRC Form 366A's) (17)

I. PLANT OPERATING CONDITIONS BEFORE THE EVENT

TMI-1 has been in long term cold shutdown since February 1979 with periods of T_{avg} >200 degrees F for hot functional testing using non-nuclear heat.

II. STATUS OF STRUCTURES, COMPONENTS, OR SYSTEMS THAT WERE INOPERABLE AT THE START OF THE EVENT AND THAT CONTRIBUTED TO THE EVENT

Not applicable.

III. EVENT DESCRIPTION

On July 2, 1984, two penetrations in the Instrument Shop Floor (355 ft. elevation of the Control Building, fire area CB4A) were identified as not having fire-rated penetration seals. These were found by Quality Control while inspecting structural steel fireproofing repairs under the 355 ft. elevation floor slab. Plant Engineering conducted a survey of fire area CB4A to verify fire-rated boundaries of the area as a follow-up. Ten additional penetrations were found to be missing fire-rated seals.

The following list identifies the penetrations found to be in deficient condition:

Penetration Number	Description
1247	3/4 in. dia. cut out 3/4 in. open end conduit
1376	3/4 in. dia. cut out 3/4 in. conduit with pull box
1392	2½ in. core bore 2 in. conduit with pull box
1393	2½ in. core bore 2 in. conduit with pull box
1443	1½ in. dia. embedded conduit with pull box
1445	1 in. dia. embedded conduit with pull box
1447	1½ in. dia. embedded conduit with pull box
1448	1½ in. dia. embedded conduit with pull box
1449	1 in. dia. open end embedded conduit
1450	1 in. dia. embedded conduit with pull box
1452	2 in. dia. open end embedded conduit

In addition to the penetrations listed above, a telephone wire in a ½ in. dia. hole through a shaft wall was found. This wire is to be removed and opening sealed, therefore, no penetration number was assigned.

A firewatch was immediately posted on July 2, 1984 per T.S. 3.18.7.2. The firewatch was secured on the evening of July 2, 1984 with the determination of safe shutdown equipment needs based on the current plant condition. The missing seals identified on July 2 are reportable per 10 CFR 50.73 (a)(2)(i)(B) because the condition existed longer than the time allowed by the Action Statement of T.S. 3.18.7.2 before a firewatch was established.

A firewatch was not required to be posted for the other missing seals. These seals are reportable per condition 4 of the TMI-1 Operating License which requires compliance with the Fire Protection Safety Evaluation Report. The Fire Protection SER of September 19, 1979 requires seals to be installed in these penetrations by April 27, 1979.

IV. COMPONENT FAILURE DATA

The seals identified as missing were part of the initial seal installation program. The installation program was performed by a contractor. Inadequate supervision of the workers installing seals is being identified as the cause of the missing seals. This event is considered to be a Cause Code "A", Personnel Error.

A contributing cause of the seals identified in this report being missing is Phase II of the fire barrier sealing project was near completion at the time of the accident at TMI-2. An extension of the SER due date was requested and approved to allow the seal work to be completed by April 27, 1979 since the contractor was temporarily dismissed due to the conditions on-site following the accident. With stable conditions (primarily administrative) on-site, the contractor was brought back to complete the work. The returning crew was smaller and lacked all the survey and planning support of the crew in place prior to the TMI-2 accident. Fire area CB4A which is the location of the missing seals identified in this LER was the last fire area to be completed and the work interruption may be considered part of the cause of this event.

V. AUTOMATIC OR MANUALLY INITIATED SAFETY SYSTEM RESPONSES:

This event is not associated with any system response.

VI. ASSESSMENT OF THE SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The missing fire barrier penetration seals did not present significant threats to the integrity of the fire barrier. Both sides of the barrier have fire detection systems which annunciate in the Control Room. No fire suppression system other than fire extinguishers and manual hose stations are provided. The 355 ft elevation side of the fire barrier is occupied most of the time (Instrument Shop and offices) although not required to be manned. The Control Room is the next adjacent fire area and is manned continuously. There was no effect on the health and safety of the public as a result of this condition.

VII. PREVIOUS EVENTS OF A SIMILAR NATURE

LER 84-001-01 reported missing conduit seals, cause Code "D": defective procedure

VIII. CORRECTIVE ACTIONS PLANNED

A procedure change has been submitted to S.P. 1303-12.9, "Inspection of Fire Barrier Penetration Seals" to include the penetrations identified on July 2, 1984 in the next scheduled inspection to meet T.S. 4.18.7.1.a refueling interval (18 month) requirements. Additional corrective action is planned to inspect other conduit penetrating fire barriers. Seals will be installed as required and the surveillance procedure will be updated to include the results of the inspection and the balance of the penetrations identified in this report. The inspection and any necessary seal work will be documented in a follow-up report to be submitted by November 30, 1984.

Nuclear

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TELEX 84-2386
Writer's Direct Dial Number:

August 1, 1984
5211-84-2195

U. S. Nuclear Regulatory Commission
Document Control Room
Washington, D.C. 20555

Dear Sir:

Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
LER 84-003-00

This letter transmits Licensee Event Report (LER) No. 84-003-00 which deals with missing fire barrier penetration seals. Public health and safety were unaffected.

This LER is being submitted pursuant to 10 CFR 50.73, using the required NRC forms (attached). NRC Form 366 contains an abstract which provides a brief description of the event. For a complete understanding of the event, refer to the text of the report which appears on Form 366A.

Sincerely,

H. D. Hukill
Director, TMI-1

HDH:SMO:vjf

Enclosures

cc: Dr. T. E. Murley
R. Conte
J. Van Vliet

IE22
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