

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) THREE MILE ISLAND UNIT I	DOCKET NUMBER (2) 0 5 0 0 0 2 8 9	PAGE (3) 1 OF 4
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TITLE (4)
INOPERABLE FIRE BARRIER PENETRATION SEALS

EVENT DATE (6)			LER NUMBER (8)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)			
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES			DOCKET NUMBER(S)
04	27	84	84	001	01	06	29	84				0 5 0 0 0
												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) 01010	20.402(b)	20.406(e)	50.73(a)(2)(iv)	73.71(b)
	20.406(a)(1)(i)	50.36(a)(1)	50.73(a)(2)(v)	73.71(e)
	20.406(a)(1)(ii)	50.36(a)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.406(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	50.73(a)(2)(vii)(A)	
	20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(vii)(B)	
	20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(viii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME SUSAN M. OTTO, TMI-1 LICENSING ENGINEER	TELEPHONE NUMBER 7117 9148 183155
AREA CODE	

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)

YES (if yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

At 1420 hours on April 27, 1984, Relay Room floor fire barrier penetration seal 735 was identified to be in deficient condition. No seal material had been installed in the conduit. A fire watch had not been established within one hour of the onset of the deficient condition, thus violating TS 3.18.7.2. This event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B).

The deficient condition of seal 735 is potentially applicable to similar fire seals that were required to be installed between April 1979 and November 7, 1983. This is evidenced by the identification of the same deficient condition in two seals subsequent to the identification of seal 735. Fire seals in new conduits installed between April 1979 and November 7, 1983 were inspected and repaired upon discovery. The safety consequences and implication of the deficiency in the seal 735 and others which were identified during the inspection are similar. Public health and safety are not affected in any of these cases.

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PDR ADOCK 05000289
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		OF	
THREE MILE ISLAND, UNIT I	0500028984	—	001	—	01	02	OF 04

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

I. PLANT OPERATING CONDITIONS BEFORE THE EVENT

The TMI-1 facility was in long term Cold Shutdown with TAVG <200°F.

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

At 1420 hours on April 27, 1984, Relay Room (338 ft Control Tower) floor fire barrier penetration seal (SEAL) 735 was identified to be in deficient condition. Seal 735 is a 3 inch core bore with a 1 1/4 inch conduit penetrating the seal. A fire watch had not been established within one hour of the onset of the deficient condition. This violated the Action Statement of Technical Specification 3.18.7.2. Therefore, this event is reportable pursuant to 10 CFR 50.73 (a)(2)(i)(B). A fire watch was established immediately after identification of the condition by the Shift Supervisor. A Priority 1 job ticket was issued and a new seal was installed inside the conduit early on the next shift that day. The firewatch was secured following a post-installation inspection by Quality Control.

The deficient condition of Seal 735 is potentially applicable to other similar fire seals. Fire barrier seals were required to be installed during modifications prior to the upgrading of procedure M.P. 1420-FB-1 "Fire Barrier Penetration Seal Repair" of November 7, 1983. These seals may not have been installed as required. Conduits installed prior to April 1979 were subject to 100% Quality Control inspection during the initial fire barrier sealing project.

Evidence of this potential problem being more widespread was the identification of the same deficient condition in Seal 85, a blackout through the floor of the Engineered Safeguards Room (338 ft Control Tower) and Seal 1055, a blackout through the wall between the Technical Support Center and 480V AC ES-1S Switchgear Room (332 ft Control Tower), subsequent to the identification of Seal 735.

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TEXT (if more space is required, use additional NRC Form 368A's) (17)

IV. COMPONENT FAILURE DATA

At the time seal 735 was to have been installed, procedure M.P. 1420-FB-1 "Fire Barrier Penetration Seal Repair" was inadequate. The Procedure was not specific on the requirement to install seals within conduits that are open-ended, or had condulets, pull boxes, or terminated at terminal boxes, or any other cabinet or enclosure. Since November 7, 1983, the procedure clearly states that seals are to be installed at the first opening, box, condulet, etc. on each side of the fire barrier. Because of the deficiency in the procedure at the time of installation, this is considered a component failure cause code "D", Defective Procedure.

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 Relay Room contains equipment considered essential for control and monitoring of plant parameters in the Cold Shutdown condition. An ionization fire detection system and a total flooding Carbon Dioxide fire suppression system with heat actuated detectors protect the Relay Room. Both systems were available during the event.

The TMI-1 fire barrier seal design requires seals in all conduits at the first opening or device on each side of the rated fire barrier the conduit penetrates. This design eliminates hot gas paths in the event of fire. The failure to seal the 1 1/4 inch conduit in the first condulet did not represent a significant threat to the integrity of the fire-rated floor slab of the Relay Room considering the availability of the automatic fire detection and suppression systems.

The safety consequences and implications of the deficiencies in seals 85 and 1055 are similar to those of the deficiency in seal 735. Public health and safety were not affected in any of these cases.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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					0104	OF 04

TEXT (If more space is required, use additional NRC Form 308A's) (17)

VII. PREVIOUS EVENTS OF A SIMILAR NATURE

LER 83-036/03L-0 and LER 83-047/03L-0 dealt with inoperable fire barrier penetration seals. The seals identified in LER 83-047/03L-0 and one seal identified in LER 83-036/03L-0 were found to have been installed without any sealing material inside the conduit. The cause of both events was that insufficient guidance was given to the worker installing the seals.

VIII. CORRECTIVE ACTIONS PLANNED

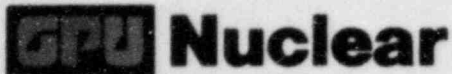
An inspection of new conduits installed as part of modification work subsequent to April 1979 and prior to the November 7, 1983 correction of MP 1420-FB-1 was performed to provide assurance that all conduits have the required fire barrier seals installed.

Several hundred seals in all plant areas were inspected. Three conduits were found to be in violation of the design specification:

1. Seal 770, Conduit D - no seal in the open end in the east inverter room. A fire watch was posted upon discovery.
2. Seal 263, 3/4" Conduit item M - no seal in a pull box in Tech Support Center (322' Control Building).
3. Seal 267, 3 1/2" Conduit item A - open end in Loose Parts Vibration Monitor Cabinet in the Tech Support Center (322' Control Building) had not been resealed.

The seals found to be in deficient condition were repaired upon discovery. The safety consequences and implications of the deficiency in these seals are similar to seal 735. Public health and safety were not affected.

Conduit installed since November 1983 when 100% Quality Control in process monitoring was made a requirement were also spot checked with no deficiencies found.



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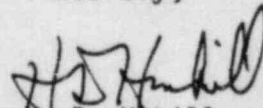
Dear Sir:

Three Mile Island Nuclear Station Unit I, (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
LER 84-001-01

This letter transmits Licensee Event Report (LER) No 84-001-01. LER 84-001-00, submitted May 25, 1984, dealt with inoperable fire barrier penetration seals. As corrective action, an inspection of certain fire barrier penetration seals was performed. LER 84-001-01 contains all the information previously submitted and the results of the inspection. 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. Haskill,
Director, TMI-1

HDH/

Attachment

cc: R. Conte, Senior Resident Inspector
Dr. T. E. Murley, Region I, Regional Administrator
J. Van Vliet, Project Manager