

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1) <p style="text-align:center">Three Mile Island, Unit 1</p>	DOCKET NUMBER (2) <p style="text-align:center">05000298</p>	PAGE (3) <p style="text-align:center">1 OF 4</p>
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TITLE (4)

Failure to Perform Fire Protection Program Surveillances at the Required Frequency

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 NAME	DOCKET NUMBER
09	16	98	98	-- 013 --	00	10	15	98		05000
									FACILITY NAME	DOCKET NUMBER
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
		20.2201(b)	20.2203(a)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)					
		20.2203(a)(1)	20.2203(a)(3)(i)	X 50.73(a)(2)(ii)	50.73(a)(2)(x)					
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71					
		20.2203(a)(2)(ii)	20.2203(a)(4)	50.73(a)(2)(iv)	OTHER					
		20.2203(a)(2)(iii)	50.36(c)(1)	50.73(a)(2)(v)						
	20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	Specify in Abstract below or in NRC Form 366A						

LICENSEE CONTACT FOR THIS LER (12)

NAME <p style="text-align:center">William Heysek, TMI Licensing Engineer</p>	TELEPHONE NUMBER (Include Area Code) <p style="text-align:center">(717) 948-8191</p>
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On September 16, 1998 an internal audit identified that a fire hose station inspection surveillance required by the Fire Protection Program had not been performed within the required 18 month frequency (due about 9/97). The inspection surveillance and a hydrostatic hose test surveillance, also required by the Fire Protection Program, historically have been performed every 18-months as a combined activity. However, when the hydro test frequency was changed to 36-months in 1994, the two surveillances were not separated in the implementing document, nor was the 18 month hose surveillance inspection scheduled. Corrective actions were taken September 16, 1998 to perform the missed inspection surveillance. This remedial inspection surveillance identified that the previous combined inspection surveillance and hydrostatic test surveillance on 2/96 had excluded six hoses because of a modification activity. The hydrostatic testing of these six hoses was not performed when the modifications were complete. On September 16, 1998 one of the six hoses was found to have minor surface abrasions, but had no other apparent degradation, was immediately replaced with a new certified hose. The remaining five hoses were hydrostatically tested the next day and found to be satisfactory.

The root cause of the missed fire hose inspection was that the surveillance schedule and implementing document was not revised when surveillance interval changes were made. The root cause of the failure to inspect and hydrostatically test six fire hoses was failure to follow Administrative Procedure 1001J, "Technical Specification Surveillance Testing Program."

This event was reported per 10 CFR 50.73(a)(2)(ii).

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

I. PLANT OPERATING CONDITIONS BEFORE THE EVENT

The plant was at 100% power at the time the condition was determined to be reportable and was not changed as a result of that determination.

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

No systems, structures or components were out-of-service that contributed to the condition.

III. EVENT DESCRIPTION

The Quality Assurance Audit S-TMI-98-12, "Fire Protection," identified the failure to perform a fire hose [KP/] inspection surveillance at the procedurally required frequency. The inspection is required by Administrative Procedure (AP) 1038, "Fire Protection Program," Exhibit 7 "Safety Related Test and Inspection" to be performed every 18 months. The inspection had not been performed since February 19, 1996; approximately 31 months ago. The missed surveillance was documented by CAP T1998-0779 written on September 16, 1998. During the performance of the remedial surveillance to inspect the hose stations on September 16, 1998, technicians further found that six of the hoses involved had not been hydrostatically tested at the AP 1038 required frequency of 36 months. These six hoses were not hydrostatically tested when this surveillance was performed on February 19, 1996, due to modification work that was in progress. The last previous complete performance of this 36-month hydrostatic test was May 17, 1994 approximately 52 months ago. CAP T1998-0783 documenting the missed hydrostatic tests was written on September 16, 1998.

The fire protection program requires fire hose inspections every 18 months and a hose hydrostatic test every 36 months. However, historically both the hose inspection and hydro surveillances have been performed as a combined activity every 18 months through Surveillance Procedure (SP) 1301-12.3, "Fire System Hose Station Inspection and Functional Test." In 1991, a separate task was set up in the computerized work management system, Generation Maintenance System 2 (GMS2), to perform the hose station inspection as a separate activity every 18 months. That task was never activated and as a result, the performance of the hose inspection and hydrostatic test continued to be accomplished as a single combined activity every 18 months. In 1994, in accordance with fire protection engineer direction, the frequency for performance of the hydrostatic testing was changed to once every 36 months. At this time however, the GMS2 task for 18-month fire hose inspections was not activated. Additionally, no changes were made to SP 1301-12.3, to separate out the inspection task from the hydrostatic test. The hose inspection was not performed when it would have been due in 1997, since it was not scheduled as a separate 18-month activity.

Regarding the subsequent discovery of six missed hydrostatic tests; in February 1996, when the fire hose inspection and hydrostatic test was being performed on other hoses covered by SP 1301-12.3, the hose stations connected to FS-V-392 and FS-V-393 [KP/SHV] were not tested. These valves had been removed from the Fire Service system for a modification to facilities in the Control Tower. A Surveillance Deficiency Report, generated in accordance with Administrative Procedure 1001J, "Technical Specification Surveillance Testing Program," identified a memorandum by the Fire Service Program Engineer as the vehicle to cause the hoses to be hydrostatically tested when modifications were complete. Contrary to the expectations of AP 1001J, the surveillance coordinator mistakenly closed the surveillance deficiency based on the memo from the program engineer. Consequently the missed portion of this surveillance was not carried as an open item in the Surveillance Open Items List and was subsequently lost.

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IV. AUTOMATIC OR MANUAL INITIATED SAFETY SYSTEM RESPONSES

Since there was no physical plant event involved with the deficiencies reported herein, there were no safety system responses, automatic or manual.

V. FAILURES AND ERRORS

The root cause of the failure to conduct the 18-month fire hose inspection surveillance was that appropriate changes were not made to the surveillance schedule or the implementing documents when other surveillance interval changes were made. Contributing to this event was the omission of the inspection frequency in Surveillance Procedure 1301-12.3, "Fire System Hose Station Inspection and Functional Test." Although SP 1301-12.3 was historically performed every 18 months, throughout this time, the only reference to frequency identified in this procedure is "3 years" found in the header of the hydrostatic test data collection page.

The root cause of the failure to inspect and hydrostatically test six fire hoses was failure to follow Administrative Procedure 1001J, "Technical Specification Surveillance Testing Program," by not carrying the missed hose tests as surveillance "open items."

The extent of the condition was examined during the root cause evaluation performed for this event. The evaluation confirmed that previous fire hose inspection and hydrostatic tests were completed every 18 months up until these two missed surveillance events. There were no other hose stations affected by the facility modification in 1996. A biennial review of the Fire Protection Program in AP 1038 was performed in June of 1997. In this review, AP 1038 was compared to the source documents to assure that it accurately reflected the fire protection program commitments. A comparison of AP 1038 to the lower tier implementing documents was not performed and is being included as a long-term corrective action. This comparison will verify that the requirements of the fire protection program are being implemented at the required intervals through GMS2 and the respective fire protection inspection and surveillance test activities.

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

There were no safety consequences associated with either the missed hose inspection or hydrostatic tests identified. These missed surveillances did not result in any actual or potential adverse impacts on personnel or plant equipment.

VII. PREVIOUS EVENTS OF A SIMILAR NATURE

Plant records; Licensee Event Reports, Corrective Action Program Documents, Plant Review Group minutes, and Quality Deficiency Reports, of the past five years were researched to identify events related to "missed" surveillances, i.e. not performed within the scheduled timeframe. The initial search identified a number of events which dealt with missed planned maintenance, equipment calibrations, or Operations surveillances, and other related activities. These events were discarded from the search results list as not being sufficiently related to missed Technical Specification surveillances. Missed Technical Specification surveillances were found to be relatively infrequent. These events were further sorted to identify those cases where scheduling problems appear as causal factors. The final search results are listed below in chronological order.

- CAP T1997-0845 11/06/97 – Saturation Margin Monitor Surveillance due to a failure to re-schedule this surveillance after another surveillance, which satisfied these surveillance requirements, had been performed on an earlier date.

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- PRG Meeting 94-031 of 06/07/95 -- Some Calibration checks on containment monitoring instrumentation were not scheduled due to a previously incorrect interpretation of Technical Specification requirements.
- PRG Meeting 94-067 of 08/05/94 -- Calibration checks on RM-A5 and RM-A15 were not scheduled due to a previously incorrect interpretation of Technical Specification requirements.
- LER 93-005 05/10/93 - The Reactor Building Annual Inspection was not performed as a result of Engineering Department not effectively tracking and communicating the need to perform the surveillance.

Based on a comparison of the nature of the two fire hose events with these previous instances of missed surveillances, a recurring condition or programmatic failure is not indicated.

VIII. CORRECTIVE ACTIONS

Immediate Corrective Actions:

1. Immediate action to correct the missed hose inspection surveillance was to initiate a Job Order to perform the activity. The inspections were completed satisfactorily on September 16, 1998.
2. The six fire hoses were declared inoperable and within 1 hour of the identification of the missed hydrostatic tests and additional hoses were routed to the affected areas. The hydrostatic test of the five hoses (one hose was replaced with a new certified hose because of minor abrasion to the jacket) was completed September 17, 1998 and the system was restored to fully operable status.
3. Management reviewed the expectations of AP-1001J to individuals responsible for tracking surveillance open items that items be tracked to their completion and that informal processes should not be relied upon to see that work associated with open items is completed. This action was completed on September 16, 1998.

Long Term Corrective Actions

1. The Surveillance Procedure 1301-12.3 "Fire System Hose Station Inspection and Functional Test" will be revised to: include verbiage explaining that the procedure implements a requirement to hydrostatically test fire hoses and a separate requirement to inspect those hoses, specify the surveillance intervals and reformat the procedure to make these facts clear and emphatic. The procedure revision will be completed by December 1, 1998.
2. A review of the implementation of the fire protection program through associated GMS2 tasks and implementing procedures will be performed to assure the specified activities and frequency meet the expectations of the Fire Protection Program as defined by AP 1038. This action will be completed by January 1, 1999.

* The Energy Industry Identification System (EIIIS), System Identification (SI) and Component Function Identification (CFI) Codes are included in brackets, "[SI/CFI]" where applicable, as required by 10 CFR 50.73 (b)(2)(ii)(F).