

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555

August 1, 1997

**NRC INFORMATION NOTICE 97-59: FIRE ENDURANCE TEST RESULTS OF
VERSAWRAP[®] FIRE BARRIERS**

Addressees

All holders of operating licenses or construction permits for nuclear power reactors.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to alert addressees to the preliminary results of a recent fire endurance test of a new fire barrier system. No specific action or written response is required.

Description of Circumstances

Transco Products, Incorporated, of Chicago, Illinois, is developing Versawrap as a stand-alone fire barrier or as a potential upgrade for such existing raceway fire barriers as Thermo-Lag 330-1 for use in nuclear power plants to meet NRC fire protection regulations. On April 7, 1997, the NRC staff met with Entergy Operations, Incorporated, the licensee for Arkansas Nuclear One, to discuss the use of Versawrap fire barriers to protect redundant post-fire safe shutdown components. Subsequently, on April 10 and 11, 1997, the NRC staff witnessed a full-scale fire endurance test of proposed 1-hour and 3-hour fire-rated Versawrap fire barriers at Underwriters Laboratories, Incorporated (UL), of Northbrook, Illinois. The tests were also witnessed by representatives of Entergy Operations, Incorporated, and Northern States Power Company.

The following summary of the test results is taken from the staff's trip report:

Assuming that the thermocouples were working properly and on the basis of the printed temperatures at the end of about 61 minutes, it appeared that test articles A, B, C, D, L, O, and R met the maximum single point temperature rise acceptance criteria [of Generic Letter (GL) 86-10, Supplement 1, "Fire Endurance Test Acceptance Criteria for Fire Barrier Systems Used to Separate Redundant Safe Shutdown Trains Within the Same Fire Area"] for a 1-hour fire rating while test articles E and Q did not. Assuming that the thermocouples were working properly and on the basis of the printed temperatures at the end of about 2 hours and 55 minutes (the temperatures at 3 hours were not

9707300061

updated on 8/1/97

PDR I+E NOTICE 97-056 970728



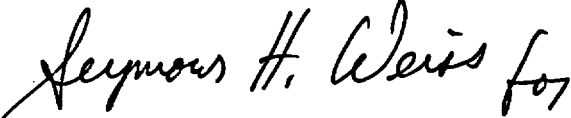
DF03

printed), it also appeared that test articles F, G, H, and I may meet the maximum single point temperature rise acceptance criteria of GL 86-10, [Supplement 1], for a 3-hour fire rating, but test articles J, K, M, N, and P will not.

The observations made by the NRC staff during the fire endurance test are not sufficient in and of themselves to determine whether or not Versawrap fire barriers will meet NRC criteria for qualifying fire barriers. In its trip report, the staff also noted that UL would document the results of the fire endurance test and that UL would base its conclusions regarding the performance of the test articles on its observations during the fire endurance and hose stream tests, analyses of electronically recorded thermocouple data, and consideration of both the maximum single point temperatures and the average unexposed side temperatures. Review and assessment of each of these factors are needed to determine whether the barrier configurations that were tested meet the NRC acceptance criteria specified in GL 86-10, Supplement 1. To date, no licensee has submitted the fire test results to the NRC for review.

The staff's meeting summary and trip report are available at the NRC Public Document Room (Accession Numbers 9704188084 and 9705130324, respectively).

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.


Marylee M. Slosson, Acting Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Technical contacts: K.S. West, NRR
301-415-1220
E-mail: ksw@nrc.gov

T.J. Carter, NRR
301-415-1153
E-mail: tjc@nrc.gov

Attachment: List of Recently Issued Information Notices

List filed in Jacket,

LIST OF RECENTLY ISSUED
NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
97-58	Mechanical Integrity of In-Situ Leach Injection Wells and Piping	07/31/97	Holders of and Applicants for Licenses for In-Situ Leach Facilities
97-57	Leak Testing of Packaging Used in the Transport of Radioactive Material	07/30/97	Suppliers and users of packaging for the transportation of radioactive material required to perform packaging leak tests
97-56	Possession Limits for Special Nuclear Material at the Environcare of Utah Low-Level Radioactive Waste Disposal Facility	07/28/97	All licensees authorized to possess special nuclear material
97-55	Calculation of Surface Activity for Contaminated Equipment and Materials	07/23/97	All Uranium Recovery Licensees
97-54	NRC Licensed Operators at Six Non-Power Reactor Facilities Allow their Operator Licenses to Expire	07/18/97	All holders of OLs or CPs for test and research reactors and all licensed operators at test and research reactor facilities
97-53	Circuit Breakers Left Racked Out in Non-Seismically Qualified Positions	07/18/97	All holders of OLs or CPs for nuclear power reactors
97-52	Inadvertent Loss of Capability for Emergency Core Cooling System Motors	07/17/97	All holders of OLs or CPs for nuclear power reactors

OL = Operating License
CP = Construction Permit

printed), it also appeared that test articles F, G, H, and I may meet the maximum single point temperature rise acceptance criteria of GL 86-10, [Supplement 1], for a 3-hour fire rating, but test articles J, K, M, N, and P will not.

The observations made by the NRC staff during the fire endurance test are not sufficient in and of themselves to determine whether or not Versawrap fire barriers will meet NRC criteria for qualifying fire barriers. In its trip report, the staff also noted that UL would document the results of the fire endurance test and that UL would base its conclusions regarding the performance of the test articles on its observations during the fire endurance and hose stream tests, analyses of electronically recorded thermocouple data, and consideration of both the maximum single point temperatures and the average unexposed side temperatures. Review and assessment of each of these factors are needed to determine whether the barrier configurations that were tested meet the NRC acceptance criteria specified in GL 86-10, Supplement 1. To date, no licensee has submitted the fire test results to the NRC for review.

The staff's meeting summary and trip report are available at the NRC Public Document Room (Accession Numbers 9704188084 and 9705130324, respectively).

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

original signed by S.H. Weiss for
 Marylee M. Slosson, Acting Director
 Division of Reactor Program Management
 Office of Nuclear Reactor Regulation

Technical contacts: K.S. West, NRR
 301-415-1220
 E-mail: ksw@nrc.gov

T.J. Carter, NRR
 301-415-1153
 E-mail: tjc@nrc.gov

Attachment: List of Recently Issued Information Notices

DOCUMENT NAME: 97-59.IN *SEE PREVIOUS CONCURRENCES

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	Tech Contact	C:SPLB	C:PECB	(A) D:DRPM		
NAME	SWest* JCarter*	LMarsh*	AChaffee*	MSlosson <i>MS</i>		
DATE	07/14/97	07/15/97	07/17/97	07/28/97 <i>MS</i>	07/ /97	

OFFICIAL RECORD COPY

printed), it also appeared that test articles F, G, H, and I may meet the maximum single point temperature rise acceptance criteria of GL 86-10, [Supplement 1], for a 3-hour fire rating, but test articles J, K, M, N, and P will not.

The observations made by the NRC staff during the fire endurance test are not sufficient in and of themselves to determine whether or not Versawrap fire barriers will meet NRC criteria for qualifying fire barriers. In its trip report, the staff also noted that UL would document the results of the fire endurance test and that UL would base its conclusions regarding the performance of the test articles on its observations during the fire endurance and hose stream tests, analyses of electronically recorded thermocouple data, and consideration of both the maximum single point temperatures and the average unexposed side temperatures. Review and assessment of each of these factors are needed to determine whether the barrier configurations that were tested meet the NRC acceptance criteria specified in GL 86-10, Supplement 1. To date, no licensee has submitted the fire test results to the NRC for review.

The staff's meeting summary and trip report are available at the NRC Public Document Room (Accession Numbers 9704188084 and 9705130324, respectively).

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Marylee M. Slosson, Acting Director
 Division of Reactor Program Management
 Office of Nuclear Reactor Regulation

Technical contacts: K.S. West, NRR
 301-415-1220
 E-mail: ksw@nrc.gov

T.J. Carter, NRR
 301-415-1153
 E-mail: tjc@nrc.gov

Attachment: List of Recently Issued Information Notices

DOCUMENT NAME: G:\TJCVERSWRAP.IN *SEE PREVIOUS CONCURRENCES

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	Tech Contact	C:SPLB	C:PECB	(A) D:DRPM		
NAME	Swest* JCarter*	LMarsh*	AChaffee*	MSlosson		
DATE	07/14/97	07/15/97	07/17/97	07/ /97	07/ /97	

OFFICIAL RECORD COPY

mlm 7/18/97

printed), it also appeared that test articles F, G, H, and I may meet the maximum single point temperature rise acceptance criteria of GL 86-10, [Supplement 1], for a 3-hour fire rating, but test articles J, K, M, N, and P will not.

The observations made by the NRC staff during the fire endurance test are not sufficient in and of themselves to determine whether or not Versawrap fire barriers will meet NRC criteria for qualifying fire barriers. In its trip report, the staff also noted that UL would document the results of the fire endurance test and that UL would base its conclusions regarding the performance of the test articles on its observations during the fire endurance and hose stream tests, analyses of electronically recorded thermocouple data, and consideration of both the maximum single point temperatures and the average unexposed side temperatures. Review and assessment of each of these factors are needed to determine whether the barrier configurations that were tested meet the NRC acceptance criteria specified in GL 86-10, Supplement 1. To date, no licensee has submitted the fire test results to the NRC for review.

The staff's meeting summary and trip report are available at the NRC Public Document Room (Accession Numbers 9704188084 and 9705130324, respectively).

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Marylee M. Slosson, Acting Director
 Division of Reactor Program Management
 Office of Nuclear Reactor Regulation

Technical contacts: K.S. West, NRR
 301-415-1220
 E-mail: ksw@nrc.gov

T.J. Carter
 301-415-1153
 E-mail: tjc@nrc.gov

Attachment:
 List of Recently Issued Information Notices

DOCUMENT NAME: G:\TJCVERSWRAP.IN

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	Tech Contact	C:SPLB	C:PECB	(A) D:DRPM	
	SWest JCarter	W6#2 LMarsh	AChaffee	MSlosson	
DATE	07/14/97	07/15/97	07/17/97	07/ /97	07/ /97

OFFICIAL RECORD COPY
R/D