

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

December 22, 1994

NRC INFORMATION NOTICE 94-86: LEGAL ACTIONS AGAINST THERMAL SCIENCE, INC.,  
MANUFACTURER OF THERMO-LAG

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 inform addressees of a grand jury indictment of Thermal Science, Inc., and Rubin Feldman, President, for allegedly making false statements to the NRC and others concerning the fire barrier material known as Thermo-Lag. In a separate legal action, Industrial Testing Laboratories, Inc., and Alan M. Siegel, President, pleaded guilty to making and aiding and abetting the making of false statements concerning Thermo-Lag. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate. Suggestions contained in this information notice are not NRC requirements; therefore, no specific action or written response is required.

Background

Many NRC licensees use the Thermo-Lag fire barrier material to meet NRC requirements regarding the protection of safe shutdown equipment. In June 1991, the NRC established a special review team to address the safety issues associated with industry operating experience and allegations regarding the use of Thermo-Lag. On August 6, 1991, the NRC issued Information Notice 91-47, "Failure of Thermo-Lag Fire Barrier Material to Pass Endurance Tests." This information notice informed NRC nuclear power reactor licensees to problems that could result from the use or improper installation of Thermo-Lag to comply with the requirements in Section III.G.2 of Appendix R to Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 50). On June 23, 1992, the NRC issued Information Notice 92-46, "Thermo-Lag Fire Barrier Material Special Review Team Final Report Findings, Current Fire Endurance Tests, and Ampacity Calculation Errors," which addressed the findings of the NRC special review team on Thermo-Lag. In its final report, the NRC special review team concluded that the fire-resistance ratings and ampacity derating factors for the Thermo-Lag fire barrier system were indeterminate.

On August 28, 1992, the NRC issued Supplement 1 to Bulletin 92-01, "Failure of Thermo-Lag 330 Fire Barrier System to Perform its Specified Fire Endurance Function," in which it concluded, on the basis of tests sponsored by the NRC and industry, that Thermo-Lag fire barriers should be treated as inoperable

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if acceptable plant-specific tests are not available. The bulletin also concluded that NRC power reactor licensees should implement compensatory measures until the barriers could be declared operable. These conclusions remain unchanged.

In addition to the NRC special technical review team, the U.S. Attorney's Office, the NRC Office of the Inspector General, and the NRC Office of Investigations conducted an investigation.

Attachment 1 of this information notice lists the NRC generic communications that have been issued regarding the Thermo-Lag fire barrier material.

### Description of Circumstances

On March 30, 1994, Industrial Testing Laboratories, Inc., of St. Louis, Missouri, and Alan M. Siegel, the president of the company, pleaded guilty to five counts of making and aiding and abetting the making of false statements within the jurisdiction of the NRC, in violation of Title 18, United States Code, Sections 1001 and 1002. As stated in the plea agreement, Industrial Testing Laboratories, Inc., and Alan M. Siegel aided and abetted the issuance of more than 30 false reports transmitted from Thermal Science, Inc., to the NRC and other entities. The false reports provided information on the fire endurance and ampacity testing of the Thermo-Lag material. Industrial Testing Laboratories, Inc., was fined \$150,000. Industrial Testing Laboratories, Inc. agreed to fully cooperate in the criminal investigation and prosecution of organizations and individuals associated with the Thermo-Lag fire barrier material. Alan M. Siegel has not been sentenced.

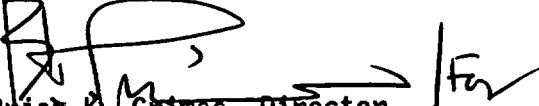
On September 29, 1994, in a separate legal action, a Maryland Federal grand jury indicted Thermal Science, Inc., of St. Louis, Missouri, and Rubin Feldman, the president of the company. Thermal Science, Inc., is the manufacturer of the Thermo-Lag fire barrier material. The seven-count indictment alleges that Thermal Science, Inc., and Rubin Feldman conspired with a testing laboratory and others to conceal material facts and make false statements within the jurisdiction of the NRC, in violation of Title 18, United States Code, Sections 1001 and 1002. Also, the indictment alleges willful violation of the Atomic Energy Act, Title 42, United States Code, Sections 2273 (a) and 2201 (b), and 10 CFR 50.5 (a)(2). The indictment, which culminated a grand jury investigation of nearly 2 years, charged that a conspiracy began in 1982 and continued through April 1992.

### Discussion

All entities and individuals involved in NRC-regulated activities, including NRC licensees, suppliers for NRC licensees, and employees of NRC licensees and suppliers, have a responsibility to comply with applicable NRC regulations and Federal laws. Where NRC identifies cases of willful violations of NRC requirements, NRR will refer the matter to the U.S. Department of Justice for consideration of criminal prosecution.

Pursuant to 10 CFR 50.5, the NRC can take direct enforcement action against suppliers and their employees in certain circumstances for (1) deliberately causing an NRC licensee to be in violation of NRC regulations, or (2) deliberately providing information to the NRC or an NRC licensee that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

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.

  
Brian K. Grimes, Director  
Division of Project Support  
Office of Nuclear Reactor Regulation

Technical contact: Edward A. Connell, NRR  
(301) 504-2838

Attachments:

1. List of NRC Generic Communications  
Concerning Thermo-Lag Fire Barrier Systems
2. List of Recently Issued NRC Information Notices

*Attachments filed in Jacket*

**LIST OF NRC GENERIC COMMUNICATIONS CONCERNING THERMO-LAG FIRE BARRIERS**

Bulletin 92-01	"Failure of Thermo-Lag 330 Fire Barrier System To Maintain Cabling in Wide Cable Trays and Small Conduits Free from Fire Damage," June 24, 1994
Bulletin 92-01, Supplement 1	"Failure of Thermo-Lag 330 Fire Barrier System To Perform Its Specified Fire Endurance Function," August 28, 1992
Generic Letter 92-08	"Thermo-Lag 330-1 Fire Barriers," December 17, 1992
Generic Letter 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," March 25, 1994
Information Notice 91-47	"Failure of Thermo-Lag Fire Barrier Material To Pass Fire Endurance Test," August 6, 1991
Information Notice 91-79	"Deficiencies in the Procedures for Installing Thermo-Lag Fire Barrier Materials," December 6, 1991
Information Notice 91-79 Supplement 1	"Deficiencies Found in Thermo-Lag Fire Barrier Installation," August 4, 1994
Information Notice 92-46	"Thermo-Lag Fire Barrier Material Special Review Team Final Report Findings, Current Fire Endurance Tests, and Ampacity Calculation Errors," June 23, 1992
Information Notice 92-55	"Current Fire Endurance Test Results for Thermo-Lag Fire Barrier Material," July 27, 1992
Information Notice 92-82	"Results of Thermo-Lag 330-1 Combustibility Testing," December 15, 1992
Information Notice 94-22	"Fire Endurance and Ampacity Derating Test Results for 3-Hour Fire Rated Thermo-Lag 330-1 Fire Barriers," March 16, 1994
Information Notice 94-34	"Thermo-Lag 330-660 Flexi-Blanket Ampacity Derating Concerns," May 13, 1994

LIST OF RECENTLY ISSUED  
NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
94-85	Problems with the Latching Mechanism in Potter and Brumfield R10-E3286-2 Relays	12/21/94	All holders of OLs or CPs for nuclear power reactors.
94-40, Supp. 1	Failure of a Rod Control Cluster Assembly to Fully Insert Following a Reactor Trip at Braidwood Unit 2	12/15/94	All holders of OLs or CPs for nuclear power reactors.
94-84	Air Entrainment in Terry Turbine Lubricating Oil System	12/02/94	All holders of OLs or CPs for nuclear power reactors.
89-25, Rev. 1	Unauthorized Transfer of Ownership or Control of Licensed Activities	12/07/94	All fuel cycle and material licensees.
94-83	Reactor Trip Followed by Unexpected Events	12/06/94	All holders of OLs or CPs for nuclear power reactors.
94-82	Concerns Regarding Essential Chiller Reliability during Periods of Low Cooling Water Temperature	12/05/94	All holders of OLs or CPs for nuclear power reactors.
94-81	Accuracy of Bioassay and Environmental Sampling Results	11/25/94	All U.S. Nuclear Regulatory Commission licensees.
94-80	Inadequate DC Ground Detection in Direct Current Current Distribution Systems	11/25/94	All holders of OLs or CPs for nuclear power reactors.
94-79	Microbiologically Influenced Corrosion of Emergency Diesel Generator Service Water Piping	11/23/94	All holders of OLs or CPs for nuclear power reactors.

OL = Operating License  
CP = Construction Permit

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Original signed by  
 B. D. Liaw

*Fw* Brian K. Grimes, Director  
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\*See previous concurrence

DOCUMENT NAME: 94-86.IN

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NAME	EConnell*	SWest*	CMcCracken*		GHolahan*
DATE	10/11/94	10/11/94	10/11/94	11/15/94	10/14/94

OFFICE	OECB:DOPS	OECB:DOPS	C:OECB/DOPS	D:DOPS	
NAME	NECampbell*	RJKiessel*	AEChaffee*	<i>Fw</i> BKGrimes	
DATE	11/21/94	11/22/94	12/01/94	12/16/94	

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- Comments from OGC (R. K. Hoefling) included
- OIG review also obtained. OIG has no problem with issuing this document and OIG has lead for OI

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*per P. West this was conc'd with  
 OI IG, OGC  
 12/11/94*

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NAME	NECampbell*	RJKiessel*	AEChaffee*	BKGrimes
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NAME	NECampbell*	RJKiessel*	AECB/DOPS <i>[Signature]</i>	BKGrimes
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DATE	11/21/94	11/22/94 <i>RK</i>	11/ /94	11/ /94	