



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

August 10, 1994

MEMORANDUM FOR: Gary M. Holahan, Director  
Division of Systems Safety and Analysis

FROM: Conrad E. McCracken, Chief  
Plant Systems Branch  
Division of Systems Safety and Analysis

SUBJECT: SUMMARY OF JULY 26, 1994 SENIOR MANAGEMENT MEETING, BETWEEN  
NRC AND NEI ON THERMO-LAG ISSUES

On July 26, 1994, senior managers of the Office of Nuclear Reactor Regulation (NRR) met with senior representatives of the Nuclear Energy Institute (NEI) to discuss the status of continuing efforts to resolve the Thermo-Lag fire barrier issues. W. Cavanaugh and D. Hintz, members of the NEI executive level fire protection working group, also participated in the meeting. Mr. Cavanaugh is the chairman of the working group. Enclosure 1 is a list of attendees.

W. Russell, Director, NRR, summarized the Staff Requirements Memorandum (SRM) of June 27, 1994, which provided Commission direction in response to the options outlined in SECY-94-127. Mr. Russell informed NEI that the staff will issue plant-specific letters to those licensees still relying on Thermo-Lag to meet NRC fire protection requirements and guidance. The letter will acknowledge the licensee response to the request for additional information (RAI) that the staff previously issued in accordance with 10 CFR 50.54(f); will inform the licensee of the Commission direction provided in the SRM of June 27, 1994; will provide guidance for preparing exemption requests; and will ask the licensee to supplement the information submitted in response the previous RAI as appropriate. He stated that the letters would be issued within six weeks and that the responses would be expected in 90 to 120 days.

NEI stated that the ongoing staff review of ampacity derating tests should be completed before individual licensees perform modifications on Thermo-Lag fire barriers. NEI believes that Texas Utility Electric (TUE) and Tennessee Valley Authority test-derived ampacity derating factors, once approved by the staff, could be used by the industry as a screening criteria and a basis for resolution. Mr. Russell stated that the ampacity issues were economic issues relating to cable aging and that they should not impact the overall resolution of the Thermo-Lag fire barrier performance issue. Mr. Russell agreed that the staff and its contractor would hold a public meeting in the near term with TUE to discuss outstanding ampacity derating testing issues. However, he reiterated that the ampacity issues should not delay resolution of the fire barrier issue.

NRR also discussed the preparation and review of fire protection exemption requests (Enclosure 2) and a feasibility study of nuclear power plant fire

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August 10, 1994

severity curves, which the NRR staff is conducting with technical assistance from the National Institute of Science and Technology (Enclosure 3). This study responds to the Commission direction regarding Option 2 of SECY-94-127. NRR stated that if it is determined that the curves are feasible, the industry would be responsible for developing the curves. NRR and NEI agreed to meet at regular intervals to discuss the study.

The resolution strategy that NEI proposed during the previous senior management meeting was also discussed. NEI stated that its flowchart of the resolution process would be updated to reflect the points discussed during the meeting and suggested that a working-level meeting be scheduled shortly thereafter.

The next senior management meeting will be scheduled at a later date.



Conrad E. McCracken, Chief  
Plant Systems Branch  
Division of Systems Safety and Analysis

Enclosures:  
As stated.

cc w/enclosures:  
J. Colvin, NEI

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EPawlik, RIII/OI

MCallahan, OCA

Regional Administrators

OPA

PTam

TBergman

ATTENDANCE LIST

<u>NAME</u>	<u>ORGANIZATION</u>	<u>PHONE NUMBER</u>
Michael Knapik	McGraw-Hill	202-383-2167
Daniel Oudinot	NRC/NRR/DSSA	301-504-3731
Paul Gill	NRC/NRR/DE	301-504-3316
Pat Madden	NRC/NRR/DSSA	301-504-2854
Conrad McCracken	NRR/DSSA/SPLB	301-504-2873
Martin Virgilio	NRR/DSSA	301-504-3226
William Russell	NRR/D	301-492-7000
Milad Milad	S&L	312-269-8606
Ken Wilson	MNGR/NUC LIC/FPC/CR3	904-563-4549
William Rossfeld	MNGR/SNS/FPC/CR3	904-563-4374
Richard Oehlberg	EPRI	415-855-2082
Dwight Chamberlain	OCM	301-504-1750
Moni Dey	NRC/RES	301-415-6443
Marsha Gameroni	NRC/NRR	301-504-3024
James Rippe	TSI	314-349-1233
Jan MacGregor	Winston & Strawn	202-371-5798
Jimmy Barker	MECH ENG/MNGR/TU ELECT	817-895-8552
Lynne Neal	Nuclear Engery Institute	202-739-8037
John Juliano	NUS	301-258-8755
Nancy Turley	Arizona Public Service Co.	602-393-5744
Sarah Brewer	The Carborundum Co.	716-278-2203
Theresa Sutter	Bechtel Corporation	301-417-8818
Frank Garrett	Arizona Public Service Co.	602-393-5640
Mike Schoppman	Florida Power & Light Co.	301-652-2500
Jim Raleigh	Southern Technical Services	301-652-2500
Mike Laun	Sargent & Lundy	312-269-6113
Mark Henry Salley	TVA	615-751-8214
Charles L. Fisher	FPL	407-694-3271
William Dean	NRC/DEDO	301-504-1726
John Raybould	Faverdale Tech. Centre U.K.	0325-38-1220
Kevin Hawks	Transco Products Inc.	312-427-2818
Robert Goss	Transco Products Inc.	312-427-2818
Morris Schreim	NEI	202-739-8082
Biff Bradley	NEI	202-739-8083
Alex Marion	NEI	202-739-8080
Tom Tipton	NEI	202-739-8107
William Rasin	NEI	202-739-8088
Joe Colvin	NEI	202-739-8075
Don Hintz	Entergy Operations	601-984-9290
William Cavanaugh	CP&L	919-546-3560

# EXEMPTION BASES

## ALTERNATE FIRE PROTECTION CONFIGURATION ACCEPTED IF:

- IT ENSURES THAT ONE TRAIN OF EQUIPMENT NECESSARY TO ACHIEVE HOT SHUTDOWN FROM EITHER THE CONTROL ROOM OR EMERGENCY CONTROL STATIONS IS FREE OF FIRE DAMAGE.
- MODIFICATIONS REQUIRED TO MEET SECTION III.G WOULD NOT ENHANCE FIRE PROTECTION SAFETY LEVELS ABOVE THAT PROVIDED BY EITHER EXISTING OR PROPOSED ALTERNATIVES.
- MODIFICATIONS REQUIRED TO MEET SECTION III.G WOULD BE DETRIMENTAL TO OVERALL FACILITY SAFETY.

# EXEMPTION DEVELOPMENT AND REVIEW

## EXEMPTION REQUESTS AND SAFETY EVALUATIONS ADDRESS:

- THE NRC FIRE PROTECTION REQUIREMENTS AND GUIDANCE THAT APPLY.
- AMOUNTS, TYPES, CONFIGURATIONS, AND LOCATIONS OF CABLE INSULATION AND OTHER COMBUSTIBLE MATERIALS.
- FIRE LOADING AND CALCULATED FIRE SEVERITIES.
- IN-SITU FIRE HAZARDS.
- AUTOMATIC FIRE DETECTION AND SUPPRESSION CAPABILITY.
- LAYOUT AND CONFIGURATIONS OF SAFETY TRAINS.
- RELIANCE ON AND QUALIFICATIONS OF FIRE BARRIERS INCLUDING, FIRE TEST RESULTS, THE QUALITY OF THE MATERIALS AND SYSTEM, AND THE QUALITY OF THE INSTALLATION.

## EXEMPTION REQUESTS AND SAFETY EVALUATIONS ADDRESS - CONT.

- FIRE AREA CONSTRUCTION (WALLS, FLOOR, CEILING, DIMENSIONS, VOLUME, VENTILATION, AND CONGESTION).
- LOCATION AND TYPE OF MANUAL FIRE FIGHTING EQUIPMENT AND ACCESSIBILITY FOR MANUAL FIRE FIGHTING.
- POTENTIAL DISABLING EFFECTS OF FIRE SUPPRESSION SYSTEMS ON SHUTDOWN CAPABILITY.
- AVAILABILITY OF OXYGEN (FOR EXAMPLE, INERTED CONTAINMENT).
- ALTERNATIVE OR DEDICATED SHUTDOWN CAPABILITY.

# NUCLEAR POWER PLANT FIRE SEVERITY CURVES FEASIBILITY STUDY

## TASKS

- HISTORY OF THE DEVELOPMENT OF THE ASTM E-119 STANDARD TIME-TEMPERATURE CURVE - TASK 1

(OVERVIEW OF ITS DEVELOPMENT, ITS APPLICATION AND ITS USE IN JUDGING FIRE RESISTIVE PERFORMANCE)

- STUDY OF RESEARCH - DEVELOPMENT OF FIRE SEVERITY CURVES FOR OTHER INDUSTRY APPLICATIONS - TASK 2

(LITERATURE SEARCH OF NIST FIRE RESEARCH INFORMATION SERVICE, REVIEW OF WORK PERFORMED AND ANALYSIS OF RESULTS, AND COMPARISON TO STANDARD CURVE)

- PROCESS FOR DEVELOPMENT -TASK 3

(RECOMMEND APPROACH FOR DEVELOPMENT, VALIDATION AND IMPLEMENTATION, IDENTIFY CRITICAL COMPARTMENT AND COMBUSTIBLE CHARACTERISTICS THAT INFLUENCE FIRE SEVERITY)



# PROPOSED SCHEDULE

COMPLETE THE SOW	JULY 15, 1994
MEET WITH NEI TO DISCUSS PLANS	JULY 26, 1994
CONTRACT IN PLACE	AUGUST 15, 1994
TASK 1 COMPLETE	SEPTEMBER 5, 1994
TASK 2 COMPLETE	OCTOBER 17, 1994
MEET WITH NEI - STUDY ISSUES	OCTOBER 27, 1994
TASK 3 COMPLETE	DECEMBER 12, 1994
FINALIZE STUDY	JANUARY 3, 1995
MEET WITH NEI - STUDY FINDINGS	JANUARY 15, 1995
INFORM COMMISSION	FEBRUARY 15, 1995