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USNRC

'87 FEB 20 A11:37

FEB 17 1987

FCTC:EPE
71-5942

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
DOCKETING BRANCH

Mr. Lindsay Audin
One Everett Avenue
Ossining, NY 10562

Dear Mr. Audin:

This letter is sent to acknowledge receipt of your Petition dated January 10, 1987. Your Petition requests that the Director, Office of Nuclear Material Safety and Safeguards, review the Safety Analysis Report for the GE-700 container in order to reevaluate the puncture test analysis for this cask, and that the cask be used only in its non-extended mode until it can be shown that the extended mode complies with all of the requirements of 10 CFR Part 71. You assert as grounds for your request that the puncture test analysis was based on testing of a much smaller cask, the GE-100, and that this resulted in a deficient analysis of the GE-700 cask with its extension. Your Petition has been referred to the staff for action pursuant to 10 CFR §2.206 of the Commission's regulations. As provided by §2.206, action will be taken on your request within a reasonable time. I have enclosed for your information a copy of the notice that is being filed with the Office of the Federal Register for publication.

Sincerely,

(SIGNED) John G. Davis

John G. Davis, Director
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated

cc w/encl:
General Electric Company
ATTN: Mr. G. E. Cunningham
Vallecitos Nuclear Center
Pleasanton, CA 94566

Certificate Holders

OFC: FCTC	FCTC	FCTC	OGC	FC	NMSS	NMSS
NAME: EPEaston:alm	CRChappell	CEMacDonald	RECunningham	DBMausshardt	JGDavis	
DATE: 02/10/87	02/11/87	02/11/87	02/12/87	02/13/87	02/17/87	02/17/87

OFFICIAL RECORD COPY

Model No. 700 Package
USA/5942/B()F

Certificate Holders

Ltr dtd: FEB 17 1987

American Testing & Inspection
ATTN: Mr. R. Preston
P.O. Box 878
Mokena, IL 60448

ARCO Petroleum Products Company
ATTN: Mr. G. A. Uhl
400 E. Sibley Boulevard
Harvey, IL 60426

Department of Commerce
ATTN: Mr. L. E. Pevy
National Bureau of Standards
Gaithersburg, MD 20899

Department of Energy
ATTN: Dr. Julio L. Torres
DP-4/GTN
Washington, DC 20545

General Electric Company
ATTN: Mr. G. E. Cunningham
Vallecitos Nuclear Center
Pleasanton, CA 94566

International Nutronics, Inc.
ATTN: Mr. E. T. O'Sullivan
1000 Elwell Court, Suite 232
Palo Alto, CA 94303

Neutron Products, Inc.
ATTN: Mr. Marvin M. Turkanis
P.O. Box 68
Dickerson, MD 20842

Rockwell International
ATTN: Dr. M. E. Remley
P.O. Box 309
Canoga Park, CA 91304

Southwest Nuclear Company
ATTN: Mr. James L. Harvey
7066-A Commerce Circle
Pleasanton, CA 94566

U.S. Ecology
ATTN: Mr. J. J. Scoville
P.O. Box 7246
Louisville, KY 40207

University of Kansas
ATTN: Mr. H. F. Rossen
Department of Chemical Engineering
Lawrence, KS 66042

University of Michigan
ATTN: Mr. Gary M. Cook
Phoenix Memorial Laboratory
Ann Arbor, MI 48104

University of Missouri
ATTN: Mr. Orvall L. Olson
288-C Research Center
Columbia, MO 65211

University of Virginia
ATTN: Dr. R. U. Mulder
Department of Nuclear Engineering
Charlottesville, VA 22901

Westinghouse Hittman Nuclear Incorporated
ATTN: Mr. Bruce S. Rowe
9151 Rumsey Road
Columbia, MD 21045

[7590-01]

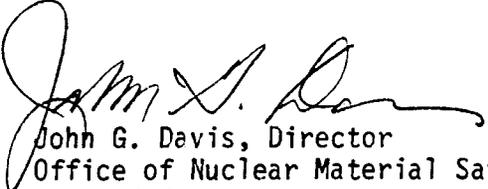
NUCLEAR REGULATORY COMMISSION
RECEIPT OF PETITION FOR DIRECTOR'S DECISION UNDER
10 CFR §2.206

Notice is hereby given that by Petition dated January 10, 1987, Lindsay Audin requested that the Director, Office of Nuclear Material Safety and Safeguards, review the Safety Analysis report for the GE-700 container in order to reevaluate the puncture test analysis for this cask, and that the cask be used only in its non-extended mode until it can be shown that the extended mode complies with all of the requirements of 10 CFR Part 71. The Petition alleges that the puncture test analysis was based on the testing of a much smaller cask, the GE-100, and that this resulted in a deficient analysis of the GE-700 cask with its extension.

The request is being treated pursuant to 10 CFR §2.206 of the Commission's regulations. As provided by §2.206, appropriate action will be taken on this request within a reasonable time.

Copies of the Petition are available for inspection in the Commission's Public Document Room, 1717 H Street, NW, Washington, DC.

FOR THE NUCLEAR REGULATORY COMMISSION


John G. Davis, Director
Office of Nuclear Material Safety
and Safeguards

10 January 1987

DOCKETEL
USNFC

'87 FEB 20 A11:37

OFFICE OF THE
DOCKETING & SERVICE
BRANCH

Director of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Certification of
Compliance No. 5942

Dear Sir;

Pursuant to 10CFR2.206, I request a review of the Safety Analysis Report (SAR) for the GE-700 container (CoC #5942) with regard to evaluation of its puncture test analysis. I believe the analysis of the cask with its extension may be deficient. I therefore request that the cask be used only in its non-extended mode until it can be shown that the extended mode complies with all aspects of 10CFR71.

My concerns are based on a review of the Safety Analysis Report (SAR) for the GE-700 cask as developed in 1980 and the GE-100 cask as developed in 1968. If there are more recent SAR's that address my concerns, I would appreciate receipt of a copy of the relevant sections with your response to this letter.

I have three concerns related to the puncture test analysis.

1. The GE-700 is a scaled up version of the much smaller GE-100. The GE-100 was drop tested on the standard plug and (according to its SAR) "the protective jacket yielded on impact but no major fracture occurred. No damage occurred to the cask." The GE-700 SAR utilizes this result as a scale model verification of its ability to withstand the puncture test. The extended version of the GE-700, however, offers a potentially vulnerable point (i.e., the juncture between the extension and the main cask body) not present in the GE-100. I therefore believe that the GE-100 puncture test cannot be used as proof that the extended version of the GE-700 has been tested in the most severe orientation for puncture.

2. Use of the GE-100 test automatically takes credit for the lead shielding behind the cask's outer wall. Most casks certified by NRC in the last 12 years have not taken credit for the puncture resistance of the lead. I think this is a wise policy since recent findings (i.e., NUREG/CR-0930, 1980) indicate that casks with lead shielding are more readily punctured when their lead is softened or melted in a fire. While I realize the testing standard assumes the puncture stress occurs before the thermal stress, reality could easily reverse the order of these events (e.g., a rail car collapsing in a fire tips over onto adjacent railroad tracks or reinforced protrusions). I therefore believe the GE-700 puncture analysis should be re-evaluated for both the extended and non-extended versions.

3. NUREG/CR-0930 also found that the empirical analyses of past punctures were "crude and unreliable" and failed to give accurate results when tested against real punctures. Since the scaling up of the GE-100 is dependent upon such analyses, I believe a proper puncture analysis should utilize the NIKE2D or similarly sophisticated computer simulation to be certain of its accuracy (NIKE2D was utilized in the 0930 study).

Please respond to each of these concerns separately and send me a copy of any changed license or other documents resulting from my request.

Thank you for your continued efforts toward transportation safety.

Yours truly,



Lindsay Audin
One Everett Avenue
Ossining, New York 10562