

71-9102

Regulatory Docket File

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NEUTRON PRODUCTS inc

Dickerson, Maryland 20753

U. S. A.

301/349-5001 TWX: 710-828-0542

1978 FEB 9 PM 3 14

February 6, 1978

U. S. ATOMIC ENERGY COMM.
REGULATORY
MAIL SECTION

Mr. Charles MacDonald
Nuclear Regulatory Commission
Washington, D. C. 20555

Re: Docket Number 71-9102

Dear Mr. MacDonald:

In response to my telephone conversation with Mr. W. Lake, the following is submitted to supplement our request of August 31, 1977 for a Certificate of Compliance.

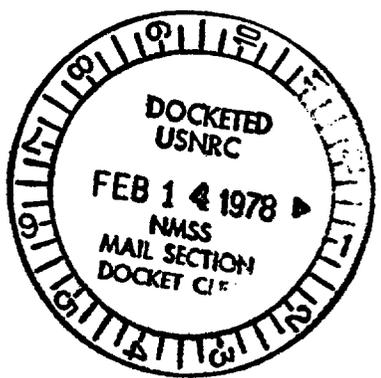
The NPI Specification E1 lead filled steel cask contains a family of drums and shielding plugs meeting the dimensional material and fabrication specifications specified herein.

Dimensions

The drums are right circular cylinders each having a diameter of $8.187 + .025'' - .000''$ and a length of $21.625 + .032''$. Each drum has a series of cylindrical or rectangular chambers which are parallel to the axis of the cylinder and which extend from end to end of the drum. The minimum wall thicknesses are $.218''$ for the outside and ends of the drums, and $.095''$ and $.218''$ for the walls of the cylindrical and rectangular chambers, respectively. The space between the diameter or width, whichever is applicable, of the chamber on the source which it is to accommodate ranges from $.062''$ to $.093''$. If necessary, solid stainless steel cylindrical or rectangular tubes having the same length as the drums are used to maintain the maximum space between the source and drum.

The sources are loaded in the chambers so that their centers are within $1/8''$ of the longitudinal center of the chamber.

The shielding plugs are inserted in the space remaining in each chamber after insertion of the sources. The diameter or width of the plugs is not less than $.062''$ smaller than the corresponding dimension of the chamber. The length of the plugs is such that the total length of plugs and source, if any, in each chamber is greater than $21.375''$, which limits their lateral movement to less than $.250''$.



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Material

The drums are steel and lead as specified in NPI Specification E1, a copy of which was submitted with my August 31, 1977 letter.

The shielding plugs are commercial grade, solid tungsten alloy.

Fabrication

The lead filled steel drums are welded in accordance with NPI Specification E1 dated August 1972 as is the casks.

The shielding plugs are machined from rod stock.

As I explained to Mr. Lake, we are currently licensed to install cobalt-60 sources in units manufactured by Picker, Atomic Energy of Canada, Ltd., Westinghouse, Siemens, Keleket-Barnes, Toshiba and TEM Instruments, Ltd., and are seeking to have the cask licensed for all these sources plus sources for units of other manufacturers so that we can reduce the number of future amendments. We believe that our oral description provides sufficient detail, both for your evaluation and for compliance inspections, while permitting us the desired flexibility. However, if you require any clarification or additional information, please call me.

Sincerely,

NEUTRON PRODUCTS, INC.



Marvin M. Turkanis
Vice President

MMT/dlm

NEUTRON PRODUCTS inc

FROM Neutron Products Inc		DATE OF DOCUMENT 02-06-78	DATE RECEIVED 02-19-78	NO.: 08576
		LTR. X	MEMO:	REPORT:
		OTHER:		
TO: CEMacDonald		ORIG.: 1	CC: x	OTHER:
		ACTION NECESSARY <input type="checkbox"/>	CONCURRENCE <input type="checkbox"/>	DATE ANSWERED:
		NO ACTION NECESSARY <input type="checkbox"/>	COMMENT <input type="checkbox"/>	BY:
CLASSIF.: U	POST OFFICE REG. NO:	FILE CODE: 71-9102		
DESCRIPTION: (Must Be Unclassified) in reponse to their telephone conversation with WLake and the following is submitted to supplement their request of August 31, 1977		REFERRED TO Reg File by CEMacDonald (3) I&E (3) PDR	DATE 02/15	RECEIVED BY 08576 ced
ENCLOSURES:				
REMARKS				