

NEUTRON PRODUCTS inc

Dickerson, Maryland 20753

U. S. A.

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

July 21, 1978

Mr. Francis St. Mary
Nuclear Regulatory Commission
Radioisotopes Licensing Branch
Division of Fuel Cycle and Material
Safety
Washington, D. C. 20555

Dear Mr. St. Mary:

In accordance with our telephone conversation, this is to request approval for the loading of cobalt-60 teletherapy sources of any manufacture approved by the NRC in an Atomic Energy of Canada, Ltd. round source drawer provided that:

- the maximum source diameter is 1.305 inches, and
- the maximum source length is 1.65 inches.

The source diameter of 1.305" is selected because it is the maximum diameter of the Picker X-Ray Model P3802A teletherapy source, which is an approved teletherapy source, and the source length of 1.65" is selected because it is the maximum length of the Neutron Products Model NPI-XX-XXXXW source, which is an approved teletherapy source.

When compared to a Neutron Products Model NPI-20-XXXXW (which has a diameter of $1.105 + .000 - .002$ inches) loaded in an AECL round drawer, the circumference of the drawer is reduced by approximately:

$$100 - \frac{\pi(2.475) - 1.305}{\pi(2.475) - 1.105} \times 100 = 3\%$$

and, accordingly, the strength of the cylinder is reduced negligibly.

We have been installing Model NPI-20-XXXXW sources in AECL round drawers for approximately six years and have installed them in approximately 100 units. Further, we have installed Picker Model P3802A capsules in two AECL round drawers and have installed them in different units in two Agreement States. We know of no source drawer problems which could be attributed to the source drawer interface in any of the loadings.

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Mr. Francis St. Mary
Nuclear Regulatory Commission
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We hope that you will find this letter sufficient to grant our request, but,
if not, please feel free to call me.

Sincerely,

NEUTRON PRODUCTS, INC.



Marvin M. Turkanis
Vice President

MMT/dlm

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