

THE DICK X-RAY COMPANY

DISTRIBUTORS

WESTINGHOUSE
X-RAY EQUIPMENT



June 2, 1960

4000 OLIVE STREET
ST. LOUIS 8, MISSOURI

D. A. Smith, Ph. D.
Isotopes Branch
Division of Licensing & Regulation,
U.S. Atomic Energy Commission
Washington 25, D. C.



RE: DLR:IB:DAS

Dear Dr. Smith:

On May 4th this year, we wrote you requesting approval of certain modifications in the fabrication of the capsule (source link) to be employed with the Commando Cobalt 60 Teletherapy unit. Your reply dated May 12th, with the subject reference, granted permission to employ the modified capsule with units then constructed and in inventory.

Subsequent to this correspondence, we were advised by the Instruments Division of The Budd Company who load our capsules, that they had adopted a policy of sealing all capsules loaded by them with a Heliarc weld. They further advised that the configuration of our capsule body and the screw plug provided for its closure prohibited reliable welding with the special welding equipment which they had acquired for this purpose.

As a result, they requested certain tentative modifications in the capsule which they believed would enable them to make a satisfactory welded seal. Since that time we have provided them several capsules for trial welds. Based on these trial welds certain detailed changes in the fabrication of our capsule (source link) as originally set forth on our drawing no. 1950, copies of which accompanied our letter of May 4th, have been agreed upon. These changes have been incorporated in drawing #1950 as a revision. Three copies of the revised drawing are enclosed.

Essentially, a revision involves a substitution of a 1/8" thick stainless steel plug which is a press fit in the body of the capsule to replace the screw plug originally employed. This plug is sealed in place by Heliarc welding of the exposed joint between the plug and the body of the capsule after the plug is pressed home. The use of a press fit for this closure as well as the use of the Heliarc method of welding is in

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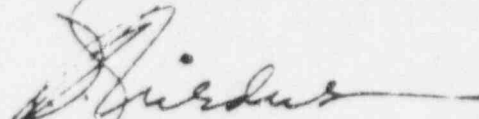
accordance with the recommendations of ORNL as stated by Mr. E. E. Pierce.

As of this date, no loaded capsules have been sealed employing this method. Approval is requested, however, for the use of this method on subsequent encapsulations required to load completed units which were in our inventory on May 4th, and in addition, to re-encapsulate the activity which will be removed from the leaking capsule removed from the Commando unit owned and operated by the Washington University Medical School at the Mallinckrodt Institute here in St. Louis, Missouri,

As stated, the proposed changes are in accordance with recommendations of the ORNL. In addition the encapsulator has demonstrated by practice welds that a high degree of quality control can be exercised in producing a securely welded seal in this capsule. Your approval is recommended. We trust you will be able to give this matter your early attention. Thank you for your cooperation.

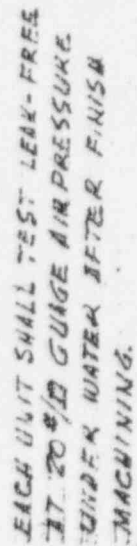
Yours very truly,

THE DICK X-RAY COMPANY


Vice-President

FBNiedner/je

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ENCAPSULATOR PRESS PLUG HOME
SEAL WITH WELIARC" CIRCUMFER-
ENTIAL WELD AT EXPOSED JOINT "X"
BELLOW NO WELD SPATTER ON CYLIN-
DRICAL SURFACE OF LINE.

TITLE	REVISIONS	DATE	ST-FILE
SOURCE LINK			DOUBLE
1. REPLACE SCREW PLUG WITH PRESS-FIT PLUG		6-1-60	TOLERANCES UNLESS SPEC.
			FRACTION ± 1/64
			DEC. ± .002
			ANGLES ± 1/2°
MAT'L:	TYPE 416 STAINLESS	DATE: 9-1-59	
FINISH:	#5		
			THE DICK X-RAY CO. ST. LOUIS, MISSOURI