

Mallinckrodt

BOX 10172 LAMBERT FIELD • ST. LOUIS, MISSOURI 63145 • 314 AX 1-0540

NUCLEAR

March 11, 1970

Jack R. Roeder, Chief
Materials Inspection and
Enforcement Branch
Division of Compliance
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Roeder:

The purpose of this letter is to inform you of the exposure of an individual to Iodine-125. We were recently in telephone contact with your Region III office and informed them of the exposure. At that time we inquired whether there is a reporting requirement for exposures to Iodine-125, as there is for exposures to Iodine-131. We received a return call from them advising us to report the exposure to you in writing.

We were first aware of the exposure on January 15, 1970, when the first Iodine-125 thyroid burden measurements were performed on new equipment purchased for that purpose. Burdens of approximately 1.24 microcuries of Iodine-125 and 0.015 microcuries of Iodine-131 were measured in the thyroid gland of one individual at that time. The individual was immediately removed from further exposure to Iodine-125 or Iodine-131 and will remain so through the current quarter ending April 5, 1970.

The activity in the gland has been diminishing with approximately a 42 day half life, as expected. The projected burden during the last week of the quarter is 0.36 microcuries of Iodine-125.

We believe that the production of Sodium Iodide I-125 Diagnostic Capsules may have been the cause of the exposure, although no conclusive evidence was found. This particular production procedure was modified as a precautionary measure.

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MALLINCKRODT CHEMICAL WORKS

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in accordance with the Freedom of Information
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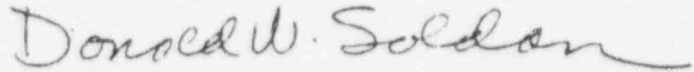
Jack R. Roeder
March 11, 1970

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Spot checks for Iodine-125 thyroid burdens performed prior to January 15, 1970 with the old equipment did not indicate that any problems existed. Routine measurements performed since that time with the new equipment have shown that no other individual has had a significant Iodine-125 thyroid burden to date.

Sincerely yours,

MALLINCKRODT CHEMICAL WORKS
MALLINCKRODT/NUCLEAR



Donald W. Soldan, Chief
Radiological Protection Officer

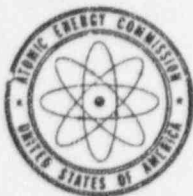
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cc: Director USAEC Region III

The individual referred to in this report is:

[REDACTED]
Social Security Number [REDACTED]

Date of Birth - [REDACTED]



UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

Material File

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1-17-72

TELEPHONE
(312) 858-2660

January 11, 1972

Mallinckrodt Chemical Works
Mallinckrodt/Nuclear
ATTN: Mr. W. E. Brissell
Director of Operations
Box 10172 Lambert Field
St. Louis, Missouri 63145

Gentlemen:

Thank you for your letter dated January 7, 1972, informing us of the steps you have taken to correct the items of apparent noncompliance which we brought to your attention in our letter dated December 23, 1971. We will examine these matters during our next inspection.

Your cooperation with us is appreciated.

Sincerely yours,

Boyce H. Orier
Regional Director

bcc w/ltr dtd 1-7-72:
G. W. Roy, CO (2)
L. Kornblith, CO
R. H. Engelken, CO
CO Files
PDR
NSIC

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