

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

July 20, 1973

Mr. F. E. Kruesi, Director
Directorate of Regulatory Operations
U. S. Atomic Energy Commission
Washington, D. C. 20545

Reference: USAEC License
No. 24-04206-01

Gentlemen:

A chemist working in our tritium laboratory on July 14, 1973, was exposed to airborne concentrations of tritium released when a refrigerator was opened in which a small amount of the tritiated product had volatilized in sufficient quantity to cause the tritium monitor to alarm.

A best fit curve of the initial urinalyses data indicated that the urinary concentration of tritium was 420 microcuries per liter on July 14, 1973, decreasing with an apparent half-life of 1.7 days. The concentration is approximately 35 microcuries per liter at this time. A special meeting of the Radiological Protection Committee was held at which the exposed individual related the circumstances leading to the exposure. The individual stated that he had placed a solution of the tritiated product in the refrigerator in an unstoppered container on the day before and surmised that the volatilization had occurred overnight.

It was pointed out by a Committee member that no specific written instruction existed which informed the individual that all radioactive materials stored in a refrigerator should be stoppered.

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MALLINCKRODT CHEMICAL WORKS

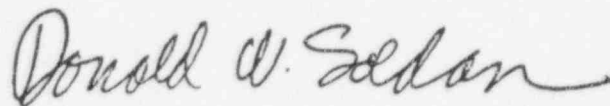
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The Committee so advised the individual and recommended that a new set of instructions be prepared which included this specific instruction, and any additional instructions as may be pertinent to the tritium operation.

Sincerely yours,

MALLINCKRODT NUCLEAR
MALLINCKRODT CHEMICAL WORKS

A handwritten signature in cursive script, reading "Donald W. Soldan".

Donald W. Soldan
Chief, Radiological
Protection Officer

DWS: ja

cc: Director Region III
Directorate of Regulatory Operations

The individual referred to in this report is:

NAME:

SOCIAL SECURITY NUMBER:

DATE OF BIRTH:



Ex 6