Director, Division of Licensing and Regulation
United States Atomic Energy Commission
Washington 25, D. C.

Gentlemen:

This report is being filed to comply with Item 17E of NRC product Material License No. 20-1537-2 Amendment No. 5.

Twelve pressure measuring devices each containing approximately 375 mc of H^3 were purchased by the licensee from NRC Equipment Corporation, Needham, Massachusetts, the first delivered in June, 1959 and the remaining eleven in January 1960. The H^3 is incorporated in the form of Titanium hydride (reportedly deposited electrolytically) on a stainless steel foil. The area of the foil in each device is 3/8 $inch^2$. The foil was purchased with activity by NRC Equipment Corporation from Radiation Research Corporation, New York City, N. Y., the manufacturer. It is designated by the manufacturer as a model [illegible] tritium source and is classified as a sealed source.

Initial wipes were taken by the licensee on the outside surfaces of the devices [illegible] as they were received from the manufacturer. Removable activity found at that time was well within permissible limits. Periodic checks at intervals prescribed in condition 17C of the above license also showed removable activity well within permissible limits. Recently, however, it became necessary to open one of these devices to make repairs. At that time, the source-foil was removed and the interior of the device was checked for contamination. In this check approximately 0.5 µc was detected on a wipe of the inside of the device at that time. Similarly, 0.5 µc was easily wiped from the active surface of the source itself. Two more of the devices were then opened and checked as above with similar results. A sample of the oil from the vacuum pump on the system these devices were coupled to was measured also and results indicated that the oil in the pump contained a total of 0.04 µc.

ITEM # 5

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[illegible]
[illegible]
of exceeding [illegible] 100[illegible]

The devices have been taken out of service [illegible] being disassembled and decontaminated under well controlled conditions. The foils containing the activity are being returned to NRC Equipment Corporation, who plan to return them to their manufacturer, after inspection.

Please do not hesitate to contact me if any further information is required.

Yours truly,

Frank Masse
Asst Radiological Safety Officer

FM/spc

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