



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

AUG 22 1985

Docket No. 030-21280
Control No. 103979

State of Connecticut Health Laboratory
ATTN: Ms. Janet B. Kapish
Assistant Director
10 Clinton Street
P.O. Box 1689
Hartford, Connecticut 06101

Gentlemen:

This is in reference to your application dated May 13, 1985 for a byproduct material license. In order to continue our review, we need the following additional information:

In providing the requested information, please refer to the enclosed guide.

1. Section 20.207 of 10 CFR Part 20 states that (1) licensed materials stored in an unrestricted area must be secured from unauthorized removal from the place of storage and (2) licensed materials in an unrestricted area and not in storage must be under the constant surveillance and immediate control of the licensee. Please confirm that the room, laboratory, or area will be locked when an authorized person is not present.
2. Please provide your procedure for disposal of the foils when use has been discontinued. If you will return the foils to the supplier for disposal, please specify this.
3. Please provide your leak test procedures for the nickel-63 foil. If you will use a commercial leak test kit, please provide the name of the supplier and model number of the kit. If you conduct your own leak tests, please provide descriptions of the following:
 - a. The materials and procedures used for collecting leak test samples.
 - b. The name of the manufacturer and model number of the measuring instrument used to analyze leak test samples.
 - c. Your procedures for calibration of the measuring instrument including a sample calculation showing how leak test results are converted to microcuries.

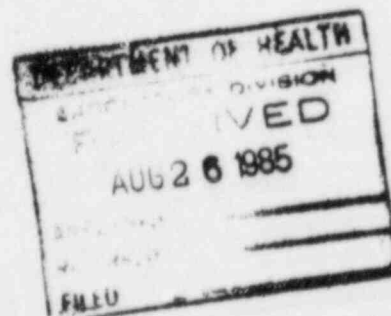
We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 103979.

Sincerely,

Francis M. Costello
for John D. Kinneman, Chief
Nuclear Materials Safety Section A
Division of Radiation Safety
and Safeguards

Enclosures:

1. 10 CFR Part 20
2. "Guide For The Preparation Of Applications For Licenses For The Use Of Sealed Sources In Gas Chromatography Devices and X-Ray Fluorescence Analyzers".



S E R I A L

NICKEL 63 ELECTRON CAPTURE DETECTOR
(RADIOACTIVE LEAK) WIPE TEST KIT INSTRUCTIONS

A. GENERAL

In the United States, the N.R.C. (or State agency in "Agreement States") requires Hewlett-Packard Ni63 Electron Capture Detectors to be tested for radioactive leakage and/or contamination at intervals not to exceed six (6) months. It is essential that this test be performed in order to assure regulatory compliance. Owners in other countries should check local and national regulations for equivalent requirements. The user's first leak test should be performed no later than six months from the date on the HP wipe test certificate which accompanies the detector. This test certificate and all subsequent leak test records must be retained as evidence of regulatory compliance.

WARNING: Ni63 is a beta emitter with an energy maximum of 0.067 MeV. (It is generally considered that greater than 0.070 MeV is required to penetrate the protective layer of skin). However, Ni63 may be injurious if ingested even in microgram quantities, and adequate measures to prevent ingestion must be taken, including the use of disposable plastic gloves, good laboratory practice, and good personal hygiene (cleanliness).

B. SERIAL NUMBER BREAK

This note is applicable to any Hewlett-Packard instrument which has a Nickel-63 Electron Capture Detector, factory or field installed.



✓C LEAK (WIPE) TEST KIT 18713-60050

Contains the following:

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QTY.</u>
1	Information Card	18713-90040	12
2	Filter Paper #41	3152-0055	12
3	Plastic Bags 4" x 8"	9222-0308	12
4	Envelope-Wipe Test Kit	05750-80036	4
5	Service Note 5700A-5	5950-3586	1

✓D PERFORMING THE LEAK(WIPE) TEST

The test should be performed as follows:

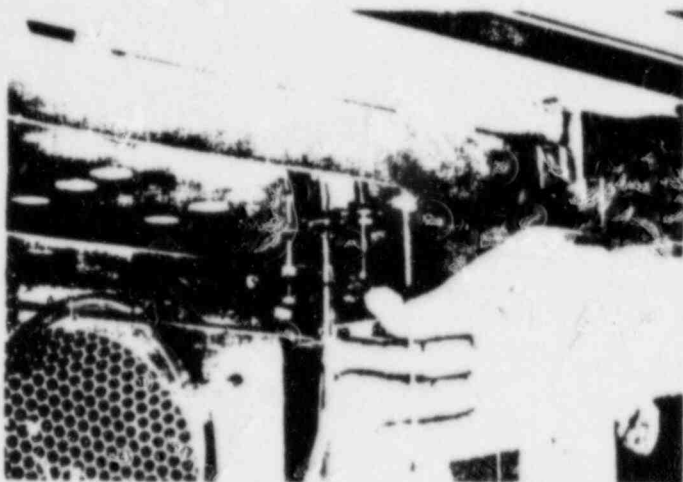
1. Select three information cards (Item 1) and fill out completely.
2. Select three pieces of filter paper (Item 2) and label them with a pencil as follows:
Sample 1 - Det. Entrance Fitting
Sample 2 - Det. Housing
Sample 3 - Det. Exit
3. Disconnect the column from the FC Cell.
4. Wipe the inside and outside of the detector entrance fitting (including column and adapter connections) with the piece of filter paper labelled "Det. Entrance Fitting, Sample 1", see Figure 1-A, B, C and D. Immediately insert it and a filled-out information card into one of the plastic bags (Item 3).
5. Wipe the detector housing (outside case) with the filter paper labelled "Det. Housing, Sample 2", see Figure 2-A, B, C and D, and insert it and filled-out information card into a second plastic bag.
6. Disconnect the exit tube, if removable (tube where vent line is attached), from the detector. Wipe the inside of the metal detector exit tube and/or the inside of the vent line with the filter paper labelled "Det. Exit, Sample 3", see Figure 3-A, B, C and D, and insert it and a filled-out information card into a third plastic bag.

7. Place the three plastic bags into one of the envelopes (Item 4) addressed to Nuclear Radiation Developments Inc., along with your purchase order to cover the cost of the test.

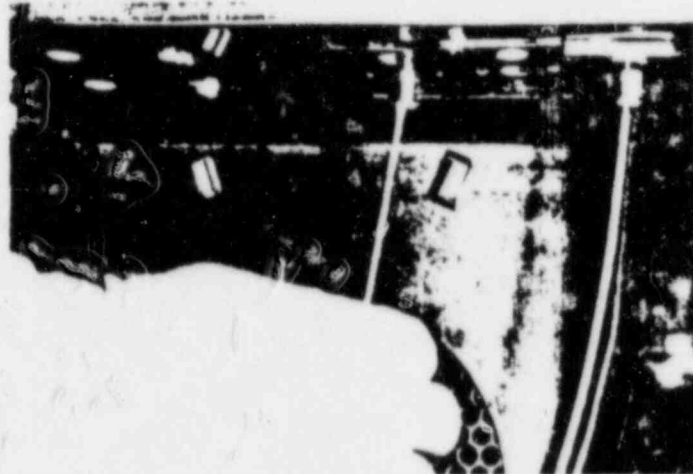
Nuclear Radiation Developments Inc.
2937 ALT Blvd.
Grand Island, NY 14072
PHONE: 1-716-773-7634

8. Sufficient material is supplied in each kit to perform four wipe tests. Extra Leakage Test Kits (Part No. 18713-60050) can be purchased from Hewlett-Packard by calling the local HP Sales Office.

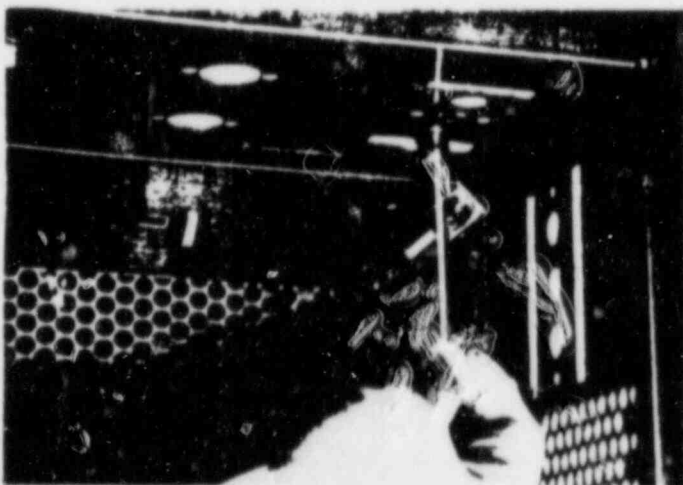
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A - 5880



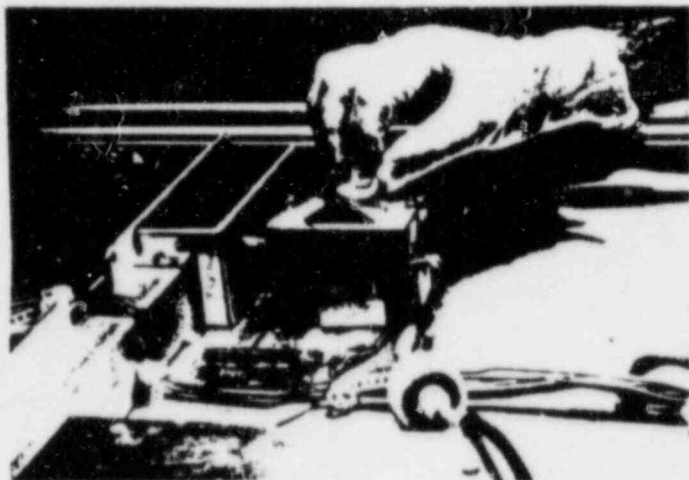
B - 5830/10



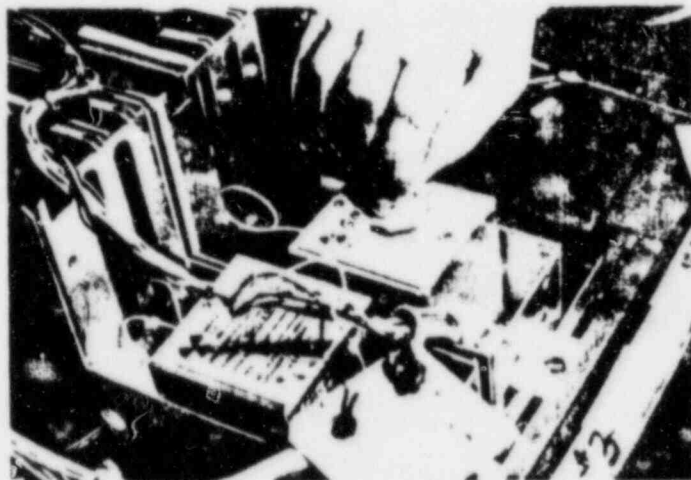
C - 5710/30



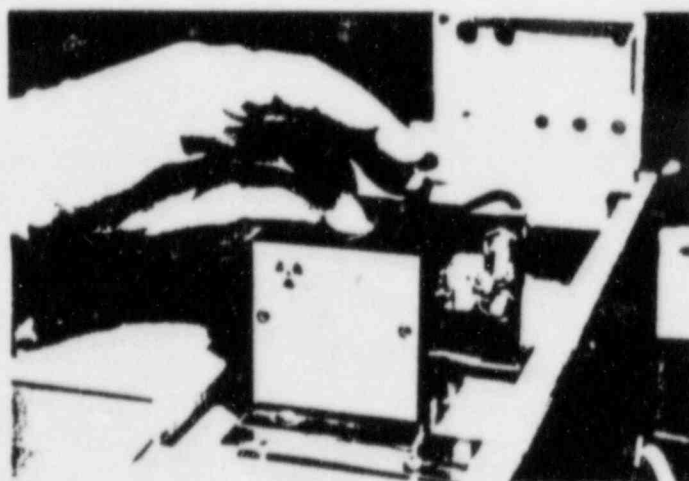
D - Older Instruments



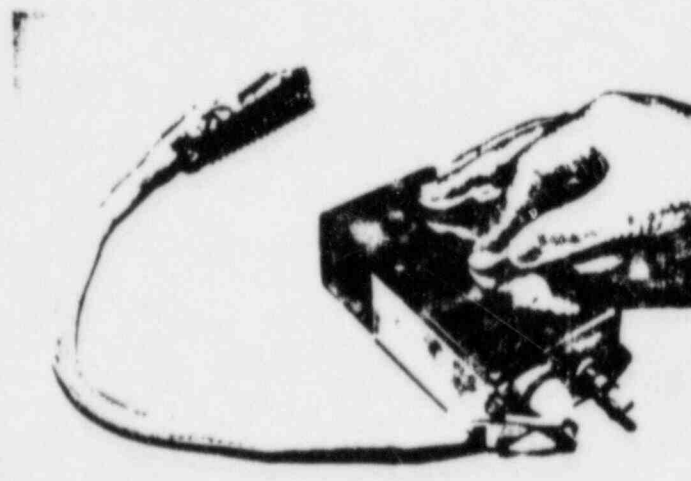
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B - 5850/10

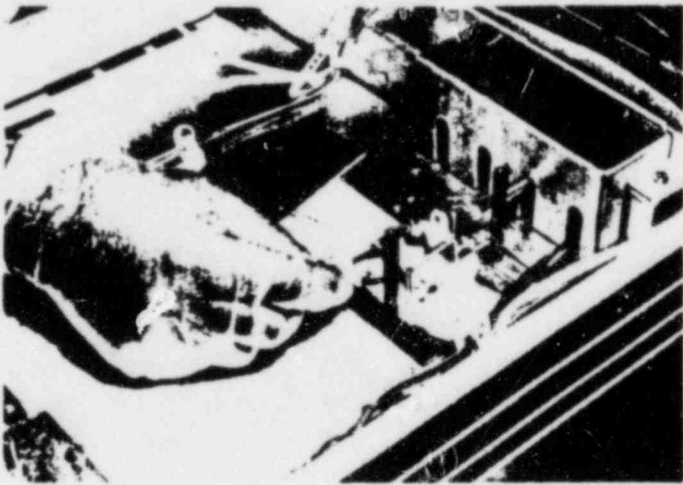


C - 5710/50

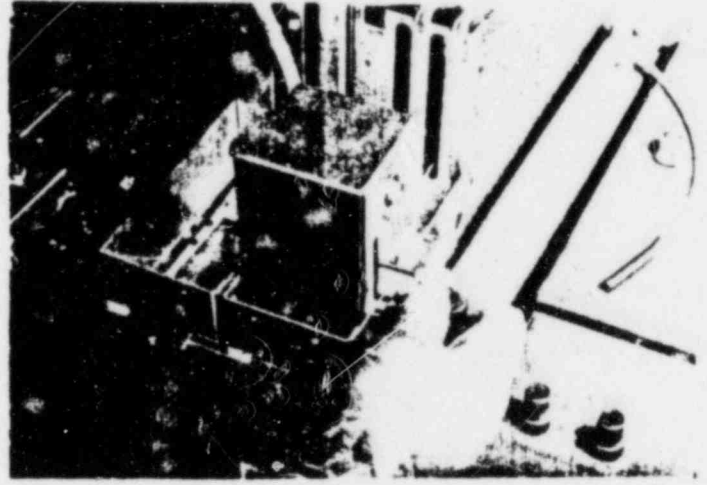


D - Older Instruments

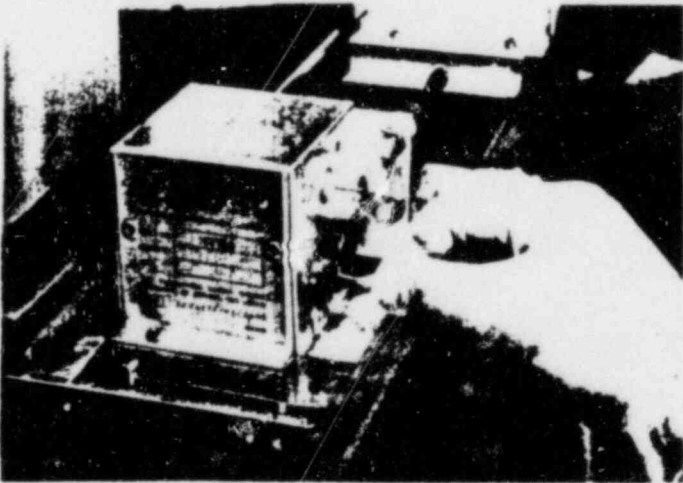
FIGURE 2
DETECTOR HOUSING SAMPLE



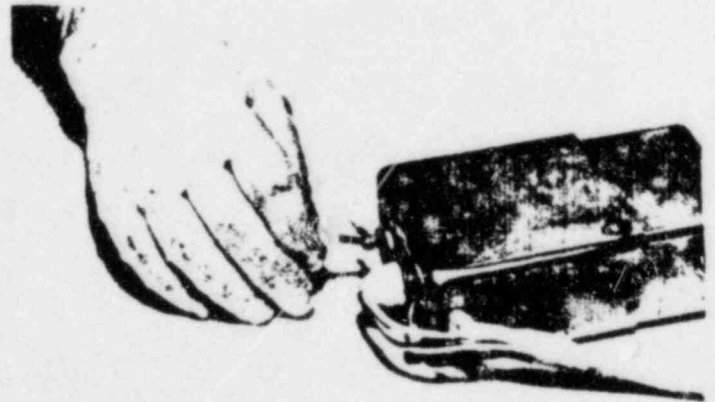
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RI:DRSS *J.M.P.* / *FMC* RI:DRSS
Piccone/rw Kinneman
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