

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 030-12688/93-001

License No. 29-06760-08

Docket No. 030-12688 Priority 4 Category G Program Code 2200

Licensee: Radiology-Ultrasound-Nuclear Consultants, PA
Radiation-Oncology Clinic
303 West Main Street
Freehold, New Jersey 07728

Facility Name: Radiology-Ultrasound-Nuclear Consultants, PA
Radiation-Oncology Clinic

Inspection at: 303 West Main Street
Freehold, New Jersey 07728

Inspection Date: April 30, 1993

Inspector: Mary Cahill
Mary Cahill, Health Physicist

May 17, 1993
Date

Approved by: [Signature]
James P. Dwyer, Acting Chief
Medical Inspection Section

5/23/93
Date

Inspection Summary: Closeout inspection on April 30, 1993 (Inspection No. 030-12688/93-001).

Areas Inspection: Announced, closeout inspection limited to survey of facility for residual contamination prior to termination of license and release of facility for unrestricted use. Five wipe samples were taken and assayed for removable beta and gamma activity. The facility was surveyed to identify fixed radioactive contamination or materials remaining.

Results: No violations were identified. No residual radioactivity, significantly different from background, was identified. No detectable removable radioactive contamination was found. No remaining radioactive material was found.

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DETAILS

1. Persons Contacted

*G. Anthony Doener, M.D., Authorized User and
Radiation Safety Officer (RSO)
Hector Martos, Teledyne Isotopes

2. Background

Radiology-Ultrasound-Nuclear Consultants, P.A. is authorized by NRC License No. 29-06760-08 to use radioactive materials for performing diagnostic nuclear medicine studies and radiopharmaceutical therapy with iodine-131 in quantities less than 30 millicuries. The license also authorizes the storage of cobalt-60 wires with an activity of 300 millicuries.

Licensed material was used in the licensee's four basement room facility located at 303 West Main Street, Freehold, New Jersey. The licensee has ceased operations authorized by this license. In a letter dated February 22, 1993, Dr. G. Anthony Doener, Authorized User and Radiation Safety Officer, requested that his license be terminated and stated that the cobalt-60 wires had been disposed of through Teledyne Isotopes. In addition, in a telephone conversation between the inspector and Dr. Doener on April 22, 1993, Dr. Doener stated that Teledyne Isotopes was scheduled to pick up remaining sealed sources the week of April 26, 1993. These sources included one cesium-137 and two state licensed sealed sources (cobalt-57 and radium-226).

Dr. Doener had possessed a second NRC license (License No. 29-06760-07) which authorized him to perform teletherapy treatments with a cobalt-60 source at the 303 West Main Street facility. This second license was terminated in April 1993.

3.0 Instrument Used in Surveys

Measurements were made by the inspector in the 303 West Main Street facilities. Radiation level surveys were performed with a Ludlum Model 19 Survey Meter containing a sodium iodide detector and a Ludlum Model 14C Survey Meter equipped with a Model 44-7 thin end window G-M detector. Background radiation levels measured with these instruments were $5\mu\text{R/hr}$ and 400 cpm, respectively.

Wipe samples were analyzed for gamma and beta activity with a Gamma Tech intrinsic germanium detector and an LB 50100 low background gas flow proportional counter. The lower limit of detection for gross beta activity is 8 dpm. The LLD for cobalt-60, cobalt-57, and iodine-131 is $7\text{E-}5\ \mu\text{Ci}$, $5\text{E-}5\ \mu\text{Ci}$, and $2\text{E-}4\ \mu\text{Ci}$, respectively.

4.0 Radiation Survey

In areas where the licensee used or stored licensed material at the above named facility, radiation surveys were conducted by the inspector using both survey instruments identified in Section 3 of this report. Areas of radioactive materials use included the hot laboratory and camera room, and the room in which the cobalt-60 wires were stored (the teletherapy unit was also previously located in this room). The floors, walls, sinks, and shelving were surveyed. Most of the furniture, instrumentation, and related equipment had been removed from the facility prior to the inspection.

Radiation levels measured with the Model 19 and Model 14C survey instrument did not exceed $7\mu\text{R/hr}$ and 600 cpm, respectively. These results were not significantly different from background measurements given in Section 3. No remaining radioactive materials were identified through these measurements.

5. Wipe Survey

A wipe survey for removable radioactive contamination was performed. A total of five wipes were taken of selected areas in rooms where radioactive materials had been stored or used. A diagram of the locations where wipe samples were taken and the results of the wipe surveys are indicated in Attachments A and B, respectively. As shown, wipe survey results indicated that no removable contamination was detected on the wipe samples.

6.0 Transfer of Licensed Material

At the time of the inspection, a representative of Teledyne Isotopes retrieved a cesium-137, cobalt-57, and radium-226 sealed sources. The activity of the cesium-137 source, according to the licensee, was 10 microcuries. A copy of the disposal manifest is attached (Attachment C).

The Teledyne Isotopes representative stated that the cobalt-60 wires with a total activity of 44 millicuries, were picked by Teledyne Isotopes in November 1992. This concurred with information provided by the licensee in the letter dated February 22, 1993.

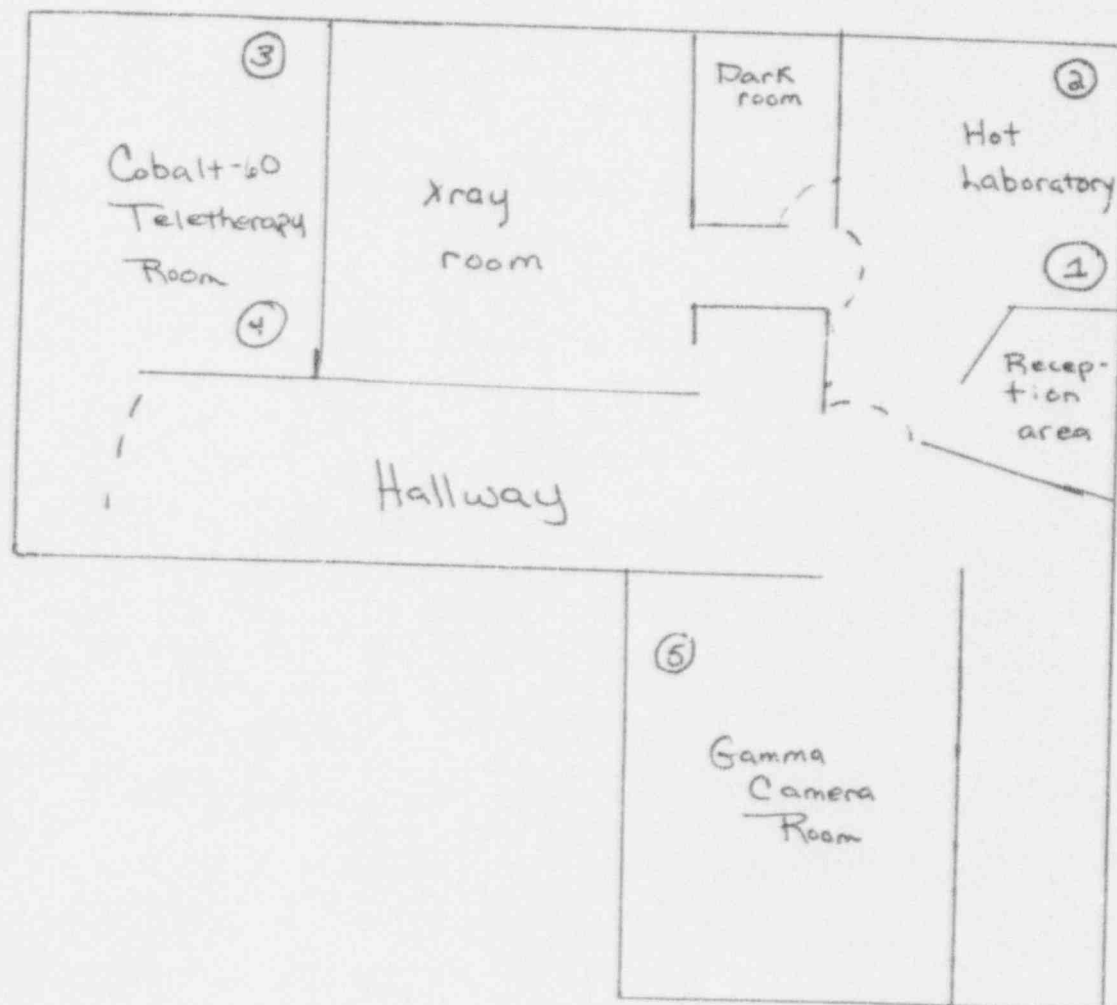
Surveys were performed by the inspector following removal of the sealed sources from the facility.

7.0 Exit Interview

The preliminary results of the closeout safety inspection were discussed with Dr. Doener.

ATTACHMENT A

Diagram of Removable Contamination Survey



ATTACHMENT B

RESULTS OF REMOVABLE CONTAMINATION SURVEY

Location	Gross Beta Activity	Gamma Activity of All Wipes Combined (μCi)		
		Cobalt 60	Cobalt 57	Iodine 131
1. Floor	< LLD ^a	< LLD ^b	< LLD ^c	< LLD ^d
2. Shelf	< LLD			
3. Floor	< LLD			
4. Floor	< LLD			
5. Counter	< LLD			

a LLD = 8 dpm

b LLD = $7\text{E-}5 \mu\text{Ci}$ c LLD = $5\text{E-}5 \mu\text{Ci}$ d LLD = $2\text{E-}4 \mu\text{Ci}$