

# THE FAIRFAX HOSPITAL



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JUN 26 9:23

## RADIATION PHYSICS SERVICES

3300 Galloway Rd., Falls Church, Va. 22046 ph. 696-3394

Mr. William E. Cline, Chief  
Nuclear Materials Safety and  
Safeguards Branch  
Division of Radiation Safety  
and Safeguards  
U.S. NRC, Region II  
101 Marietta St. N.W.  
Atlanta, GA 30323

Docket No. 030-20648  
License No. 45-17128-03

Dear Mr. Cline

In response to your letter of Aug. 9, 1988, we offer the following additional information relative to the source change which we performed on our Cobalt 60 teletherapy unit on Jan. 15, 1988 (reference our previous submissions dated Jan. 18, 1988 and May 24, 1988).

- As we discussed on the phone two days ago, I am the Radiation Safety Officer for the Fairfax Hospital; therefore my signature of the submitted reports covers the requirement 10 CFR 35.641(c).
- Enclosed is a revised version of the facility survey which we submitted with the May 24, 1988 material. This revised table includes calculations of the maximum weekly radiation levels which may occur for this facility as required by 10 CFR 35.641(c).
- Again, as we discussed by phone, we check the viewing system for proper operation daily before any treatments are given. Thus we are meeting the requirements of 10 CFR 35.634(d)(4) relative to spot-checks.

I believe this answers the questions which you had raised, but if you need more information please let me know.

Sincerely,

James A. Deye, Ph.D.  
RSO, Fairfax Hospital

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Area Radiation Survey of  
CGR ALCYON II TELETHERAPY FACILITY  
The Fairfax Hospital

Source: Co-60, 6507 Ci on Jan. 15, 1988, Mod. no. COT-20 sn 3415

Phantom: 25 cm cube, polystyrene

Source to phantom distance: 67.5 cm

Field Size (maximum): 32 X 32 cm

Workload: estimated maximum = 80,000 R/wk at isocenter or approx. 3.7 hrs/wk beam "on" time.

Phantom	Gantry Angle	Location	(un) restricted	Reading(mR/hr)	U	T	mR/wk
N	270°	A. dressing rm	un	0.8	.25	.25	0.34
N	90°	C. window (max)	re	1.0	.25	1	1.68
N	90°	C. door (max)	re	0.6	.25	1	1.00
N	90°	C. wall (max)	re	<0.2	1	1	<1.3
N	180°	E. outpt. entrance (max)	un	0.2	.25	.25	0.08
Y	270°	A. dressing rm (max)	un	0.5	1	.25	0.84
Y	270°	B. control panel	re	<0.2	1	1	<1.3
Y	270°	C. window	re	0.4	1	1	2.7
Y	270°	C. door	re	0.3	1	1	2.0
Y	90°	C. window (max)	re	3.0	.25	1	5.0max
Y	90°	C. door (max)	re	2.0	.25	1	3.4max
Y	90°	C. wall (max)	re	<0.2	1	1	<1.3

Notes:

1. 0° is toward the floor
2. 270° is toward the south wall (i.e. dressing rm. wall)
3. All measurements made with the Victoreen 470A Survey Meter (sn 1439)
4. See Fig 3 and 4 (page 7 and 7a) for location of measurements
5. Locations A, B and C are controlled areas and location E is uncontrolled
6. U is the use-factor and T is the occupancy-factor.
7. The last column contains the calculated estimates of weekly exposures to each area

Conclusion:

Based on these measurements, radiation levels in all areas are less than 3 mR/hr. Hence it is not likely that radiation dose levels will exceed those limits set by 10 CFR Part 20.

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DATE 4-4-88  
TIME 8:40 ☒ A.M.  
☐ P.M.

TELEPHONE OR VERBAL CONVERSATION RECORD

☐ INCOMING CALL

☒ OUTGOING CALL

☐ VISIT

PERSON CALLING

Ed Kline

OFFICE/ADDRESS

R II

PHONE NUMBER

EXTENSION

404-331-5084

PERSON CALLED

James A. Deye, Ph.D.

OFFICE/ADDRESS

RSO - The Fairfax Hospital  
Falls Church, VA

PHONE NUMBER

EXTENSION

703-698-3705

CONVERSATION

SUBJECT

New Teletherapy Source Change

SUMMARY

- Deye, Ph.D. submitted letter to RII-NRC dated 1-18-88 notifying us of new teletherapy source change on 1-15-88. Deye performed a head survey (enclosed in letter) and stated calibrated output. Also Deye requested he use old room survey data since old vs new output very similar (128.8 Rmm vs 130.9 Rmm) & no changes in room structure.
- Discussed w Deye new Part 35 which requires more documentation sent to NRC for approval (see attachment)
- Requested Deye send in:
  - Field Calibration Data
  - Safety checks of all systems
  - Survey of restricted & unrestricted areas
- Dr. Deye was not in office. Expect back 4-7-88. Left J. Arto, RII. name w secretary & had Dr. Deye call me. Potted.

REFERRED TO:

☐ ADVISE ME OF ACTION TAKEN.

ACTION REQUESTED

Deye to send appropriate copies of required tests to RII ASAP. Deye called 4-5-88. Will submit all of required info.

INITIALS

DATE

ACTION TAKEN

Info to be received

INITIALS

DATE

FAIRFAX HOSPITAL