



**Oil City Area
Health Center, Inc.**

A member of Horizon Health Group

Writer's Direct Dial Number
814/677 - _____

October 30, 1990

Mohamed M. Shanbaky, Chief
Nuclear Materials Safety Section "A"
Division of Radiation of Safety & Safeguards
Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pa. 19406

Dear Sir:

This letter relates to your inspection conducted on our facility on August 27, 1990. Our License Number is 37-01599-03. The docket number is 030-08756 and the Inspection Number is 030-08756/90-001.

As per your inspection, two areas of non-compliance needed to be addressed. The first part relates to the monthly spot checks. The information in your letter was relayed to Dr. Virgil Yoder, the Certified Radiation Physics who is employed by the Health Center. To comply with these spot checks he has created a new form and series of procedures for us to follow which in his opinion would correct these violations. We will initiate the spot check program immediately and hopefully this will be satisfactory. If you have any suggestions or criticism of the form or methodology please contact us.

The second area of violation was that the Physicist did not review the spot checks and return them to us within 15 days. I have been personally assured by the technicians involved as well as the Physicist that they will extend every effort to be prompt and expedite the review of these checks.

These changes should correct the violations encountered. If you have any comments or changes to suggest we would be more than happy to receive them.

Sincerely yours,

Neil E. Todhunter, Chief Executive Officer
Oil City Area Health Center
174 E. Bissell Ave.
Oil City, Penna. 16301

DMR:mhm

CC: D.M. Reamer
Billy Pittser

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COBALT-60 TELETHERAPY: MONTHLY SPOT-CHECKS

OIL CITY AREA HEALTH CENTER, OIL CITY, PA

PICKER C-9

DATE:					
INITIALS:					
Nuclear Associates Model 05-596 Diode Detector					
ITEM TESTED	<u>Reading</u>	<u>Normalized to 1.00 minute</u>	<u>Reading</u>	<u>Normalized to 1.00 minute</u>	<u>Reading</u> <u>Normalized to 1.00 minute</u>
Output & timer constancy: measured output for 1.00 (1)					
minute timer setting. (2)					
(3)					
(4)					
Coefficient of variation:					
Average output (R/min):					
Expected R/min (calculated)					
To determine timer error: measured output for three (1)					
20 second exposures. (2)					
Timer linearity: 0.50 min. measured output for 1.00 min.					
timer setting of: 2.00 min.					
3.00 min.					
4.00 min.					
Coefficient of variation:					
Timer constancy & linearity O.K.?					
Measured timer on/off error.					
Variation: Measured/Expected R/min (%)					
Optical distance indicator: distance error for indicated distance of 80.0 cm.					
Check for proper operation of: Treatment room door					
Door interlock					
Head rotation interlocks					
Beam on/off warning lights					
TV and mirror viewing					

OIL CITY AREA HEALTH CENTER
OIL CITY, PA

MONTHLY SPOT CHECKS: Co-60 TELETHERAPY

1. Set 80 cm SSD to couch top. Check accuracy of optical distance indicator for 80 cm SSD by direct measurement (35 cm from retracted trimmer bars). Mark any difference of measured versus indicated in the box on the form opposite "optical distance indicator".
2. Extend trimmer bars. Place film in cardboard cassette on couch top. Adjust collimators for 15 x 15 or 20 x 20 cm light field. Mark edges of light field either by a lead marker touching each edge of the field or by a coin touching each inside corner of the light field. With coins, it works better to provide some build-up with a plastic plate or even a writing pad or magazine placed on top of the coins and cassette. In that case it helps to tape the coins down first. Make a single exposure of about 5R. The exposure may have to be adjusted up or down if the film turns out too light or too dark. To compare light field with radiation field, it may help to draw lines on the film marking the edges of the light field.
3. Position the diode detector on the couch top, in the center of a 10 x 10 cm field (trimmer bars extended). Make four successive exposures at 1.00 minute timer setting and record the four readings in the section "output and timer constancy", after the numbers (1)-(4). One of these may also be used as the 1.00 minute reading for #5 below.
4. Take a reading for three successive exposures at 20 seconds timer setting (resetting the timer after each exposure but not resetting the Diode Detector). Record this cumulative reading in the next section on the form for "determine timer error". Repeat this procedure to get a second reading.
5. Make exposures for the times (0.50 to 4.00 minutes) listed in the next section on the form, "timer linearity", and record each reading opposite the timer setting.
6. Check for proper operation of the five items at the bottom of the column, and check off in the appropriate box.
7. When you send me the form, I will do the calculations and fill in the rest of the form. You don't need to send me the light field/radiation field film. I think any significant variance between the two will be readily apparent to your eyes. I would say that any misalignment not more than 3 mm would be acceptable.