



Luther Hospital

1221 Whipple Street
Eau Claire, Wisconsin
54702-4105

Phone (715) 839-3311

May 7, 1985

Ms. Patricia J. Whiston
Materials Licensing Section
Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Ms. Whiston:

RE: License No. 48-02122-04
Control Number 78629

Enclosed in duplicate is a letter from our physicist which answers the questions in your letter of April 19, 1985.

I trust all of the questions have been answered in a satisfactory manner.

Sincerely,

Donald N. Johnson
Vice President
Professional Services

cs
Enclosure
cc: Gerald C. Pauls

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Luther Hospital

1221 Whipple Street
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May 3, 1985

Gerald C. Pauls
Radiology
Luther Hospital
1221 Whipple Street
Eau Claire, WI 54702-4105

Control No. 78629

Dear Mr. Pauls:

Here is the information requested by the NRC on the Cobalt-60 radiation survey.

- 1a. The door interlock was tested by opening the door during beam "on". The timer stopped and the beam went to the "off" condition. The unit did not start when the door was shut until the timer was placed in the "on" position and the unit turned "on" by the key switch. This meets condition 17 of the license.
- 1b. The teletherapy "on-off" indicators were checked in two ways. First by the white electric light of the "zone guard" on the cobalt head. When the light is "on" the beam can be turned to "on" at the console. This was verified by turning the unit "on" at the console. When the light was "off" the beam cannot be turned on at the console. This was verified by trying to turn on the beam at the console. The beam would not turn "on", i.e. timer did not come on nor any of the beam "on" red lights. Second, the beam condition was also verified by the Prime Alert radiation detector on the entry wall. With the beam "off" the Prime Alert indicator was green (No radiation above 2mR/hr). With the beam "on" the Prime Alert indicator was blinking red (radiation level above 2 mR/hr which only results with beam "on").

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In all cases there was direct agreement between the electrical/mechanical beam "on-off" indicators and the Prime Alert radiation indicator.

- 1c. The electrical/mechanical stops were tested as described in 1b. above to meet the conditions of the license. The license conditions are those listed on the first page of the "Report of Teletherapy Tests and Surveys" submitted under cover letter of March 28, 1985 by Gerald Pauls. The tests are sufficient to show that the primary beam is limited as per license conditions.
- 1d. The source returned to the "off" position at the end of the preset time as indicated by the red "beam on" lights on the cobalt head and console going "off". This was also verified by radiation measurement using the Prime Alert radiation monitor in the room. At the conclusion of the preset time, the Prime Alert went from blinking red (beam on) to green (beam off) as determined by radiation measurement. The source could not be turned "on" until the timer was reset and the keyed on switch activated.
2. The phantom used for radiation survey to adjacent areas was a polystyrene SCRAD radiation dose phantom with dimensions of 25 x 25 x 20 cm. (thickness of 20 cm.).

Sincerely,

J Thomas Payne PhD
J. Thomas Payne, Ph.D.

JTP:s