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St. Vincent Hospital
ATTN: Joseph J. Neidenbach
Administrator
P. O. Box 13508
Green Bay, WI 54307-3508

Gentlemen:

Please submit the following additional information regarding the teletherapy survey report dated October 14, 1986 submitted to our office:

1. Describe the limits of beam orientation permitted by electrical or mechanical stops installed on the teletherapy unit. Specify each direction in which the teletherapy head can be moved and the maximum angle orientation (e.g., 0° is vertical toward the floor; 90° is horizontal toward the east wall; 180° is vertical toward the ceiling; and 270° is horizontal toward the west wall). You may use sketches to describe the beam stops that limit the use of the primary beam. For units with an integral beam absorber, provide this information for orientation with the primary beam directed (a) toward the integral beam absorber and (b) away from the integral beam absorber.
2. Please submit the results of the survey performed of radiation levels in adjacent areas. Note that these measurements should be made during irradiation of a phantom at the normal treatment distance using maximum field size and include:
 - a. The phantom used, including the material of which it is made and its size;
 - b. The source-to-phantom distance; and
 - c. The field size (field size should be the maximum permitted by the collimators unless physical means are used to restrict field size).
3. Submit plan and elevation drawings or sketches of the teletherapy facility; a scale of $1/4$ inch = 1 foot is recommended. The drawings or sketches should:
 - a. Indicate the direction of north,
 - b. Show the location of the teletherapy unit and source within the treatment room;

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- c. Identify each area adjacent to the treatment room (including above and below);
 - d. Indicate the directions of primary beam usage and, in the case of an isocentric unit, the plane of rotation; and
 - e. Identify the locations at which radiation levels were measured.
- 4.
- a. Specify the mechanical and/or electrical beam stops that are operational and restrict beam orientation when the primary beam is directed toward the integral beam absorber. Specify each direction in which the teletherapy head can be moved and the maximum angle (from vertical) of the beam orientation in each direction.
 - b. Specify the mechanical and/or electrical beam stops that are operational and restrict beam orientation when the primary beam is directed away from the integral beam absorber. Specify each direction in which the teletherapy head can be moved and the maximum angle (from vertical) of beam orientation in each direction.
 - c. Describe the tests that were conducted to ensure that electrical and/or mechanical beam stops limit use of the primary beam in the manner described in your response to Items a. and b. above.
5. Although you indicate that certain safety systems operate "properly," you have not described the tests that were conducted to ensure their proper operation. Please describe the tests that were conducted to ensure proper operation of:
- a. Electrical interlocks on the teletherapy treatment room doors. Your tests should be sufficient to demonstrate that the interlock system operates in accordance with the requirements of Condition 17. of your license.
 - b. Teletherapy source "on-off" indicators, electrical and mechanical, both at the source housing and at the teletherapy machine control panel. You should use a method of cross-checking these indicators, such as using a radiation detection instrument, to ensure that the indicators correspond to the actual condition of the source.
 - c. Electrical and/or mechanical stops installed for the purpose of limiting use of the primary beam of radiation. Your tests should be sufficient to show that the stops limit use of the primary beam in the manner described in Item 4. above.

- d. Teletherapy treatment timing device. In addition to demonstrating timer accuracy, your tests should be sufficient to show that the source returns to the "off" position at the end of the preset time and that the source will not return to the "on" position until the timer is reset.
6. If a teletherapy source was removed, provide:
- a. The date of removal and
 - b. The name, address, and license number of the person or firm who took possession of the unit or source.

If you have any questions or require clarification on any of the information stated above, you may contact us at (312) 790-5625.

We will continue our review of your application upon receipt of this information. Please reply in duplicate, within 30 days, and refer to Control Number 82309.

Sincerely,

Original Signed By
Patricia J. Whiston
Materials Licensing Section

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