

DEC 27 1982

30-00134

30-01363

Memorial Medical Center  
ATTN: Mr. Jack M. Cook  
President  
800 North Rutledge Street  
Springfield, IL 62781

License No. 12-00089-01  
License No. 12-00089-02

Gentlemen:

This refers to the routine safety inspection conducted by Dr. L. W. Shatterly and Mr. D. R. Gibbons of this office on November 30, 1982, of activities authorized by NRC Byproduct Material Licenses No. 12-00089-01 and No. 12-00089-02 and to the discussion of our findings with selected members of your staff at the conclusion of the inspection.

The inspection was an examination of activities conducted under your license as they relate to radiation safety and to compliance with the Commission's rules and regulations and with the conditions of your license. The inspection consisted of a selective examination of procedures and representative records, observations, independent measurements, and interviews with personnel.

This inspection also included a measurement of the output of your teletherapy equipment. Our measurement was made using a Victoreen Model 570 Condenser R-Meter with Model 621 chamber, calibrated by the National Bureau of Standards Laboratory. The source-to-chamber distance was 80 centimeters and the field size used was 10 by 10 centimeters. After applying standard correction factors for temperature, pressure, attenuation, inverse square, backscatter, timer error, chamber factor, and roentgen-to-rad conversion, our measurement of the output of your teletherapy equipment was 178.6 rads per minute at the point of maximum buildup in a miniphantom. The most recent monthly spot check measurement of your teletherapy equipment, conducted on November 18, 1982, reported a measured output for the same exposure parameters of 183.03 rads per minute. Applying a correction factor to account for 12 days decay, the value calculated from the November 18, 1982 calibration becomes 182.24 rads per minute.

Based on the close agreement in measured output values, we feel the actual output of your teletherapy equipment to be within established guidelines of  $\pm 5$  percent.

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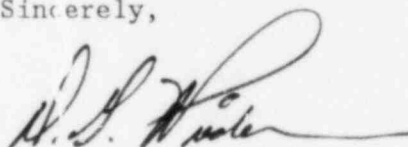
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During this inspection, certain of your activities appeared to be in non-compliance with NRC requirements, as specified in the enclosed Appendix. A written response is required.

The responses directed by this letter (and the accompanying Notice) are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,



D. G. Wiedeman, Chief  
Materials Radiation Protection  
Section 1

Enclosure: Appendix,  
Notice of Violation

cc w/encl:

Roland D. Cull, M.D., Director  
of Nuclear Medicine Dept.

Mr. Randy Maxey, Assistant RSO

Nicholas A. Detorie, Ph.D., RSO

DMB/Document Control Desk (RIDS)

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Gibbons/jp  
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Shatterly

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Wiedeman

12/28/82