St. Joseph Mercy Hospital

December 26, 1980

Francis A. St. Mary
Materials Licensing Branch
Division Fuels, Cycles & Material Safety
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. St. Mary:

This is in response to your letter dated October 21, 1980. The reference control number is 03053.

On October 27, 1980 the AECL Theratron 780 Teletherapy unit was reevaluated using a Victoreen condensor 100 R chamber model #621 Serial #12562. It was calibrated at the regional calibration laboratory in Cleveland, Ohio on October 23, 1980. It was calibrated at the Cobalt 60 calibration point. The output as stated in my report dated February 27, 1980 was found to be correct. The Victoreen 550 was checked against the 100 R Chamber. The chamber calibration factor used in the report dated February 27, 1980 with the Victoreen 550 was found to be still valid.

Enclosed is a report of the October 27, 1980 reevaluation of the Theratron 780.

Sincerely,

Jeffrey T. Colvin, M.S.
Radiological Physicist, ABR

JTC/ph

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THERATRON 780 REEVALUATION

For a 10x10 cm field at 80 cm TAD using a Victoreen condensor 100 R chamber for a 0.5 minute exposure, the following readings were obtained:

2-21-80

Chamber factor = 1.032

Temperature pressure correction factor = 0.994

$C\lambda$ = 0.95

72R x 1.032 x 0.994 x 0.95 x 2 = 140.3 rads per minute

140.3 rads per minute x 0.9159 = 128.5 rads per minute on 10-27-80.

10-27-80

Chamber factor = 1.036

Temperature pressure correction factor = 1.002

$C\lambda$ = 0.95

65 x 1.036 x 1.002 x 0.95 x 2 = 128.2 rads per minute on 10-27-80.

JC.