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Office Memorandum • UNITED STATES GOVERNMENT

TO : C. L. Dunham, Director, Division of Biology and Medicine, Washington DATE: DEC 13 1956

FROM : S. R. Sapirie, Manager, Oak Ridge Operations

SUBJECT: X-RAY EXPOSURE

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SYMBOL: ORB:CSS

Reference is made to your memorandum dated November 27, 1956, symbol EM:CLD, subject as above, with reference to a pilot study of x-ray exposures from the records of our Oak Ridge Community Hospital.

Preliminary discussions with Mr. Carl D. Jeffries, Director, and Robert P. Ball, M.D., Radiologist, indicate that there exists at the Oak Ridge Hospital exceptional opportunities for a pilot study of the actual exposure from diagnostic procedures. For each type of diagnostic examination at Oak Ridge Hospital a standard set of pictures is made and the milliamperage setting and the time and voltage used are recorded for each. At the present time it appears that completely reliable records are available for 30,000 to 35,000 exposures. From the data it will be possible, with a few additional dosimetry measurements, to make an estimate of dose for each exposure. In addition, the program of x-ray work at the Oak Ridge Hospital can provide indefinitely a continuing standard recording of all diagnostic exposures. From these records the dose calculations can readily be made. The standard recordings have been consistently kept since October, 1952.

In connection with obtaining data of interest to the Health Physics Division, ORNL, D. M. Davis and E. D. Gupton have made some limited phantom studies utilizing the Oak Ridge Hospital facilities. ORNL might be able to furnish some additional dosimetry measurements, but we believe outside resources would have to be provided for other phases of the pilot study.

We recommend that a member of your staff come to Oak Ridge and discuss plans for setting up the pilot study proposed. Dr. C. S. Shoup and Mr. H. J. McDuff of our Research and Development Division will be pleased to arrange for discussions with the Oak Ridge Hospital authorities in order to help activate a program of recording, if you feel this is desirable.

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MEDICINE, HEALTH & SAFETY - 3-9

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AUTHORITY: LOE-DPC
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4/18/86

C. L. Dunham

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The tabulation of records and estimate of dose from the records may require skilled manpower not available in Oak Ridge from other programs. We recommend that following firm plans for conduct of this study, provision be made in the FY 1958 budget for its support.

S. R. Sapirie
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CC: N. H. Woodruff
F. W. Ford, Community Affairs
C. D. Jeffries, Oak Ridge Hospital
H. M. Roth

MAILED 13 ON 2:00

COMMUNICATIONS

DEC 13 1956

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