

## Archival Records Housed at USTUR Support Radium Dial Worker Dosimetry

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The American radium dial worker (RDW) cohort of over 3,200 persons is being revisited as part of the Million Person Study (MPS) to include a modern approach to RDW dosimetry. An exceptional source of data and contextualization in this project is an extensive collection of electronic records (requiring 43 gigabytes (GB) of storage) digitized from existing microfilm and microfiche housed at the United States Transuranium and Uranium Registries (USTUR). Although the type, extent, and quality (e.g., legibility) of record(s) varies between individuals, the remarkable occupational, medical and demographic data include in vivo radiation measurements (e.g., radon breath, whole body counts), autopsy results, medical records (including copies of radiographs), interviews over the years, and correspondence. Of particular dosimetric interest are the details of radiation measurements. For example, there are some instances where handwritten and transcribed values are both available, along with notes providing context for why a particular measurement in a time series of measurements was chosen to assign an intake, or if there were concerns about a particular measurement. Born prior to 1935, RDW have nearly all passed away. Thus, the updated dosimetry, especially for the bone, will allow the correlation of lifetime cumulative dose with radiation risk. Here we review typical information available in this collection of historical records, highlighting some interesting finds, and discuss the relevance to current and ongoing work related to updating the dosimetry of the RDW in the Million Person Study, including providing an example of the usefulness of information contained in these records.

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