

radium-luminous paint to other companies and was itself involved in the actual painting of dials. This firm prospered, primarily because the demand for luminous compounds was stimulated by the war. The original plant was in Newark, New Jersey, but the company moved to larger quarters in Orange, New Jersey, in 1917. The firm was reorganized as the U.S. Radium Corporation in 1921. von Sochicky left the firm in 1922 and formed a new company, the General Radium Corporation, which supplied radium for medical uses but was not involved in the manufacture of luminous compounds.

A radium extraction plant and a radium dial painting studio were set up on the site in Orange, New Jersey. Changing the name of the firm to the U.S. Radium Corporation reflected an interest in selling radium to the medical profession as well as to the dial painting industry. The rapid growth of the dial painting industry at this time is documented in an article published in *Scientific American* in 1920 (Mount 1920), which stated that more than 1,000,000 watches and clocks had already been produced by this rapidly growing industry.

The U.S. Radium Corporation started using mesothorium (^{228}Ra) in its dial paint in May 1919, a move that allowed it to substantially reduce the price of its product. The company was said to have eventually controlled the entire output of mesothorium in the United States. Its raw material was obtained from the Welsbach Company in Gloucester, New Jersey, and the Lindsay Light Company of Chicago; both of these companies extracted thorium from monazite sand. The residue was sold to the U.S. Radium Corporation. The final refining of this product, which was described as 50% mesothorium and 50% barium bromide, was undertaken in the laboratory in Orange, New Jersey.

Soon after its formation, the U.S. Radium Corporation began to experience problems with the health of its dial painters. These problems are well summarized in a letter written by its president, dated June 18, 1928, to the Commissioner of Public Health of the City of New York. The following statements are taken from that letter; they outline the sequence of events that took place and give a clear impression of the corporate point of view.

The luminous material business of this corporation was started in 1914 or '15 as a private enterprise. . . .

About the year 1917, the present corporation, then known as The Radium Luminous Material Corporation, took over the business of the parent company and greatly expanded its operations. Mines were acquired, a plant for the extraction of