

estimate of 300 located cases, 42 cases were reported as measured. In the first half of 1958, 11 dial painters and 2 other radium cases were measured, and a total of 68 cases were said to have been measured and 36 X-rayed. In the second half of 1958, 37 dial painters were reported to be measured, making a total of 92 measured to date in addition to the 6 reported in the first half of 1957. The accounting represents the first suggestion that Miller was separating the cases he had located from those previously identified and measured at Argonne.

In an article titled "Status of the Radium Dial Project" in the RPY semiannual report for the period July-December 1959, Miller described the locations and dates of operation of four "radium arts studios" that operated in Illinois. Miller stated that these plants were owned by the Radium Chemical Company of Pittsburgh, Pennsylvania, but operated under the name of the Radium Dial Company. (It is probable that the radium used was supplied by the former and that both had the same officers, but there is no evidence that Radium Dial was owned by Radium Chemical.) For the plant in Town C, probably Ottawa, 191 names were obtained from city directories. Of these, 87 had been measured as of December 1959. For Town B, probably Peru, 48 names had been obtained and 23 measured. For Town A, probably Chicago, 14 names had been obtained, but no effort had been made to trace individuals. No figures were given for Town D, probably Streator, but some cases from this town had been measured.

The philosophy of Miller's search, stated in this article, resulted in a bias in the radium program while he was responsible for the search for additional cases. He had observed that the individuals who started work after July 1925 had low radium body burdens, usually less than 10^{-8} Ci. Thus, his search was limited to women who painted watches before July 1925. This policy did not change until the Center for Human Radiobiology was formed in 1969 under the direction of Rowland and Stehney. The new policy recognized that all employees in the dial industry were equally important for epidemiologic studies and therefore emphasized that employment, not body content, was the critical factor.

The same semiannual report (July-December 1959) contained the first article by the team of Finkel, Miller, and Hasterlik. They reported having studied approximately 200 persons suspected of having appreciable body contents of radium. This team had correlated radiographic changes in the skeleton attributable to radium deposition with the measured body contents for the 175 subjects for whom X-rays had been made and showed that such changes did increase with radium body content.