by P. L. Kirk, a pioneer investigator in the field of quantitative chemistry on the microgram scale.

This work was carried on chiefly by Dr. B. B. Cunningham and L. B. Werner, who had previously been working in the biochemical field, and the next slide (Figure 3) shows a photograph of the room at the Metallurgical Laboratory where they worked. The small amount of space in which they worked, apparent from the photograph, is all the more remarkable when one considers that Werner is a man who is more than two meters tall. The first pure chemical compound (7) of plutonium free from carrier material and all other foreign matter was prepared by Cunningham and Werner on August 18, 1942, and the first weighing of such a compound occurred on September 10, 1942 when 2.77 micrograms of the oxide was weighed. A picture of this oxide is shown on the following slide (Figure 4). Not only was it possible to test the separation processes at the actual concentrations which were going to be used in the plant, tests which were of inestimable importance, but a great number of pure chemical compounds of plutonium were produced and its chemical properties were well studied by a number of investigators working on the ultramicrochemical scale. The next slide shows an early photograph of a compound of plutonium (Figure 5). Since plutonium has become available on a production scale from the chain reacting units the chemical properties have been thoroughly investigated until they are as well-known as those of numerous elements that have been studied for a great many years. A contribution of importance was made by W. H. Zachariasen of the University of Chicago, who was able to use his x-ray technique to identify or help identify a number of the compounds which were synthesized, and in many cases, thus to identify their structure.