

And, of course, everybody worried about the calibration of the balance. How could you calibrate a balance to a hundredth of a microgram when you didn't have microgram weights to do it with? Well, these doubts dissipated gradually, and we came to accept the obvious. Plutonium was a little complicated in its chemical behavior perhaps, but much easier to purify than many elements which had been discovered a half century earlier. And after we had calibrated the balance in three independent ways, and had come out with the same answer, we realized that Bureau of Standards certified microgram weights were not essential.

Looking back on these early experiments, one sees that they were not really glamorous or high-flown at all. They were straightforward and pretty simpleminded, really. And in a way, this seems a pity, because in the case of an event of such historical importance, one feels that it should have involved at least one esoteric principle of chemistry or physics. The balance ought really to have been something much more complicated than a quartz glass fiber enclosed in a homemade case of wood and glass. But that's the way it was. I suppose that most of us looking back on those early days and recalling the challenge and excitement would not change them if we could. I became hooked. I've since had the great pleasure of being the first to do experiments with other new elements. And, in a way, I'm still doing business at the same old store. Only the atomic numbers have changed.

GLENN T. SEABORG Now it seems rather commonplace that it should have been easy to handle materials on this scale. But at that time, it was very doubtful in our minds whether you could even separate or purify and handle, as a chemical entity, materials as small as micrograms and submicrograms.

MICHAEL CEFOLA My initial knowledge of the existence of the project was disclosed when Dr. Seaborg contacted me in May 1942 and wanted to discuss my joining his group at the Metallurgical Laboratory.

The outcome of the meeting was that I learned very little about the nature of his research except that ultramicrochemical techniques would be involved. He strongly stressed the importance of the work without giving specific details.

As I could not join the group until June, I had ample time to speculate about my role in the laboratories. My first guess was that I would be carrying out analyses of impurities on trace levels. That I was wrong became most obvious when, on a visit to the Met Lab before the official starting date, I saw one of the rooms lined with counting