

Dr. Googin and his early days at Y-12, part 4

In the last article, John Googin was introduced to Y-12 by being given a tour of a small portion of Building 9202 when he first arrived on the site in the morning of May 17, 1944. He proceeded to amaze his manager by answering the question, "What do you think you have just seen?" John responded, "You are processing a heavy metal. It is probably uranium. You are separating the isotopes to make an atomic bomb."

That surprised Mr. Schmidt, John's department manager and caused him to comment to Mr. Vitalla, who was to be John's immediate supervisor and who had just given John his introductory tour, that what they had just witnessed was the quickest penetration of their security system they had seen. John had been working on nuclear energy for the past four years thinking it was truly going to be the wave of the future. So, he was better able to discern exactly what was going on at Y-12 than most new hires would have been.

After the description of the tour and exchange with his department manager, in his autobiography of the Manhattan Project, John then described the clothing worn by the workers as, "Everyone who worked with the 'T' (uranium) was required to change clothes; visitors could just wear white lab coats. This outfit was really all the clothes including the underwear, the shoes and the socks."

John went on to say, "... the recruit had worked at a shoe factory and a shop yard one summer installing degaussing belts in 10,000 ton freighters, ... but it was never like Y-12."

He also said, "Showers were to be taken. There was laundry service and clothes replacement when they developed too many holes. It would quickly become evident that the 35% 704 (hydrogen peroxide) and the 70% 703 (nitric acid) could do great damage to the cotton clothes that were used."

John wrapped up this discussion of his first tour by saying, "After the security and general operations lecture, the recruit got a description of the processes performed in Bulk Treatment and some associated areas. Those gas masks in the office had a real purpose."

John went on to more fully describe the process and to explain why the gas masks were necessary. In great and exacting detail he described the reaction caused by heating the "T" compounds in glass lined and agitated pressure vessels to make phosgene as a by-product. He said, "Those towers outside the office window were the scrubbers that reacted the phosgene with caustic to make it harmless. However, there were times when there were leaks and the masks were sorely needed. This chlorination all took place in the tall tower section of 9202. There was an emergency ammonia system to react the phosgene in case of a leak and fogs were produced."

There were rooms of sublimation units to purify the material being processed. The chemistry of the Built Treatment area was to take a solution of tuballoy called "Gunk" that came from the cleaning of what John termed, "those mysterious machines," which were calutrons, in other buildings and make pure uranium trioxide out of it.

John described each step of the chemical purification process in what must have been to him simple chemical reactions and common knowledge activities for this young college graduate who thought of himself as a "recruit" and who had deliberately prepared himself to work in the war effort on nuclear energy. He did not find any surprises in the processes after first determining the final product and guessing its intended use as an atomic bomb.

John concluded his autobiographical entry on his first day at Y-12 with, "After all this education on security and process, the first day came to an end with a walking trip to the warehouse, at the same location as the present 9720-6 [since demolished and now a concrete pad], with Ed to get the first batch of needed clothes. The walk was along the railroad siding that brought tank cars of chemicals to 9202."

It is pertinent to note that on this walk along the railroad tracks, John pressed his newly appointed supervisor for information as to what were the objectives of the laboratory supporting Bulk Treatment.

Now, get the picture, on the job less than a day and this new young upstart of a chemist had absorbed enough information to inquire about the production goals and do it intelligently.

Next we will learn the supervisor's reaction to this somewhat brash and eager young chemist with extremely high self confidence.