

9731: It all started here...

As our story of Building 9731 continues, you will remember it was the first building completed on the site. It was also the first building where calutrons were installed and today contains the only remaining Alpha calutron magnets. There are many stories of Building 9731. It was the focus of attention at the beginning of Y-12's electromagnetic separation process. What follows is a story of Jane Puckett, a female statistician and her experience in Building 9731.

Jane Greer Puckett, now living in Tullahoma, Tenn., was originally from Paris, Tenn. She attended a girls' college in South Alabama for two years and transferred to the University of Tennessee in the summer of 1942. She had plans to study engineering, but was denied entry into the College of Engineering due to her gender. At the suggestion of the University registration staff she enrolled in the College of Business Administration with plans to study statistics. However, she continued to study mathematics and physics in the College of Liberal Arts while taking all the statistics courses offered. She graduated in August of 1943.

On October 18, 1943, she was employed as a statistician by Tennessee Eastman Corporation and arrived in Oak Ridge. She was immediately assigned to the Building 9731.

Within the week of her arrival, she attended a series of lectures on the process being used to collect the "product," to learn the terminology, the procedures for collecting it and the formula used for computation. She was immediately put to work in the upper level of a small area of 9731. She was excited to be using her skills as a statistician and to be working on something that was obviously important to the war effort.

On one occasion Jane recalls the excitement of dignitaries as they looked over her shoulders checking the results as she was calculating early data. She later learned that among those present were General Groves and J. Robert Oppenheimer. As you can imagine, both Groves and Oppenheimer were most interested in this early success. I am sure it was a relief to them to actually see Lawrence's calutrons working as designed.

The successful data obtained in Building 9731 indicated the importance of completing as quickly as possible the installation of calutrons in the Building 9201-1, 9201-2 and 9201-3 Alpha buildings. At this time Buildings 9201-4 and 9201-5 were not yet included in the planning. They were added later when it became apparent just how long it was going to take to separate the Uranium 235 needed for the first atomic bomb.

In October 1943, construction had already begun on Building 9201-1. As it and other buildings opened, Jane was assigned the task of setting up the offices. She trained and supervised the record clerks who worked around the clock at long tables with adding machines and/or Marchant calculators.

Each clerk was given data to compute, each table doing a separate function. All were tracking the progress of producing "product." It was Jane's responsibility to collect all the results and combine the data to determine the production. She would then file the production data report by shift. At no time were any of the clerks aware of what the data was or for what it was to be used.

All reports were "Top Secret" and were picked up by two security guards and delivered to the proper officials. Any "waste paper" was placed in red containers that were also picked up by security guards.

Each of the young record clerks had been thoroughly checked for security purposes prior to employment. Jane recalls that there were approximately 25 girls per building at each shift. As can be imagined, there was a scarcity in the latest of office machines. Many adding and calculating machines were hand-operated. It was interesting to note that the clerks tried to arrive for their shift early and then rush to their table so that they could sit where an electrically-operated machine was placed.

They were, however, very dedicated. The experience of working with these girls was most rewarding for Jane. She assured the production of the precious Uranium 235 was calculated accurately.

Even though all the other calutron buildings did the actual electromagnetic separation of the production quantities of Uranium 235, Building 9731, as the pilot building, was where it all began. Jane still recalls those early times fondly.

The use of the electromagnetic process for the separation of Uranium 235 was given the "go-ahead" orders as a result of the work done within the walls of Building 9731 in the fall of 1943. The person doing the actual statistical analysis and documentation was Jane Greer Puckett.

Remember she was a talented and dedicated young lady who could not get into the University of Tennessee Engineering program because of her gender. However, through her knowledge of statistics she may well have contributed more to the advance of nuclear science than many if not most of the engineering graduates of UT.

She still counts this period of time working in Y-12's Building 9731 as among the most important contributions she has made over her life, including all the many things she has achieved since leaving Oak Ridge.

Caption: Jane Greer Puckett – a Y-12 Manhattan Project pioneer