

It all started in Building 9731 – Jane Greer Puckett, Manhattan Project Statistician

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You have heard of “Calutron Girls” and there are several of them still living in Oak Ridge today. They were featured at the special Y-12 Beta 3 Calutron Tours during the 2005 Secret City Festival. This article features yet another way in which women were involved in the early days of the electromagnetic separation of uranium 235 at Y-12 during the Manhattan Project.

Jane Greer Puckett, now living in Tullahoma, TN, is still very active and continues as the National Registration Chair for the Amateur Athletic Union (AAU). Her past experience with figures as a mathematician and statistician prompted her to avidly support internet registrations for all the athletes throughout the US. She is proud of the well over one-half million registrations a year completed on the internet the last few years by athletes participating in thirty-one different sports.

Her hard work and dedication to the youth of not only Tennessee but the Southeast and the nation has led to much recognition. She and her husband, Jim, were inducted into the Tennessee Swimming Hall of Fame and the AAU Volunteer Hall of Fame. Jane was inducted into the Tennessee Sports Hall of Fame in 2002 and in July of 2003, named by the “Nashville Tennessean” as the sixth most powerful woman in sports in the state of Tennessee.

However, while the Pucketts' years have been full of “living”, Jane feels that their eight years of living “The Oak Ridge Experience” of dedication to a cause has helped build the foundation for their family as students, community activists, athletes and contributing adults.

Jane Greer originally from Paris, TN attended a girls' college in South Alabama for two years and transferred to the University of Tennessee in the summer of 1942, with plans to study engineering. She was denied entry into the College of Engineering due to her gender so the suggestion of the University Registration Staff was for her to enroll in the College of Business Administration with plans to study statistics. This she did. While there 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.

She was employed as a statistician by Tennessee Eastman Corporation and arrived in Oak Ridge on October 18, 1943. She was immediately assigned to the Y-12 Electromagnetic Separation Plant's Building 9731, the first building to be finished. It was the “pilot building” and was used for training and testing operations for obtaining Uranium 235 by the electromagnetic process. Building 9731 today still has the huge magnet portions of the four original calutrons, two Alpha and two Beta, installed there in very early 1943.

Within the week of 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 formulae for computation. She was immediately put to work in the upper level of a small area of #9731.

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.). 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 having been added later when it became apparent just how long it was going to take to separate the precious little Uranium 235 needed for the first atomic bomb.

In October, 1943 construction had already begun on Building 9201-1 and as it and other buildings opened Jane was assigned the task of setting up the offices, training and supervising numbers of 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/functions. It was Jane's responsibility to collect all the results and combine/compute the data to determine the production and 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.

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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 twenty-five 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. Clerks were hired for all production buildings as each building was completed and Jane trained each new group in the statistical processes required to assure 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”! 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 its walls in the fall of 1943. The person doing the actual statistical analysis and documentation was Jane Greer Puckett – a talented and dedicated young lady who could not get into the University of Tennessee Engineering program because of her gender, but through her knowledge of statistics 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 including all the many things she has achieved in her life.

A future article will feature Jane Greer Puckett's experiences living in Oak Ridge during the Manhattan Project and until 1953.



Jane Greer Puckett, Statistician at Building 9731, now active in amateur sports registration