

Hugh Barnett, at 102 years of age, recalls his work on the Manhattan Project

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Recently I attended a program at the East Tennessee History Center in Knoxville. An elderly gentleman sat on the front row a few seats in front of me. He listened intently and asked several probing questions of the speaker. I remember thinking, I sure hope I am that capable when I reach his age. At the end of the program I overheard him state that he would soon be 102 years old.

I waited until a break in the conversation and introduced myself. He immediately told me he worked at Oak Ridge for several years. Well, that did it. I wanted to talk to him at length to learn what he did in Oak Ridge. So, I made an appointment to spend more time with him. On July 9, 2018, I visited with Hugh Barnett at his home in Maryville.

Here is Hugh's story of his career in Oak Ridge and other assignments. We began talking about what Hugh did before he came to Oak Ridge. He started working on the Manhattan Project in New York City.

Hugh said, "Before the war, Remington Arms Company offered me a job in their Engineering Department. Our department was in charge of administering construction of small arms plants all over the United States. I ended up being Remington's representative at the Franklin Arsenal in Philadelphia, PA. I didn't live in Philadelphia, but spent two days a week there and the rest of the time in the home office in Bridgeport, CT."

In 1943, the small arms ammunition plants were all running well, so engineering support was not as needed as it had been when the plants were just getting started. Some of the engineers were being told to look for work elsewhere.

A new effort was being started called the Manhattan Project. When it was first being formed they interviewed engineers at Bridgeport, CT. at the home office of Remington Arms Company. This was a common approach used extensively by the Manhattan Project to quickly build a competent technical staff. Hugh requested to be interviewed. Tom Lane did the interview. This would result in a long friendship.

Hugh accepted Tom's offer and reported to New York City at the Union Carbide office in the Woolworth Building. He said they were forming the staff to operate the K-25 Gaseous Diffusion Plant in Oak Ridge, TN.

The first couple of months was spent by Hugh trying to absorb as much information as he could about nuclear energy and gaseous diffusion. Then he was assigned as an engineer reporting to the maintenance head for the K-25 Gaseous Diffusion Plant. He travelled to many of the plants making equipment for K-25.

On March 1, 1944, Hugh moved to Oak Ridge to help actually set up the maintenance group as the gaseous diffusion process was being installed in the world's largest building under one roof, the K-25 Gaseous Diffusion Building.

Hugh said when he first came to Oak Ridge he was assigned a cement house at 50 Outer Drive. It was a "B" house. When their first child was born, they moved to 102 Outer Drive which was a "D" house.

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A standard practice at that time was to carpool. Hugh's carpool consisted of himself, Tom Lane, the Industrial Relations Manager and the Assistant Plant Superintendent. That is where they would discuss what each of them knew about what was going on. He said they all knew about the work at Y-12 and Los Alamos. They were evidently among the few managers who had enough information to understand they were producing needed materials for atomic bombs.

In July 1945, each member of the carpool all put up a dollar to see who could guess the closest to the date the atomic bomb would be dropped. Hugh bet on September, so when Little Boy was dropped on August 6, 1945, Hugh lost a dollar.

Later, in the late 1940's and early 1950's, Hugh worked on the design and procurement of the converters for additional gaseous diffusion plants in Oak Ridge, Paducah, KY, and Portsmouth, OH. These converters are a major part of gaseous diffusion as that was where the uranium 235 was separated from the uranium 238 creating what is known as enriched uranium.

He was by now intimately familiar with gaseous diffusion equipment and process design. Knowledge gained in New York City was now being put to good use by Hugh. The nation's uranium 235 was enriched in the gaseous diffusion plants using the converters Hugh provided for the next several years.

Hugh would eventually become the superintendent of maintenance at K-25 with over 1,000 people working for him. He proudly worked to maintain the nation's production of enriched uranium for several years.

In 1960, Hugh was transferred to Y-12. He was put in charge of maintenance which included the Oak Ridge National Laboratory functions such as the Biology Division and the Thermonuclear Division located in several of the large buildings at Y-12 that had originally been built for the electromagnetic separation of uranium. These buildings would serve ORNL for many years and would be maintained by Y-12 Maintenance.

When the K-25 Gaseous Plant became capable of producing the uranium 235 at weapons grade, by December, 1946, Y-12's calutrons were shut down, with the exception of two buildings, Building 9204-3 (Beta 3) and Building 9731. Both these buildings are now part of the Manhattan Project National historical Park.

ORNL needed the space in 1947 to create a Biology Division. For many years they used the large Y-12 buildings to operate large portions of their experimental work.

Many years later, I would have the same job that Hugh had at Y-12 being responsible for providing maintenance to the site which included the Oak Ridge National Laboratory functions at Y-12. As the Associate Director of the Facilities Management Organization, it was always clear that the ORNL at Y-12 operations were expected to have good maintenance service. We always tried to do that, as I am sure Hugh did as well when he was there.

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One requirement we had was that the Biology Division must have electrical power returned to service within four hours when it went down. The reason was that the mice started dying if electrical power was off more than four hours.

In 1966, Union Carbide transferred Hugh to their plant in Indiana where he stayed for four years. He was offered a job in Quebec, Canada, at a large stainless steel plant. He was put in charge of maintenance and engineering there. Hugh said he had to learn how to speak French!

One of the problems Hugh addressed there was to stop the practice of allowing equipment breakdowns to be the reason to send workers home. He instituted the practice of preventive maintenance and scheduled maintenance to reduce the downtime which resulted in other plants in the company coming to learn how to keep their plants running as well.

One of Hugh's long-time friends got a promotion and Hugh called to congratulate him. His friend said, where are you? Hugh said he was in Canada. His friend said why don't you come and work with me, which he did. The company was New Jersey Zinc and they wanted to build a plant in Clarksville, TN. Hugh worked there for four years, again in charge of engineering and maintenance. After four years there Hugh retired.

On August 14, 2018, Hugh celebrated his 102nd birthday. He is a joy to know and has a really good recall of fond memories. I enjoyed learning about his life and career by spending a wonderful morning talking with him at his home. I also learned a lot by reviewing his oral history at the Center for Oak Ridge Oral History online at: http://coroh.oakridgetn.gov/corohfiles/videojs/Barnett_Hubert.htm

If you have not yet completed your oral history, contact Jordan Reed at the Oak Ridge Public Library.



Hugh Barnett turned 102 years of age on August 14, 2018