

Manhattan Project Spies and Oak Ridge, part 2

(As published in *The Oak Ridger's Historically Speaking* column on December 15, 2014)

Continuing with the second of what has now become four installments of the *Historically Speaking* series on Manhattan Project Spies with connections to Oak Ridge, we now examine Klaus Fuchs – maybe the most dangerous of the three at which we are looking in this series.

A new book on Klaus Fuchs is being published. There are at least two others of which I am aware. The new book is written by Mike Rossiter and will be available in June, 2015. Fuchs may be the world's most dangerous spy.

He, along with George Koval, provided information that determined the course of the Soviet Union's actions to create their atomic bomb. Koval reporting from Oak Ridge and Fuchs reporting from Los Alamos essentially covered the total range of the entire Manhattan Project information needed by the Soviet Union to enable them to profit by knowledge of what the United States had already done.

Emil Julius Klaus Fuchs was born in Germany in 1911. He was a communist and opposed Hitler. He and left Germany and went to England in 1941 where he got a job as a physicist and was involved in the early efforts of the British to determine how to make an atomic bomb. He began to share information with Russia about the British and their tentative first efforts to determine how to obtain the needed materials for an atomic bomb.

When the British realized the tremendous resources that would be required, they sent a delegation to the United States to convince them that actually creating an atomic bomb could better be done there. Just obtaining the needed nuclear materials would require more resources than Britain had and could be more quickly accomplished using the resources of the United States.

When a group of 15 scientists (mainly physicists) came to the United States Klaus Fuchs was among them. They were sent to merge the British efforts to create an atomic bomb with those of the United States in the Manhattan Project. He arrived in late 1943 at Columbia University.

The group at Columbia University where Fuchs was assigned was investigating ways to separate U-235 from U-238. The primary reason Fuchs was included in the group of 15 British scientists brought to the United States was his theoretical work with gaseous diffusion and electromagnetic separation.

As you know, this same type of work was done in Oak Ridge during the Manhattan Project. Fuchs also provided Russia with this information as early as 1942, before Oak Ridge became a reality. However, he is also documented as providing similar information in 1944.

According to an extraordinarily successful United States counter-espionage effort known as the Venona Project, as early as June 14, 1943, "Quantum," a spy who has never been identified, gave information about the atomic bomb project to the Soviets. In the very first cable decrypted in December 1946, Meredith Gardner read a 1944 Russian message which included a list of the leading scientists working on the Manhattan Project.

The Venona Project was kept secret for close to 50 years even though the decryption was completed between December, 1946, and 1952. Notice this decryption took place well after the spying had happened. There was no awareness of the spy activities during the time the secrets were being provided to the Russians during the Manhattan Project.

A decrypted cable that had been sent on February 9, 1944, showed that Klaus Fuchs shared secret information with Russia "about the two processes for separating isotopes of uranium then being explored by Manhattan Project scientists – gaseous diffusion and the electromagnetic method."

Also from the cables it was evident that Fuchs kept right on spying once he reached America. As the Venona cables show, he was sending information to Russia while at Columbia University and he also continued the practice when he arrived at Los Alamos.

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In August 1944 Fuchs was transferred from Columbia University to the theoretical division in Los Alamos. This would prove to be his most advantageous assignment during the entire Manhattan Project.

In "Klaus Fuchs, the Man Who Stole the Atom Bomb," by Norman Moss, there are several specific examples of Fuchs removing secret documents and transferring them to the Russians. It seems he operated without suspicion and even commented at least once to a fellow spy that "he routinely carried secret documents out past the guards."

He also was brought into the U.S. originally without any research into his past. His association with other British scientists and his technical knowledge must have been sufficient to cause those attempting to bring him to the U.S. to do so without regard that he might be a spy. He was obviously someone who engendered trust and operated without arousing suspicion.

Moss quotes Fuchs as saying, "I had to face the fact that it had been possible for me in one half of my mind to be friendly with people, be close friends and at the same time to deceive them and endanger them. I had to realize that the control mechanism warned me of danger to myself, but that it had also prevented me from realizing what I doing to people who were close to me."

At the time of his confession, Fuchs went on to say that the three ideas that made him what he was he had come to realize were all wrong. This confession is muddled and hard to follow showing a confusion in his own mind, I believe.

While in Los Alamos, Fuchs continued to provide secret information to the Soviet Union, including the actual plans for Fat Man, the implosion plutonium bomb dropped on Nagasaki. The Soviets had the plans before the bomb was dropped.

Undoubtedly, this is where Stalin got his information that prepared him to react without surprise when President Truman told him of the atomic bomb at the July 17 - August 2, 1945, Potsdam Conference. You have to wonder what Truman thought about this...frustrated, I am sure.

Britain reestablished its own atomic-bomb project after the war ended. Fuchs returned to Britain in mid-1946. In 1949, the FBI provided British counterintelligence with the Venona decrypts, proving that Fuchs was a Soviet agent. In December 1949, Fuchs was questioned and on January 24, 1950, he confessed. He was sentenced to 14 years in prison.

After nine years he was released. Fuchs died in 1988, but not before he also provided China with the plans to Fat Man and other nuclear information helpful to them to create their own atomic bomb. Klaus Fuchs has been proven to be among the most damaging spies ever.

I have been provided additional information on Klaus Fuchs that I will share next.

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Klaus Fuchs, German born, British citizen, may be the most damaging spy, but never in Oak Ridge – however, Fuchs still released much information about what was going on in Oak Ridge during the Manhattan Project