Commando Raid in Norway - I

Lead: One of the great fears of the Allied leadership during World War II was that Germany might build the first atomic bomb.

Intro.: A Moment in Time with Dan Roberts.

Content: Germans were among the pioneers in nuclear research. A team under Otto Hahn at the Kaiser Wilhelm Institute for Chemistry in Dahlem, a suburb of Berlin, in December, 1938, succeeded in splitting the uranium atom. After his results had been confirmed, it took only a
short leap of imagination for scientists to realize the potential for creating a weapon of terrible power. German scientists. British scientists. American scientists.

With the coming of the war the race was on to create a weapon utilizing this incredible source of power, but before a bomb could be created scientists had to engineer a controlled and sustained nuclear reaction. They had to bring enough uranium together to cause a reaction but in a controlled way so as to avoid blowing up everything around it. This required a moderator, a substance that slowed down the neutrons in an atomic reaction enabling them to split other atoms. In theory, at least, the use of a moderator
made possible a controlled atomic reaction. The most efficient moderator available at the time was "heavy water," a substance found in ordinary water in very tiny amounts. Its hydrogen atoms consist of deuterium, an isotope which has a neutron in addition to a proton in its nucleus. Thus, its atomic weight is heavier. Hence, "heavy water." To separate heavy water from ordinary water is extremely difficult, time-consuming and very expensive. The only plant in the world capable of creating heavy water in sufficient amounts to conduct nuclear research was the Norsk Hydro Hydrogen Electrolysis plant in Vemork, Norway a nation occupied by the Germans in 1940. It became clear that Nazi Germany was determined to
use the heavy water being made at Vemork to create a bomb. This combined with its development of the V-1 and V-2 rocket delivery systems were treated by the allies as a terrible threat.

While American atomic research proceeded using graphite as a moderator, allied high command began formulating a scheme to take out the Norsk heavy water plant at Vemork. Next time: the failure of plan A.

This series of programs on the Vemork raids were produced at a suggestion by, Robert Flaxman who listens to A Moment in Time on WCVE-FM in Richmond, Virginia.
We welcome your comments and suggestions on this program. Call toll-free 1-800-928-1776.

At the University of Richmond, this is Dan Roberts.

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