

Y-12 transition and the birth of the national laboratories

The Atomic Energy Commission was formed as a result of the Atomic Energy Act approved in congress on August 1, 1946. It officially took responsibility for the nation's atomic energy programs on January 1, 1947.

However, General Groves had not been waiting on anyone or anything. As soon as the war ended, he began planning the budget to expand the Manhattan Project efforts on all fronts. He also knew that to have any hope of holding on to any of the scientists who had worked on the atomic bomb he must continue to support and even increase research.

He saw the need for the nation to continue to produce more nuclear weapons and set about making that happen. By the time Manley's letter of September 24, 1946, that we saw in last week's article, reached General Groves he had already taken action to move some of the production work out of Los Alamos.

He had organized a special Army battalion at Sandia to take over assembly work. He contracted with Monsanto in Dayton, Ohio, to take on part of the development and manufacturing of some components. He was already considering transferring the uranium work to Oak Ridge at Y-12 and the plutonium work to Hanford. The scientist at Los Alamos applauded these ideas and encouraged them to be implemented right away. They agreed the work of Los Alamos should be dedicated to designing the weapons of the future.

So, here we have Y-12 being considered for uranium work as early as September 1946 as found documented in *The New World* by Hewlett and Anderson. At this time, Y-12 was producing uranium 235 at record rates using the enriched feed material from K-25. The Alpha calutrons were shut down and in standby because K-25's product was higher quality than could be produced on the Alpha calutrons. The Stable Isotope Program at Y-12 was growing and gaining momentum.

In addition to making improvements at Los Alamos after the hard winter of 1945, considering what to do to expand the manufacturing efforts to other existing sites in Oak Ridge and Hanford and thinking of ways to retain the scientific workforce, Groves also had to concern himself considerably with budget matters.

This was tough to get a handle on and he felt some guidelines needed to be established. So, he accepted a proposal from Colonel Nichols to form an Advisory Committee on Research and Development.

The following section is quoted from *The New World* by Hewlett and Anderson, "...consisting of seven men who had figured prominently during the war – Robert F. Bacher, Arthur H. Compton, Warren K. Lewis, John R. Ruhoff, Charles A. Thomas, Richard C. Tolman, and John a. Wheeler."

"On March 8 and 9, 1946, the committee met in the Manhattan District's Washington offices with Nichols and representatives from some of the institutions sponsoring proposals. Nichols explained that the Army needed advice on both policies and specific programs. Groves would submit a budget based on the committee's recommendations"

"On broad policy, the committee agreed that the Manhattan District should expand its activities to include a larger number of qualified agencies. This expansion was to further research and development in the production of fissionable materials and useful power as well as advance training in nuclear studies and the acquisition of fundamental scientific information."

"The work undertaken in universities and private laboratories should be limited primarily to fundamental research of an unclassified nature. If such investigations led to discoveries which might have direct military application or otherwise affect the national welfare, further development could take place either at universities or private laboratories on a separate classified basis or at government laboratories where classified work was the norm."

“National laboratories should be established for the primary purpose of pursuing unclassified fundamental research that required equipment too expensive for the university or private laboratory to underwrite. Government reservations – The Clinton Engineer Works, for example – were the place for semi-works and other installations associated with commercial exploitation or industrial skill. Enterprises that were hazardous from the medical or legal standpoint should be established at remote federal installations rather than at universities and private laboratories.”

“The committee envisioned the national laboratories as important channels through which government funds would flow to nourish nuclear research. Each laboratory should have a board of directors chosen from the universities and other institutions participating. Though some financially responsible and mutually acceptable agency would perform the work of administration, the board of directors would submit research proposals and budgets. Final approval of both must remain with the Manhattan District.”

Next week we will continue the above quote from *The New World* by Hewlett and Anderson. I think it helps show the struggle the Manhattan District was waging to retain control of the military and industrial complex that had grown out of the Manhattan Project. While legislation was being developed that ultimately would form the Atomic Energy Agency, Groves was pushing for growth and more scientific research.

It was out of this struggle that the national laboratories we know today had their genesis. Oak Ridge National Laboratory being one of them.