Production work up for grabs

Los Alamos continued in turmoil and scientists kept leaving. The Operation Crossroads effort had dealt the laboratory a tremendous blow as the demands for production seemed to override any scientific research and development.

On September 24, 1946, John H. Manley wrote General Groves a letter as noted in Hewlett and Anderson's *The New World*. The letter said, in part, that Los Alamos was unable to maintain the position the United States had advertised before the world regarding the possession of additional nuclear weapons. Therefore the nation's security was being put in jeopardy. The primary reason for Manley's concern was the rapid loss of scientific personnel at Los Alamos.

He went on to recommend that General Groves establish a military organization that would take over the details of weapons production, stockpiling, and surveillance at some site other than Los Alamos. He also recommended that Los Alamos remain the location for weapons design but that it become a civilian establishment. The letter was written on Manley's last day at Los Alamos.

General Groves and Colonel Nichols had independently arrived at similar conclusions six months earlier. They had determined that the military needed to assure that atomic weapons were available for necessary military use. This would require assigning metal production and explosives work to industrial contractors.

Further, it would mean standardizing atomic weapon models so the production manufacturers could produce the necessary nuclear piece parts uniformly. The other necessary parts of the weapon would need to be standardized as well.

Los Alamos manufactured these atomic devices in a non-production fashion. Each one had been a separate and unique process. The idea that more of the simpler Little Boy design weapons would be feasible was removed from consideration because of the difficulty using plutonium in that design.

The size of Fat Man design was becoming a problem to the military as it was difficult to fit that design into standard airplanes. Modification was required and damage occurred to the airplane each time one of the devices was dropped. Standard production models were needed and the overall size needed to be reduced.

All these problems were ones that Los Alamos needed to work, but was strapped producing the test devices for Operation Crossroads and also attempting to produce a stockpile of atomic weapons for the military's potential use. Additionally, many workers were leaving.

In November, 1946 Norris Bradbury wrote a letter to the Atomic Energy Commission before the AEC officially took office on January 1, 1947, and after the Atomic Energy Act was approved on August 1, 1946. A portion of that letter is printed in the *LOS ALAMOS SCIENCE* Winter/Spring 1983.

The letter states, "The problem of production of atomic weapons has been considered. It is believed that no immediate change can be made in extent of production now being carried out at Los Alamos. However, if the philosophy of maintaining Los Alamos as an atomic weapon research center is carried out, it is suggested that plans be made to remove as much as possible of this routine activity from this site. This has the additional advantage of disseminating the knowledge of necessary technique as well as decreasing the seriousness to the nation of a major accident or catastrophe at Los Alamos."

Bradbury wanted to start a great deal of scientific research, both applied and basic, on the whole range of actinide elements (90 through 103). Production of weapons was seen as consuming resources that could otherwise be used to support such research.

After Operations Crossroads there was a period of time when many changes took place in all of the nuclear weapons sites. The next test event did not happen until 1948.

The passage of the Atomic Energy Act on August 1, 1946, was evidence of a culmination of the various forces at work in the political, military and industrial organizations involved in the Manhattan Project and ongoing nuclear activities.

During 1946 in Oak Ridge, Y-12 continued placing calutrons in stand by with the exception of those in Building 9731 which were going full speed separating isotopes of materials other than uranium. The folks in Building 9204-3 were struggling with what to do about those calutrons since it was obvious they could never compete with the K-25 gaseous diffusion process.

In the early months of 1946, the radioisotope program at Y-12 was a high point and it was a fledgling effort. However, Y-12 had begun producing metal buttons as early as October, 1945, and shipping them to Los Alamos as noted in Bill Wilcox's *An Overview of the History of Y-12* where he references a *Y-12 Staff Report* of 1979.

So, working with uranium metal was established at Y-12 and poised for growth. With the changes taking place that reduced the mission late in 1946, Y-12 was ripe for new work. The difficulties at Los Alamos with the production work and the availability of Y-12 to take that on would soon become obvious to the newly forming Atomic Energy Commission.