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Y-12 PLANT MILESTONES

1941-1942—Scientists at University of California Radiation Laboratory, Berkeley, began development of a magnetic separator which would function on the principle of the mass spectrograph, and would separate U-235 from natural uranium in appreciable quantities.
By autumn 1942, the rate at which U-235 was separated at UCRL justified authorization of construction of the Electromagnetic Separation Plant at Y-12.

1943-1946—Ground was broken for the first building in the Y-12 area on Feb. 1, 1943. Chemical operations for magnetic separator charge preparation began October 1943, and the first magnetic separator was started up in November 1943.
The first production building went into operation Jan. 27, 1944, and conversion of highly-enriched uranium-235 to UF_6 began in November. Ultimately, Y-12 employed 22,000 operating personnel and was the first plant to produce large quantities of enriched U-235. Uranium recovery began in January 1945. On September 22, 1945, all electromagnetic separators used to produce low-level enriched U-235 were shut down, since the K-25 gaseous diffusion plant was supplying a sufficient amount of partially-enriched feed for the product-level electromagnetic separators.

1946—All magnetic separators were discontinued December 23 as production units.

1947—Carbide replaced Tennessee Eastman Corporation as operating contractor of Y-12 on May 4, 1947.
Enriched uranium-235 produced by the gaseous diffusion process was reduced to metal and fabricated at Y-12 in accordance with AEC requirements.

1948—Machining of enriched uranium on a small scale was started early in the year.

1950—Hafnium-free zirconium production was started in January for use in the Naval Reactor program. The casting and machining of uranium-aluminum alloy and the first large-scale precision machining of beryllium began.

1953—Additional uranium casting facilities and another uranium machining shop were installed and completed by fall. A hydraulic pressing facility was installed in October.

1954—An expansion of the enhanced uranium salvage facility was completed early in the year. Installation of equipment for a new method of UF_6 reduction was completed during the second quarter.

1955—Installation of additional uranium casting facilities was completed early in the year.

1956—An accelerated program of providing technical information and assistance to industry interested in uranium salvage and recovery operations began.

1957—Installation of a Primary Rolling Mill and further pressing facilities for fabricating uranium were completed during the third quarter.

1958—Installation of a heavy machine shop for uranium fabrication was completed in the first quarter. A second rolling mill for uranium processing was installed late in the year.

1959—Development and special fabrication service in pressing and machining of tungsten was provided for the benefit of the missile program. Commission announced public sale of highly-enriched lithium-7.

1960-1962—Specialized development and preproduction fuel element fabrication for the nuclear-powered rocket (Rover) program was started in August 1960. AEC authorized Y-12 to provide specialized fabrication service for a missle nose cone in February 1962. During this period, there was continued operation of a plant developed at Y-12 for large-scale separation of lithium isotopes.

This document has been reviewed by the Y-12 Plant Classification Office and has been determined to be UNCLASSIFIED
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