



Nuclear notes

By B G A SKROTZKI, Associate Editor

Over 5,000,000 kwhr of electricity have been generated by the first two atomic submarine power plants built by Westinghouse Electric Corp. The first plant (Mark I) went into operation on the Idaho desert on May 31, 1953. The Nautilus, powered by the second atomic plant (Mark II) went to sea January 17, 1955. Mark I continues to be put through extensive testing program. This information will help to design better future reactors. Westinghouse now works on three new atomic marine plants—one for Navy surface ship, two for submarines.

World's most radioactive piece of material now works at atomic radiation laboratory of the Esso Research Center in Linden, N.J. This cobalt metal pipe, 13-in. long and 2-in. dia, was bombarded for more than 2½ years in the Brookhaven atomic reactor. The pipe produces about 3500 curies of gamma rays. (World supply of refined radium produces about 2400 curies.) Esso Lab seeks ways of making better gasoline, oils, petrochemicals and oil products.

British 10-year atomic power program has six more plants added to the 12 originally projected. Reactors will produce fissile material for both military and civil use. Building of first plant, Calder Hall, started in 1953 will run by end of 1956.

Division of Civilian Application in AEC staff will be headed by Harold L Price. It develops regulations and instructions for licenses, authorizations, and other activities related to civilian use; administers AEC licensing program; prices materials and services to licensees and materials bought from them; authorizes distribution of source, special nuclear and byproduct materials; administers access to restricted data for civilian use; deals with authorizations to export equipment and materials and engage in activities outside of USA.

Government's atomic energy program has been created over past 12 years; 12- to 14-billion dollars have been invested in it. We spend about 2-billion dollars a year to run it, equivalent to \$250,000 every hour, every day.

Radioactive isotopes find many jobs in industry. Typical applications include: Controlling thickness of strip material in rolling mills; discharging static electricity in textile operations; oil prospecting; fluid flow control in pipelines; detecting leaks in water mains; detecting liquid level in closed systems; testing filter efficiency; measuring wear in test engines; checking efficiency of industrial mixing processes; checking migration of constituents in paper manufacture; measuring plant nutrients in soil and uptake of fertilizer, many others.

AEC pays \$400,000 to four scientists for all rights, title and interest in certain inventions in plutonium separation processes. This work had been done in 1940-1941 at the University of California, before they engaged in research work on Government contracts. These men are: Dr Glenn T Seaborg, professor of chemistry, University of California; Dr Joseph W Kennedy, head of chemistry dept, Washington University; Dr Arthur C Wahl, professor of chemistry, Washington University; Dr Emilio G Segre, professor of physics, University of California.

Nuclear Engineering and Science Congress in Cleveland, Ohio, Dec 12-16, 1955 will present nearly 300 papers in 50 sessions. Concurrent Atomic Exposition will show equipment and models of leading U.S. and foreign industrial firms.

