**A look back at *Union Carbide's FIRST 20 Years in Nuclear Energy [Union Carbide in Nuclear Energy]***

Note: Union Carbide Nuclear Division, which started out as Carbide and Carbon Chemicals Company, operated the Atomic Energy Commission/Energy Research and Development Administration/Department of Energy sites in Oak Ridge, Paducah, Ky., and Portsmouth, Ohio, until 1984, some 40 years.

The articles in this series are taken from a publication produced by Union Carbide Nuclear Division in the early 1960s and provide some insights into technological advances and substantial manufacturing accomplishments made in Oak Ridge just 20 years after the Manhattan Project came to East Tennessee. Tim Gawne of Oak Ridge National Laboratory provided the publication to me when he found a copy in the ORNL Library archives.

This section covers the Union Carbide Corporation:

**"UNION CARBIDE IN NUCLEAR ENERGY"**

"Like many other companies Union Carbide is putting the atom to work in its own business, both in production operations and in research.

"Radioisotopes are used as tracers in checking reactions in making chemicals and plastics. They permit accurate determinations that were impossible previously.

"Agricultural researchers working for Union Carbide are using radioisotopes to study fertilizers used in plant nutrition and in studying fungicides and herbicides developed to help farmers obtain more abundant food crops. Radioactive thickness gauges and similar instruments have simplified and improved the control of many mechanical processing operations, particularly in plastics manufacture.

"STERLING FOREST – Union Carbide Nuclear Company's research center consists of the reactor and the radioactive materials laboratory, which is being used for studying the effects of radiation on various compounds.

"RESEARCH CENTER – The center is the focal point for nuclear and ore research within the Corporation. Included in this project are the main research building, a power and utilities building, and an ores and minerals development laboratory.

"FROM PRODUCTION TO RESEARCH – Uranium salts find their way into various research, production and development programs for the peaceful uses of nuclear energy.

"UNION CARBIDE'S MILL AT URAVAN, COLORADO – is one of the largest on the Colorado Plateau. The Corporation is a major supplier of uranium for the nation's nuclear energy program.

"The Oak Ridge, Tennessee and Paducah, Kentucky nuclear facilities are operated by Union Carbide Corporation for the U. S. Atomic Energy Commission."

While this historic report generated by the Union Carbide Corporation during its days of managing the U. S. Atomic Energy Commission's nuclear sites sheds insight into the technological advances resulting from the Nuclear Age, it also gives a glimpse into the world of developing nuclear energy. It was written during a time when new scientific information was being obtained at a rapid pace.

It was written as a document to capture the situation some 20 years after the world's most significant basic atomic-related discovery had been applied outside the laboratory. This newly discovered source of atomic energy was used in the most powerful and obvious display of force the world had ever seen. It shocked the world and brought a new recognition that for the first time in human history, mankind possessed the knowledge and skill to possibly destroy the earth!

Yet the same equipment, the same science that brought us nuclear weapons, brought us nuclear medicine. The laboratories that sprang from the onset of the Nuclear Age now have made advances beyond imagination just a few years ago. Neutron science is a major contributor to basic science today and will likely continue to lead the way for the foreseeable future.

The use of atomic weapons in warfare resulted in the immediate ending of World War II, a war that had shown how devastating worldwide warfare can be. Nuclear weapons have proven to be a primary source of strength that has resulted in avoiding a third world war for 67 years. Nuclear weapons remain a primary force and one that enormous effort is being required to contain.

What will the next 20 years bring? What will a report such as this look like regarding the continuing and exponentially expanding advancement of the Nuclear Age?

Will the peaceful use of atoms continue as described by Dr. Glenn T. Seaborg, chairman of the U. S. Atomic Energy Commission, who said in 1962, "Nuclear research today is varied and rewarding. Its future is so exciting that we cannot but envy the future scientists who will reach maturity two decades from now. But I trust that we may have the satisfaction of knowing that we have in a real sense paved the way for their achievements."

Seaborg was looking 20 years ahead to 1982. We stand an additional 20 plus years ahead of his vision and the exciting research findings of the Nuclear Age continue. Can you imagine what will be written about the Nuclear Age in 2032?