

Union Carbide's Last 20 Years in Oak Ridge – part 3

As we continue with Bill Wilcox's personal review of the last 20 years of Union Carbide's tenure in Oak Ridge, Bill now takes us from the general overview to some of the specific milestones of accomplishment or significant events during those years from 1964 until 1984.

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1972. K-25 technical and operational specialists devised and sold the Oak Ridge Operations and USAEC Headquarters in Washington on a massive (\$1.5 billion) program to increase the productivity of all three Gaseous Diffusion Plants. It involved not only barrier efficiency improvements, but improvements in converters, compressors and coolers.

Known formally as the Cascade Improvement and Cascade Up-Rating (CIP/CUP) Programs (pronounced by us around the plant as Sip/Cup), these major efforts were highly successful in terms of producing the increases in production and decreases in cost projected. They took center-stage for top management at K-25 and Paducah, and were finished ahead of schedule in 1980 and under the authorized budget limits.

1974. Some news from Washington really shook us up in Oak Ridge. On October 11, President Gerald Ford signed an unexpected new Energy Reorganization Act that abolished the almost three decades old and familiar USAEC and in its place created both the Energy Research & Development Agency (ERDA) and the Nuclear Regulatory Commission (NRC). ERDA took charge January 19, 1975.

1975. A month-long strike and work stoppage at K-25 was the longest ever in Oak Ridge, resulting from the union rejecting the company's proposed three year contract for 4,000 hourly employees. It was a major problem for Carbide management.

1975. ORNL spent almost the entire year operating under the name Holifield National Laboratory which the Congress had named in 1974 in honor of the retiring Chairman of the Joint Committee on Atomic Energy – a widely respected joint committee of the House and Senate. But that name was not a happy choice for our ORNL'ers, and Senator Howard Baker Jr., in the following January, pleased us all when he submitted a bill to restore its Oak Ridge National Laboratory name. As a compromise, the new and very important heavy ion research facility at ORNL was named for Mr. Holifield instead.

1977. President Jimmy Carter announced that the next U. S. enrichment plant will be built at Portsmouth, Ohio, utilizing the new Gas Centrifuge process. Top management and all K-25'ers were both pleased to have its new technology chosen for the new plant, but very disappointed in the location, having lobbied hard to get the new the plant sited here where the technology was developed and pilot planted and where many machines were already in full operation.

1977. To nobody's great surprise, Congress abolished the three year old ERDA, and replaced it with a Cabinet level agency called the Department of Energy. The new DOE was activated Oct 1, with James Schlesinger as first Secretary of Energy.

1978. President Jimmy Carter decided to visit Oak Ridge and both K-25 and ORNL. Y-12 was ruled out because of all the security involved – he was bringing staff and a press contingent. He made a 30-minute stop to see K-33, K-25 Site's latest building, then went to ORNL for a much longer visit to an auditorium full of their staff. The advance planning was very detailed and long drawn out.

1979. A major national news event that captured Carbide's top management attention was the Three Mile Island, Pennsylvania nuclear accident. ORNL responded quickly, sending experts to help. It was

America's worst nuclear accident, but because of the safety systems, there were no injuries to people or animals beyond the plant fences. None-the-less the media erupted and the result was a great increase in the number and complexity of regulations that have increased the capital and operating costs of future U.S. units.

1981. Two major capital improvement programs for Y-12, the subject of much discussion and work by management, were finally approved by Congress and underway at Y-12. Their purpose was to modernize and bring up to modern standards some old production capabilities and to upgrade utility systems. The two together were to cost \$522 million. In 1982 another project was added to these costing \$63 million to be spent improving Y-12's physical security in response to new threat analyses from Washington. Parts of each one of all the large number of nuclear weapon types were then being made at Y-12 to very high quality standards and with very tight delivery targets.

1982. Faced with a continual loss of the U-235 toll enrichment market share by K-25, Paducah, and Portsmouth, DOE Headquarters decided it could no longer fund Research and Development for the four processes being touted for the future. They decided on the best two – Livermore's laser process (Atomic Vapor Laser Isotope Separation) and the K-25 et al. Gas Centrifuge Process.

Teams from each "camp" were to present their case in a "Peer Review" process in which they would be subject to questions from the other side. The debate between the two before a DOE Committee went on for over a year; ours very ably led by Carbide's Ken Sommerfeld, former K-25 Plant Manager.

But at the end, the DOE's committee that heard the debate chose AVLIS. Epilogue-DOE and their successor in this business, the United States Enrichment Corporation, funded Livermore R&D for 17 more years of effort to deliver on their promises, but in 1999 USEC gave up the effort, saying it was not developed and they would count on the Advanced Gas Centrifuge for use in the plant to replace Paducah's gaseous diffusion plant.

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Thanks yet again, Bill. Even more milestones coming next week.