

## Oak Ridge Centers for Manufacturing Technology, part 2

In the fall of 1995, the *ORNL Review*, Vol. 28, No. 1, featured an article titled, "Oak Ridge Solution to Manufacturing Problems," written by Bill Wilburn. Bill's introductory caption to his lead photograph of Jerry Whitaker of ORCMT's Testing and Evaluation stated, "The end of the Cold War continues to drive a national effort to use defense technologies to enhance the nation's industrial competitiveness."

The Oak Ridge Centers for Manufacturing Technology was a primary method used in the 1990's to apply the expertise and experience developed over the years of the Cold War to help our nation in yet another vital manner. There were many examples, during the years ORCMT existed, of the application of expertise gained from the Cold War that enhanced the capability of industry across the nation.

Bill's article notes that companies with manufacturing problems they were unable to solve because of a lack of knowledge or resources could access world-class manufacturing skills and equipment and applied research and development facilities for help. ORCMT served as a valuable resource that provided access to the Department of Energy's three Oak Ridge sites — Y-12, Oak Ridge National Laboratory, and K-25.

Additionally, the valuable experience base that had been developed through the nation's response to the Cold War was accessible through a single one-stop-shopping contact, ORCMT. Many of the ORCMT facilities located at Y-12 were originally intended for the Manhattan Project and later used for manufacturing components of nuclear weapons.

Officially created in September 1993 as a result of the increased desire to assure that defense technology skills were not lost and to share the benefits of the expertise gained during the Cold War, the ORCMT was provided offices and machine shop, laboratory and general use facilities at Y-12. While all three sites were engaged, the primary facilities were located in Bear Creek Valley at the Y-12 site.

From this somewhat tentative beginning (this was something totally new to the folks developing the program), ORCMT's industrial outreach began immediately to produce positive results. By March 1995, the newly formed centers had already assisted more than 1,600 businesses nationwide. These industries ran the gamut of all types of industry in the nation.

Automotive part production, food product manufacturing, ceramic manufacturing and machining, materials testing and evaluation, precision measurement – all these and other industries came calling. As ORCMT looked back on its first year and a half of operation, the success was beyond anything imagined at the beginning. A return on the government's investment of 4:1 was realized...this was unheard of!

At the time of Bill Wilburn's article, it was estimated that between 1994 and 1998, ORCMT would stimulate over \$1 billion of private-sector benefits and create 25,000 high-quality jobs. Makes one wonder why we are not doing something like this now in 2011 with our economy having such difficulties.

Maybe we should look at the ORCMT model more closely – exactly why I am writing this history. We need to learn from our past, and this may just be as good an example of an opportunity to do so as I have ever seen.

The writing style used by Wilburn included placing short succinct phrases in boxes and inserting these catch phrases within the text as standalone ideas conveying the key points attempting to be made with the writing. His first one stated, "ORCMT's business is to help business with manufacturing, which is a key to America's economic health."

His second graphic text, intended to catch the reader's eye, cited manufacturing as a "mainstay of the economy." I hold that to be still true today some 16 years later. However, as he stated in 1995, "production processes are changing." What was true in 1995 is even more so today. Improvements have

been made, but still more is needed. The advances in technology at Oak Ridge are as vital to industrial competitiveness today as they were in the 1990's, maybe even more so.

In this early effort to assist private industry, ORCMT had succeeded in less than two years to touch every single state in the nation with assistance to private industry. Assistance provided ranged from 659 contacts in Tennessee to 250 in California to over 100 in each of Illinois, Michigan, Ohio, Pennsylvania and New York, to one contact in each Alaska , Hawaii and North Dakota.

As pointed out in the first article in this series, all the Oak Ridge federal sites were managed by one company during most of the 1990's, although that changed with the break-up of the one-contract approach in 1998. The introduction of a managing and "integrating" contract concept for the K-25 site resulted in a radically new type of contract being awarded to the Bechtel Jacobs Company.

During these changing times with the contract at K-25, there were other changes taking place at Y-12 and the Oak Ridge National Laboratory. At Y-12, the end of the Cold War produced significant reduction in force actions referred to as "workforce restructuring" and at ORNL, the bid to construct the precursor to the Spallation Neutron Source, the Advanced Neutron Source was having great difficulty gaining enough support to become a reality.

There was much frustration during this time as ORNL fought to retain funding for basic scientific research. The Fusion Energy program was finding it hard to sustain the level of funding needed. The Y-12 buildings once used for major programs by ORNL were being vacated as the programs moved back to the main campus or to other locations.

It was in this climate that the Oak Ridge Centers for Manufacturing Technology began. Jack Cook, who was at the time, located in Building 9201-3 (Alpha 3) at Y-12 and was a member of the Engineering Technology Division of ORNL and John Koger of the Y-12 Development Division made one of the first presentations, if not the first one recommending the ORCMT be considered.

Jack said, "Dr. John Jones, who headed the Engineering Technology Division, and Dave Beck [of Y-12 management] formed an informal agreement to work together to develop the ties between several divisions of ORNL and Y-12."

Jack continued, "It worked! We had programs with the Fusion Energy Division, Metals and Ceramics, Instrument and Controls, Chemistry and many others. Several of the laboratories of ORCMT were housed in the Engineering Technology Division building (9201-3 at Y-12). One laboratory was the Optics machining modules on the 2<sup>nd</sup> floor of Alpha 3."

According to Jack, "Building a bridge between ORNL and Y-12 was symbolic of what today we would call 'commercialization.' We just thought of it as transitioning science and development to applications and demonstrations for both industry and other agencies of the Government."

We will have more on the history of ORCMT as we take the story from the beginning in September 1993 forward in coming installments. We will also look at some of the success stories and why ORCMT was so successful. Remember, every state in the union was helped!