

Tennessee Pollution Prevention Partnership Success Story



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Y-12 Reduces Ozone Depleting Substances

The Member

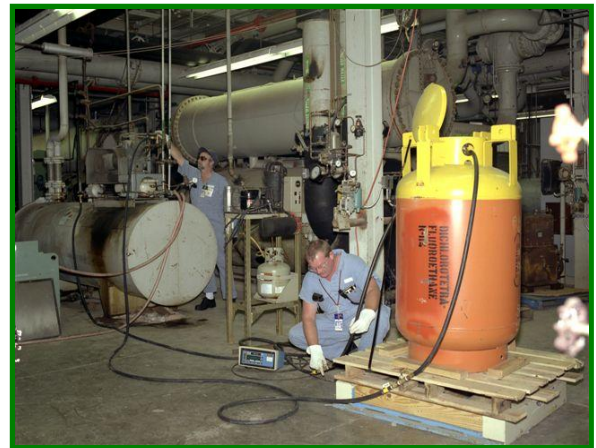
The Y-12 National Security Complex is a high-precision manufacturing, assembly and inspection complex comprised of more than 20 facilities and organizations located on 800 acres near Oak Ridge, Tennessee. Operated by Babcock & Wilcox Technical Services Y-12 L.L.C. (B&W Y-12) for the National Nuclear Security Administration, Y-12 plays a vital role in the Department of Energy's (DOE) Nuclear Weapons Complex.

The Story

B&W Y-12 continually searches for ways to reduce hazardous materials used, and has an ongoing program to eliminate use of Class I ozone depleting substances (ODS). The Clean Air Act has phased out manufacture of Class I ODS, and DOE established goals for all sites to retrofit or replace 100 percent of chillers with greater than 150 tons of cooling capacity and manufactured before 1984 that use Class I refrigerants by 2005, and to eliminate use of Class I ODS by 2010 to the extent that safe alternatives are available. The Y-12 Complex achieved the first goal in 2004. Additional projects are in progress to meet the second goal. For instance in 2006, B&W Y-12 completed projects to eliminate use of Class I ODS refrigerants in two of the three remaining Class I ODS chillers in operation at Y-12. The chillers each contained 2,500 pounds of CFC-11, a Class I ODS. Chiller AR-108 was taken off line and removed from service, and AR-101 was retrofitted and converted from CFC-11 to HCFC-123 (a Class II ODS). More than 5,000 pounds of CFC-11 was captured from these systems and shipped to the Defense Logistics Agency for reuse at other DOE or Department of Defense sites.

The Success

This project reduced Y-12 Complex Class I ODS HVAC inventories by 70% compared to 2005 levels. The project supports Y-12's overall DOE goal to eliminate the use of Class I ODS by 2010 to the extent that safe alternatives are available. Since the ODS elimination program began in the early 1990's, Y-12 has eliminated over 90% (over 15,000 pounds) of its Class I ODS used in HVAC systems.



B&W Y-12 Craftsmen complete retrofit work on two chillers to eliminate use of 5000 pounds of CFC-11.

The Pollution Prevented

Compared to 2005 levels, the chiller retrofit and removal project eliminated 70% (**5,000** pounds) of CFC-11 in use and potentially emitted.

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