

## **Quality Assurance Issues with the Manufacturing of HEPA Filters**

**Subir K. Sen,  
U.S. Dept. of Energy, Germantown, MD**

### **ABSTRACT**

DOE Standard requires independent Quality Assurance (QA) inspection and testing of certain category of HEPA filters used in DOE nuclear facilities. These tests are currently being performed at the Filter Test Facility owned and operated by the Air Techniques International (ATI) near Baltimore. These tests repeat the tests required to be performed by the manufacturers for penetration and resistance for the manufactured filters prior to shipping the filters to the FTF. Filters that do not pass the QA inspection and tests at the FTF are rejected and sent back to the manufacturers. DOE publishes these inspection and test results on a semi-annual basis. Two semi-annual reports published in 2007 reported significantly higher rejection rate than the ten year average preceding it. The causes for rejections were primarily manufacturing defects and not meeting purchase order specifications. Concerned at the apparent laxity in quality control (QC) and inspection during the manufacturing of the HEPA filters, DOE is undertaking a multi faceted plan that in collaboration with the manufacturers will determine the root cause of the problem and determine corrective actions. Manufacturing processes and QA programs will be reviewed to understand how this labor intensive manufacturing process can be improved to minimize defects.