

BNL ALARA CENTER**Processes and Practices Related to Occupational Dose**

ID: 1020

SPECIAL WORKING COMPARTMENTS WITH HEPA FILTERS**Keywords:** HIGH EFFICIENCY PARTICULATE AIR FILTERS; CONTAMINATION PREVENTION**Description:**

High efficiency particulate air (HEPA) filters are now being used in special working compartments to remove particulates, thereby reducing radioactivity from air in ventilation ducts and from discharges to the environment.

The properties of HEPA filters that are of importance in reducing radioactivity are its particle collection efficiency, air flow capacity, and pressure drop. Effective performance is critically dependent upon maintaining a good seal between the filter and its housing. Filters require careful handling during changing operations and the aluminum spacers inserted between the pleats of the filter medium are incompatible with the cement in which it is proposed to encapsulate used filters for disposal.

HEPA filters of rectangular cross section have been used for many years in nuclear industry. New circular cross-section HEPA filters have been developed to replace the conventional rectangular type. Among the advantages are improved sealing, easier changeout, better retention of contaminants, and less waste disposal problems.

References and Selected Abstracts:

1. K.S. Robinson, "Why circular HEPA filters are better than rectangular ones," Nuclear Engineering International, Vol. 35, No. 428, pp. 56-57, March 1990.