



# The AirShield



Control of airborne radioactive contaminants in the field has presented challenge to the nuclear power plant industry. The Total Effective Dose Equivalent (TEDE)/ALARA concept has been embraced throughout the industry; however, the tools available to meet these standards have not evolved along with expectations. The Lancs AirShield system presents an innovative approach to controlling airborne containments. When used together with traditional engineered controls, worker protection from airborne radioactive and industrial hazards is enhanced.



The Lancs AirShield is the first engineered airborne control tool to be developed using laser particle counter evaluation techniques. Laser particle counters (as shown in the picture on the left at the bottom) are used to determine the removal factor, assigning a numerical value to the device's protection efficiency over a range of particle sizes. When using high kinetic energy tools such as grinders, hammers and sanders, energy is imparted to the surface being worked. This energy accelerates particles away from the surface into the surrounding air space. These accelerated particles may escape the existing control and enter the worker's breathing zone. The AirShield prevents these high kinetic energy particles from entering the breathing zone by physically blocking them as a face shield would do. A vacuum equipped frame produces a slight low pressure area to prevent the buildup of airborne particles under the shielded area. Heavy particles fall away from the shield after impact but lighter particles that tend to remain airborne are removed by the slight negative pressure.



The effective low pressure area formed in front of the AirShield is shallow. This prevents the shield from causing turbulence when used along with a HEPA ventilation unit. Turbulence would tend to increase the production of airborne particulates. The Lancs AirShield is designed to work as a standalone unit for low kinetic energy work such as table top inspections and valve maintenance, or in combination with other controls for surface destructive work.

To discuss The AirShield contact our Sales Team at 425.823.6634.