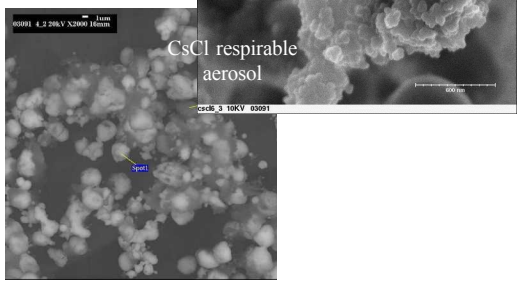
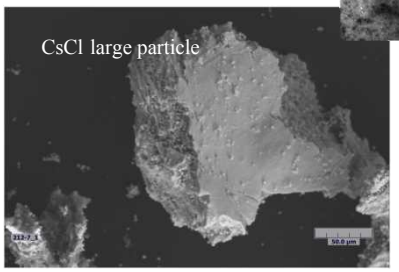
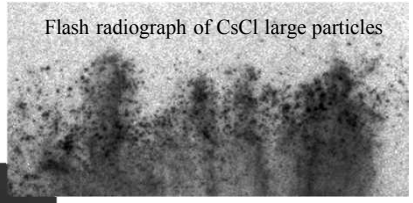
Respirable aerosol (< 10 μm)
Can go kilometers
Very little health effect, cleanup problem

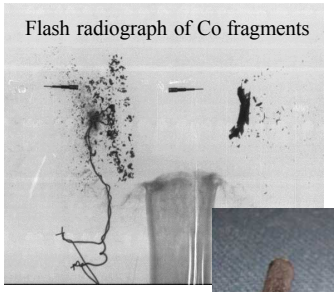
Large particles (> 100 μm)
Will not go further than a few hundred meters
Localized groundshine problem

Fragments
Will generally not go further than 500 m
Local



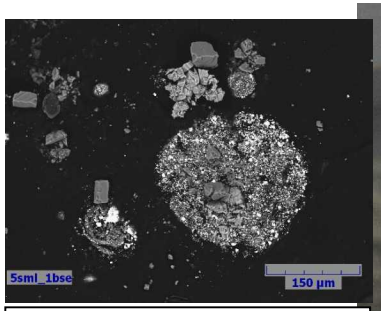






Radiological Dispersal Devices produce respirable aerosol, large particles, and fragments (amount and fractions depend on material properties and device design)

Large particles escape buoyant plume and disperse ballistically



Small 1 μm WC particles
Shock sinter to become large particles
(> 100 μm) in explosive environment