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Author

Aimee Maclennan

Organization

Canadian Light Source – Saskatoon, SK

Title

Mitigating the Risk of Radiological Dust: A Multidisciplinary Challenge

Abstract

Airborne particulates present significant health hazards due to their ability to penetrate deep into the pulmonary system and enter the bloodstream, potentially resulting in respiratory infections, cardiovascular disease, and a range of other adverse health effects. When such particulates are radiological in nature, they introduce a dual risk: the intrinsic physical toxicity of the particle and the ionizing radiation it emits. Once inhaled or ingested, these particles may deliver localized radiation doses to internal tissues, thereby increasing the severity of potential health outcomes.
The Health and Safety department at the Canadian Light Source recently encountered a situation in which the repair of activated equipment was expected to produce radiological dust. This presentation will outline the CLS hazard assessment process and how it was applied for this task.