Dragon, Karen E. (CDC/NIOSH/EID)

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To: NIOSH Docket Office (CDC)
Subject: NIOSH-036

The announcement on this project discusses a scope to include not only respiratory devices but also implies that "garments" will be included at some point as well. Having measurements for TIL for respirators makes perfect sense but for protective clothing it may not. As an operational Radiation Health Physicist for more than 25 years, it is clear that measuring TIL for radioactive particulates is full of potential errors.
First and foremost, the migration mechanics of radioactive particulates in the field, onto and through protective clothing can not be replicated.
Simply using a test method that assumes the particulate is in an air or water situation, such as common filtration test methods, does not in any way replicate the actual transfer and interface mechanics involved. Workers more often than not pick up contaminants through direct contact, ie brushing against or kneeling on a contaminated surface. Some protective clothing
(fabrics) are very effective at mitigating contamination pass through during practical application and these fabrics have some degree of openness in their weave. The Europeans, have a TIL standard for garments and the nuclear industry in Europe struggles greatly with it as overkill. Often workers in Europe are prescribed clothing that puts much more heat stress on the workers than needed because of the standards employed. The predominant PPE garments of choice used for decades and still today in the USA nuclear power stations and DOE facilities are made from standard 65/35 poly cotton blend, untreated fabrics. Nothing special. And they work great and keep the workers comfortable.

Anyway, while I personally support TIL testing for respiratory hazards, I do not support such testing on garments, especially those used to protect against "contact" with particulates. Such TIL values might be helpful for workers that would be immersed in a "gaseous or vapor" contaminant cloud but not one consisting of particulates in many cases.

Thanks.

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