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Fentanyl Contamination, Exposure, Detection, Risk, and Decontamination

This presentation will provide an overview of EPA's technical support role in fentanyl responses and will contain the results from research that was initiated to fill select gaps identified during the development of EPA's Fact Sheet for OSCs: Fentanyl and Fentanyl Analogs. Fentanyl is fast-acting, but the life-threatening effects can be reversible if detected and treated early. Surface contamination levels associated with these dermal exposures might be used as a benchmark for decontamination goals and analytical detection capability. Characterizing the contamination includes separate operations of sampling and analysis.

Both surface and media-specific sampling and analysis methods are needed to assist decision-makers before and during remediation efforts to guide decisions regarding protection from contamination and, following decontamination, to ensure that sites are remediated to levels acceptable for civilian reoccupation. Analytical detection capabilities for surface matrix types will be discussed. Decontamination operations will benefit both from in situ neutralization options for fentanyl on building materials.

Current remediation knowledge is limited to the core chemistries of several oxidizers such as hydrogen peroxide, peracetic acid or hypochlorite (bleach).

EPA has collected data describing the efficacy of several decontamination options. These data describe results from decontamination tests using nonporous surface materials contaminated with solid fentanyl salt. They included spray application of various decontamination solutions that are identified in the Fentanyl Fact Sheet as well as more recently identified decontaminants of interest. A successful approach to ensuring the safety of law enforcement, first responders, remediation contractors, and the public can be developed by coordinating the separate approaches to estimating the risk, remediation efficacy and analytical detection capability for fentanyl.

Presentation Theme: Research: Methods to characterize and decontaminate the opioid contaminated site.

Collaborators, Advisor(s) and Department(s) that assisted with this research: Stuart Willison, US EPA, Office of Research and Development, Center for Environmental Solutions and Emergency Response, Homeland Security and Materials Management Division, Cincinnati, OH