

CONCURRENT SESSION 3 – BIOLOGICAL AGENT SAMPLING & ANALYSIS

METHODS

Sampling of Waste Materials from a *Bacillus anthracis* Release Incident

Scott Nelson | *Battelle Memorial Institute*

As part of the response and recovery operations following a wide-area biological contamination incident, such as an aerosol release of *Bacillus anthracis*, environmental sampling will play a prominent role in response activities. This need for environmental sampling will extend to the materials destined for treatment and disposal as waste. Sampling of the waste materials presents particular challenges, including: 1) the potential need to open sealed bags containing waste that was packaged at the original site of contamination and later moved to a staging area for collection and possible on-site treatment (because waste acceptance criteria [WAC] and number of samples required to meet WAC likely will have not been established at the time of collection), and then re-seal the bags following sampling; 2) the need to minimize the possibility of cross-contamination of the staging area where bagged waste is being handled; 3) the need to maximize worker safety for those managing the waste; 4) the need to be flexible in how many waste bags get sampled and how many samples need to be acquired per bag to satisfy appropriate waste acceptance criteria as defined by the state regulatory agencies and/or the receiving facility; and 5) the need to acquire samples in a form that facilitates eventual laboratory analysis using standard methods that are approved by the Laboratory Response Network (LRN).

This presentation will discuss a block of work that evaluated the performance of potential methods to acquire samples from bagged waste materials in such a way as to minimize cross-contamination of nearby areas, maximize worker safety, and generate samples that are compatible with LRN analytical procedures. This project focuses on likely waste streams that might be generated from cleanup activities at U.S. Coast Guard (USCG) bases and ports. Model waste streams used for these tests include different sized mooring lines (rope), personal protective equipment (PPE), and materials commonly used in seats for marine response boats and vessels. This study will help the USCG to recover rapidly following a biological contamination incident and returning assets to duty.
