



## US POSTAL SERVICE BIOHAZARD DETECTION SYSTEM UPDATE

### BACKGROUND

In response to the anthrax attacks of October 2001, the US Postal Service (USPS) contracted with Northrup-Grumman to develop the Biohazard Detection System (BDS). The BDS is an early warning system that regularly analyzes air samples, using polymerase chain reaction (PCR) methods, for the presence of anthrax. This system has been instituted at 102 large mail processing and distribution sites throughout the country in areas identified at high risk. The system collects samples at key “pinch points” in the mail processing system and collects samples each hour during mail processing (3:00 pm to 11:00 pm Monday through Saturday). The analysis takes 90 minutes to run and, if anthrax DNA is detected: 1) the system alarms, 2) all mail processing machines are automatically shut down, and 3) postal staff are instructed to evacuate the building. The false positive rate of BDS is 1/500,000 tests. To date, there have been no false positives, false negatives or true positives.

In June 2002, the first prototype BDS system was installed in the Baltimore Processing and Distribution Center (P&DC). Since that time, BDS has been established in 57 other facilities—starting first in the Northeast and then spreading throughout the rest of the country. Los Angeles County (LAC) has three P&DC sites that run BDS: Los Angeles (October 2004), City of Industry (November 2004), and Santa Clarita (December 2004).

### METHODS/RESULTS

Response Planning: In the event of a BDS alert, the USPS will coordinate a response involving many different agencies using a Unified Incident Command Structure. This includes: the US Postal Inspectors, Terrorism Early Warning Group, LAC and LA City Fire and Hazmat Departments, LAC Sheriff Department, LA Police Department, Health Hazmat, FBI, and LAC DHS Public Health (PH).

USPS will be responsible for notifying PH and Emergency Medical Services (EMS), evacuating personnel from the facility, and providing an active personnel roster to PH. US Postal Inspectors will transport samples to the PH Laboratory and will contact appropriate law enforcement (for security and crime scene analyses). USPS Employee Assistance and Occupational Health staff will be called on scene to assist with providing counseling and securing assistance from the local Red Cross. USPS is responsible for risk communication and securing additional environmental testing of the facility and surrounding area. Hazmat teams will be responsible for decontamination of all those determined to be at risk based on the CDC Recommendations [1]. In terms of the Public Health response, PH is responsible for laboratory confirmation of anthrax (e.g., repeat PCR and culture) and provision of antibiotic prophylaxis. EMS is responsible for maintaining and transporting the USPS medication cache.

Current Status: ACDC’s Bioterrorism Preparedness and Response Section (BPRS) has met with the Public Health Medical Director and the Area Health Officers of the three SPAs with BDS sites. In the event of a BDS alert, the SPA Health Officer along with the Area Medical Director and Nurse Manager coordinate the staffing and dispensing of the 3-day prophylactic medications within 15 hours of the BDS alert. BPRS has met with the USPS Pacific Area and Los Angeles Area medical staff and also attended two 2-day training/drills. In addition, BPRS has conducted one prophylaxis drill at the Los Angeles P&DC in May of 2004 and a tabletop drill at the Santa Clarita site in November 2004 with a follow-up visit with representatives from the SPA and BPRS in December 2004. Once the PH plans have been finalized with each USPS facility in a formal memorandum of understanding, BPRS will be conducting trainings and drills for USPS and PH staff to assure prompt response in the event of a BDS alarm.

### DISCUSSION

May 2004 Drill—Lessons Learned: The objective of a drill is to understand how to perform a function



better in the future, and this drill provided innumerable lessons to that effect. To begin with, it is essential that the drill's coordinator communicates early and often with all those involved in organizing and conducting the drill. Preparation of logistics (e.g., reference binders, clipboards) must be completed several days in advance. Participants in the drill should be those who might likely be called upon to perform the function in case of a real event. We expect that our next drill should be very much improved by these and many other lessons learned.

Conclusions: This project continues to be challenging considering LAC currently maintains three BDS sites. This requires complex coordination between several LAC DHS agencies as well as a range of other non-DHS agencies (e.g., FBI, Fire, Police, etc.). Moreover, a BDS alarm is likely to occur outside normal work hours (i.e., any time between 4:30 pm and 12:30 am Monday through Saturday) and can occur at any or all of the three sites. Public Health's goal is to establish dispensing teams capable of responding within four hours of the alarm.

Several projects are also in progress such as developing a BDS response manual and finalizing memorandums of understanding. However with the input from the USPS, CDC, State and local experts, continued progress is expected in the coming year.

## REFERENCES

1. CDC. Responding to detection of aerosolized *Bacillus anthracis* by autonomous detection systems in the workplace. MMWR 2004; 53(RR07):1-12. Available at: [www.cdc.gov/mmwr/PDF/RR/RR5307.pdf](http://www.cdc.gov/mmwr/PDF/RR/RR5307.pdf)