

Protecting Investigators Performing Environmental Sampling for *Bacillus anthracis*: Personal Protective Equipment

Workers conducting environmental sampling that places them at risk for exposure to *Bacillus anthracis*, the organism causing anthrax, should wear protective personal equipment (PPE), including respiratory devices, protective clothing, and gloves. The items described below are similar to those used by emergency personnel responding to incidents involving letters or packages. Emergency responders need to use greater levels of protection in responding to incidents involving unknown conditions or those involving aerosol-generating devices.

Powered Air-Purifying Respirator with Full Facepiece and High-Efficiency Particulate Air (HEPA) Filters

- The constant flow of clean air into the facepieces is an important feature of this respirator because contaminated air cannot enter gaps in the face-to-facepiece seal. These respirators also give wearers needed mobility and field of vision.
- Respirators should be used in accordance with a respiratory-protection program that complies with the OSHA respiratory-protection standard (29 CFR 1910.134).
- Respiratory facepieces for investigators should be assigned on the basis of results of quantitative fit testing.
- Wearing a properly functioning and powered air-purifying respirator with a full facepiece that is assigned to the wearer on the basis of quantitative fit testing will reduce inhalation exposures by 98% of what they would be without wearing this type of respirator.

Disposable Protective Clothing with Integral Hood and Booties

- Wearing protective clothing not only protects the skin but also can eliminate the likelihood of transferring contaminated dust to places away from the work site.
- Wearing disposable rubber shoe coverings with ridged soles made of slip-resistant material over the booties of the disposable suit will reduce the likelihood of slipping on wet or dusty surfaces.
- All PPE should be decontaminated immediately after leaving a potentially contaminated area.
- Protective clothing should be removed and discarded before removing the respirator.

Disposable Gloves

- Disposable gloves made of lightweight nitrile or vinyl protect hands from contact with potentially contaminated dusts without compromising needed dexterity.
- A thin cotton glove can be worn inside a disposable glove to protect against dermatitis, which can occur from prolonged exposure of the skin to moisture in gloves caused by perspiration.