

must include closed-toe shoes. A full-length, long sleeved, fully fastened laboratory coat, gown, or smock will be worn over the street attire in the laboratory at all times. The laboratory clothing will be removed and left in the laboratory when leaving to enter non-laboratory use areas.

(b) *Animal caretakers.* In addition to the clothing requirements in §627.22(a), animal handlers will be provided with safety shoes or safety boots. The requirements of §627.22(b) should also apply.

(c) *Nonhuman primate rooms.* Personnel entering rooms housing nonhuman primates will wear the clothing stated in §627.22(a) and, if applicable, §627.22(b) in addition to a molded mask or HEPA filtered respirator, latex or vinyl gloves, and eye protection.

§ 627.23 Biosafety level 1.

This level requires only the minimum attire described in §626.22.

§ 627.24 Biosafety level 2.

This level requires the following additions to the minimum clothing specified in §627.22:

(a) *Laboratory.* Gloves (type dependent on the application) will be worn when handling etiologic agents or containers of etiologic agents and when handling infected animals.

(b) *Animal rooms.* (1) Protective clothing will be changed completely every day. One- or two-piece laboratory suits or solid-front gowns and wrap-around smocks are preferable. Full-length, long-sleeved, fully fastened laboratory coats are allowed.

(2) Eye protection must be worn when handling nonhuman primates.

(3) Appropriate gloves must be worn.

(4) Molded masks or HEPA filtered respirators will be worn in rooms housing nonhuman primates.

§ 627.25 Biosafety level 3.

The outer clothing worn in these facilities must never be worn outside the facility. Color-coded clothing that is worn only in the facility is recommended to remind individuals not to wear it outside. The minimum clothing includes—

(a) *Laboratory.* (1) Long-sleeved, solid front, or wraparound gowns, scrub

suits, or coveralls over street attire which includes closed-toe shoes. Dedicated shoes, boots, or shoe covers will be worn in the facility.

(2) Appropriate gloves.

(b) *Animal rooms.* (1) A complete change of protective clothing on a daily basis. Long-sleeved one- or two-piece solid front uniforms, solid-front gown, wrap-around smocks, or solid front coveralls.

(2) Eye protection must be worn when handling nonhuman primates.

(3) Molded masks or HEPA filtered respirators will be worn in rooms housing infected animals.

(4) Shoe covers will be worn and removed before exiting the room; alternatively, disinfectant footbaths will be used for each exit from the room when infected animals are present.

§ 627.26 Biosafety level 4.

Street clothing must be removed in an outer clothing change room and kept there. Clothing worn in the facility will be removed in an inner change room and a shower taken before replacing the street clothing. Two distinct PPE requirements exist for BL-4 operations:

(a) *Class III biological safety cabinet containment.* Clothing requirements when all etiologic agents and infected animals are housed and manipulated in Class III biological safety cabinets will include—

(1) Complete change of clothing and wet shower upon exit. This includes undergarments, pants and shirts or jumpsuits, and shoes. While it is preferred that the shower include washing the hair, head covers will be worn by those who do not wash their hair on each exit.

(2) Appropriate inner gloves. The inner gloves will be donned in the change room.

(b) *Class I or II biological safety cabinet containment.* Clothing requirements for this level when etiologic agents are contained in Class I or II biological safety cabinets of equivalent partial-containment caging systems (for infected animals) (See §§627.56 and 627.57) include—

(1) Complete change of clothing and wet shower upon exit. This includes undergarments, pants and shirts or jump-

suits, and shoes. While the shower should include washing the hair, head covers will be worn by those who do not wash their hair on each exit.

(2) Appropriate inner gloves will be donned in the change room.

(3) A one-piece positive pressure suit described in §627.31(g).

(4) Impervious boots fitted over the suit.

§627.27 Large-scale (LS) operations.

The clothing requirements for these are the same as for the corresponding biosafety levels for laboratory operations.

§627.28 Solutions of toxins and dry forms of toxins in closed containers.

In addition to the minimum clothing specified in §627.22, disposable gloves or gloves designed to protect against the diluent will be worn when handling these materials.

§627.29 Dry forms of toxins handled in open containers.

In addition to the requirements stated in §627.28, the requirements stated in §627.18(c) apply.

§627.30 Situations specified in §627.18(e).

The clothing requirements for this section are for the emergency procedures specified in §627.18(e). Because situations can occur and there is no feasible or available means to mitigate the potential hazard adequately by engineering controls, the clothing requirements exceed those required for a properly conducted laboratory operation at an equivalent biosafety level. The protective equipment required will be selected based upon an assessment of the potential hazards that could be encountered. The following clothing requirements are given as a guide. The selection of PPE will be based upon the highest possible level of contamination that could exist in the room. This will be based upon what is known about the operations that were conducted in the room during and prior to the current incident. In each situation, the aerosols will be allowed to dissipate or settle before entry (approximately 30 minutes). The following clothing requirements apply to these situations:

(a) *BL-1*. (1) Gloves.

(2) Outer complete covering such as a pair of coveralls.

(3) Shoe covers, provided shoes, or safety shoes or boots.

(4) Eye protection (maintenance only).

(b) *BL-1 LS*. The same as described in section 627.30(a) with the following additions:

(1) An impervious apron.

(2) Impervious boots.

(c) *BL-2 and toxins*. (1) Gloves.

(2) Full outer covering such as a coverall.

(3) Shoe covers, provided shoes, or safety shoes or boots (maintenance).

(4) An approved half-face or full-face respirator with HEPA filters (worn).

(5) Eye protection.

(6) An impervious apron (not required for entry only).

(d) *BL-2 LS*. The same as §627.30(c) with the addition of impervious boots.

(e) *BL-3 and BL-3 LS*. (1) A complete change of clothing.

(2) Gloves.

(3) An approved full-face HEPA or HEPA plus charcoal filtered respirator.

(4) An impervious apron (not required for entry only).

(5) Impervious boots.

(6) Head cover.

(f) *BL-4*.

(1) A full change of inner clothing.

(2) An inner pair of gloves.

(3) A one-piece positive pressure suit as described in §627.31(g), or a one-piece Xsuit with an approved positive pressure self-contained breathing apparatus (SCBA) and a supplied-air respirator (SAR) or both (see §627.31(f)).

(4) Appropriate gloves fitted to the suit.

(5) Impervious boots fitted over the suit.

§627.31 Specific requirements for individual PPE items.

(a) *Aprons*. Simple plastic or rubber aprons.

(b) *Boots*. When boots must be worn with an apron, the apron should cover the boot tops sufficiently so that liquids splashed on the apron will not run into the boots.

(c) *Eye and face protection*. Eye protection will meet or exceed the requirements of OSHA found in the 29 CFR