**Section 855.480 Glovebag Procedures**

Glovebag procedures for repair or removal of pipe insulation shall be conducted using commercially available glovebags of six mil clear polyethylene or equivalent, appropriately sized for the project. Glovebag procedures for the repair or removal of pipe insulation shall be conducted in a mini-containment area (including the floor) constructed of one layer of six mil polyethylene in the shape of a triangle or rectangle, or the work area shall be prepared according to all parts of Section 855.400, except in lieu of two layers of polyethylene being applied to the walls and floors according to Section 855.400(i), the walls and floors of the work area shall be covered with one layer of six mil polyethylene. Negative air pressure may be provided by HEPA vacuum cleaning equipment. The HEPA vacuum exhaust may discharge to the interior or exterior of the building.

a) All necessary tools and materials shall be brought into the work area before the glovebag procedure begins.

b) The air sampling professional shall collect the following air samples in each contained area:

1) One area air sample.

2) One area sample at each discharge from the exhaust of negative pressure ventilation equipment.

3) After the first cleaning, the contractor shall wait a minimum of 12 hours drying time and no visible water or condensation shall remain. After the second cleaning, the contractor shall wait a minimum of 12 hours drying time and no visible water or condensation shall remain. Final air clearance shall be conducted by the air sampling professional.

c) Glovebag procedures shall be done by a minimum of two licensed asbestos workers trained in glovebag procedures and equipped with full personal protective equipment. Full personal protective equipment means the entire body is covered with disposable clothing including head, torso, arms, legs and feet. Hands may be left exposed to provide greater mobility. Respirator protection shall be provided and shall consist of a minimum of an air purifying respirator with a HEPA filter.

d) The outer diameter of pipe insulation to be removed shall not exceed one half of the bag's working length/height above the attached gloves.

e) The bag is to be attached securely around the insulation in a manner to prevent air transfer.

f) The integrity of the glovebag seal shall be smoke tested. The contents of a smoke tube shall be injected through the water port access sleeve of the bag. After twist sealing the access sleeve, the bag shall be squeezed gently to check for leakage points, which are then taped airtight.

g) If the pipe insulation adjacent to the section which will be worked on is damaged, or if the pipe insulation terminates, is jointed, or contains an elbow adjacent to the work section, the adjacent insulation shall be wrapped in six mil polyethylene sheeting and sealed airtight with duct tape.

h) The ACBM within the secured glovebag shall be wetted with amended water prior to removal.

i) After the insulation has been repaired or removed, the unprotected pipe shall be sprayed with amended water and scrubbed with a bristle or nylon brush to remove all visible ACBM. The pipe, the interior of the bag, the insulation, and the tools shall then be sprayed with amended water. The enclosed atmosphere shall be misted, and sufficient time shall be allowed for the mist to settle out before breaking the seal to remove the glovebag.

j) Any exposed pipe insulation ends or repairs created by this procedure shall be:

1) sealed with encapsulant prior to bag removal, or

2) thoroughly wetted before bag removal and sealed with wettable cloth end caps and spray glue or any combination of these materials immediately following bag removal.

k) The tools shall be pulled through with one or both glove inserts, thus turning the gloves inside out. The glove(s) are then twist sealed forming a new pouch, taped and severed mid-seal forming two separate bags.

l) A HEPA vacuum shall be used for evacuation of the glovebag in preparation for removal of the bag from the pipe or duct, for clean-up in the event of a spill, and for post project clean-up.

m) With the glovebag collapsed and the ACBM in the bottom of the bag, the bag shall be twisted several times and taped to seal that section during bag removal.

n) A six mil polyethylene or equivalent in strength bag shall be slipped around the glovebag while it is still attached to the pipe. The glovebag shall be detached from the pipe.

o) The asbestos-contaminated waste, the clean-up materials, and protective clothing shall be wetted sufficiently, double-bagged minimizing air content, sealed separately, and disposed of in conformance with Section 855.475.

p) The contractor or school (for maintenance employees) shall provide, at a minimum, air purifying respirators with HEPA filters in compliance with OSHA regulations 29 CFR 1926.1101(h) and USEPA regulations 40 CFR 763, Subpart IV.