

May 1989
Revision 2

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ENVIRONMENTAL CONTROL PROCEDURE 002
INSULATION REMOVAL

May 1989
Revision 2

- I. SCOPE
- II. NOTIFICATION
- III. RESPONSIBILITY

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ENVIRONMENTAL CONTROL PROCEDURE 002
INSULATION REMOVAL

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I. SCOPE

A MAJORITY

~~Much~~ of the insulation in the plant contains asbestos. Friable asbestos is a hazardous substance and requires special handling. ~~ASBESTOS ONLY PRESENTS A HEALTH HAZARD WHEN FIBERS BECOME AIRBORNE AND ARE INHALED. THE mere presence of asbestos containing material does not represent a health hazard.~~ ~~NO INSULATION OF ANY KIND WILL BE REMOVED BY ANYONE IN THE PLANT OTHER THAN~~ ~~ELITE OTHER THAN A-CERTIFIED~~ ~~IN ANY AMOUNT,~~

~~or an asbestos abatement contractor.~~

~~have been trained in the glovebag method of asbestos abatement and will only perform glovebag jobs and small scale jobs such as picking up small amounts of fallen asbestos.~~ Small scale job identification and glovebag procedures are attached. Plant personnel and contractors will follow OSHA and MSHA regulations.

Visual inspection for determination of asbestos insulation is not possible; therefore, samples need to be taken and sent to an approved asbestos lab for identification. Small and emergency jobs that require prompt attention (jobs that cannot wait for sampling and outside analytical work) will be treated as if the insulation is an asbestos containing material (ACM).

A survey done in 1984 by Reynolds' Corporate Industrial Hygiene Department is available for reference. The survey was done on various lines and tanks in the plant. If the equipment that needs abatement is not on the survey, the material will be sampled for asbestos determination or considered ACM if the insulation is to be removed on an emergency.

A separate procedure (ECP 002A) explains the scope and procedure required to handle an emergency insulation abatement situation.

II. NOTIFICATION

Notification to the Texas Air Control Board (TACB) for removal of ACM will have to be done ten (10) days in advance of removal for quantities greater than 160 square feet or 260 linear feet of pipe. Notification for large scale emergency jobs will be verbal, followed by written notification. Notification is given to TACB on form ACB-99 which is recommended by TACB. Notification for small emergency jobs is covered by a blanket notification letter to TACB every six months.

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III. RESPONSIBILITY

A. Plant and Contractor

The foreman, which must be a "competent person" (i.e., one who has completed a certified supervisor asbestos training course), having control of the crew abating ACM is responsible for the following:

1. providing a work plan for proper abatement procedures to be used for each job
2. providing protective clothing to include appropriate respirators, disposable coveralls, head and foot covering and gloves
3. posting warning signs around the work area
4. placing ACM in proper bags which are then inserted in the plant asbestos container
5. keeping a daily count of bags placed in the container and coordinating with the Environmental Group to insure that the material is removed in a timely manner from the plant (90 days maximum holding time)

B. Project Engineer (large ACM removal jobs)

The Project Engineer is responsible for overseeing the contractor and assuring that the proper procedures are followed and will conduct a contractor asbestos removal/repair audit as the job progresses.

The Project Engineer will also have the responsibility of informing the Environmental Group that the asbestos container is full so a hazardous waste manifest can be completed and signed by the Plant Manager (or his designated representative).

The Project Engineer will supervise or guide the truck in and out of the plant during pickup of the asbestos container. The green copy of the manifest will always be kept and taken to the Environmental Group for filing and documentation.

C. Environmental Group

The Environmental Group will be responsible for notification to TACB and preparation of the hazardous waste manifest. Spot audits and inspections will be made to evaluate compliance with safety and abatement procedures prescribed by law. A complete record of ACM disposal will be maintained.

D. Safety Department

The Safety Department will assist in monitoring the abatement operation and coordinate with governmental safety agencies as required.

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E. Competent Persons (Supervisory Asbestos Training)

The Sherwin Plant has 2 competent persons that have the proper training to assist anyone that has a question concerning asbestos. If a question or emergency arises during an off-shift, weekend or holiday, check to see if one of the competent persons is on-site for assistance and recommendations (list attached).

hdlg/cs
May 1989
(002 Insul Rem/ECP)

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COMPETENT PERSONS
ASBESTOS ABATEMENT

Stan Millsap
Paul Matula
Chris Muller
O. G. Randle
Danny Reyes
Hurley Moseley
Chuck Taylor
Danny Packebush
Clyde Wise
Cecil England
Howard Cave
Hector De La Garza

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GLOVEBAG TECHNIQUE FOR PIPE LAGGING REMOVAL

Objective: Become familiar with the procedures used and materials necessary for the glovebag technique.

Learning Tasks: Information in this section should enable participants to:

-  Understand the concept of localized glovebag removal.
-  Become familiar with the necessary materials to perform the job.
-  Recognize the importance of proper pipe lagging preparation.
-  Understand the basic procedures and sequence for glovebag operations.
-  Be aware of necessary precautions, work practices and personal protective equipment.
-  Perform proper clean-up and disposal of asbestos-containing waste generated by this technique.

OVERVIEW OF THE GLOVEBAG PROCEDURE

The glovebag consists of a 6-12 mil bag fitted with long sleeve gloves, a tool pouch and a two-inch opening used for water application. Although glovebags can be fabricated by the user for each project, most contractors prefer to purchase ready-made bags. The size, quality, style and cost vary depending on the manufacturer. The cost per glovebag is in a range of \$10-40 apiece. In addition to the glovebag, several other tools and materials are commonly required to perform the project successfully. These materials, listed below, are readily available from most asbestos abatement contractor suppliers.

MATERIALS

1. Glovebag (one or more depending on project size)
2. Pump-up garden sprayer (2-3 gallon size)
3. Amended water (surfactant)
4. Duct tape (3-inch width)

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5. Polyethylene disposal bags (6 mil)
6. Smoke tubes with aspirator bulb
7. HEPA-filtered vacuum cleaner
8. Bone saw
9. Utility knife with retractable blade
10. Wire cutters
11. Tin snips (if aluminum jacket is present)
12. Polyethylene plastic (roll of 4 or 6 mil)
13. Dual cartridge respirators with high efficiency cartridges
14. Disposable full-body suits with hood and feet covering
15. Small scrub brush
16. Stapler
17. Several rags

18. Wettable cloth

19. Asbestos caution signs and labels

20. Reinsulation materials as necessary

BEFORE STARTING THE PROJECT

Two persons are required to perform the glovebag removal project. A third person is often available, however, to assist with supplies, keep unwanted visitors out of the area, and to conduct the air monitoring. Each of these team members should have received training on the use and limitations of glovebag removal projects. They should also be included in the respiratory protection program and medical surveillance program.

Before any work begins, all necessary materials and supplies should be brought into the work area. This work area should be roped off and warning signs posted on the perimeter to minimize the chance of visitors entering this area. Barrier tape (3-inch) with a preprinted asbestos warning works well for this purpose. The HVAC serving the work area should be shut down, if possible. Employees should be trained in emergency procedures should the

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glovebag rupture. This usually includes wet cleaning and/or HEPA vacuuming procedures and a shower available at a remote location. With this phase completed, the following generic guidelines may be used for most pipe lagging projects. REMEMBER! NEVER PERFORM GLOVEBAG REMOVAL ON HOT PIPES (OVER 150°F.) This may cause the bag or gloves to melt over the workers' hands and arms.

REMOVAL PROCEDURES

1. Following the manufacturer's directions, mix the surfactant with water in the garden sprayer.
2. Have each employee put on a cartridge respirator and check the face-fit.
3. Have each employee put on a disposable full-body suit. Remember, the hood goes over the respirator straps.
4. Check the pipe where the work will be performed. If it is damaged (broken lagging, hanging, etc.), wrap the entire length of the pipe in polyethylene plastic and "candy stripe" it with duct tape. A common error when doing

glovebag work is forgetting that loose pipe lagging several feet or even several yards away from the glovebag work may be jarred loose by the activity. This is one of the common causes of high airborne fiber concentrations during glovebag work. The other problem is failure to clean up debris on the floor and other surfaces which has accumulated and contains asbestos. If the pipe is undamaged it is still necessary to place one layer of duct tape around the pipe at each location where the glovebag will be attached. This serves two purposes. First, it gives a good surface on which to seal the ends of the glovebag. Second, it minimizes the chance of releasing fibers when the tape at the ends of the glovebag is peeled off at the completion of the job.

5. Slit the top of the glovebag open (if necessary) and cut down the sides to accommodate the size of the pipe (about two inches longer than the pipe diameter). One brand has a zipper top and straps at each end facilitating installation of the bag on the pipe.
6. Place the necessary tools into the pouch located inside the glovebag. This will usually

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include the bone saw, utility knife, rags, scrub brush, wire cutters, tin snips and wettable cloth. Note: It is easiest to pre-cut the wettable cloth at this point. Cut out a donut shape with the inner diameter 1/2-inch smaller than the diameter of the pipe beneath the insulation. The outer diameter of the donut should be three inches longer than the diameter of the pipe insulation being removed. Finally, cut a slit in each of the two donuts so they can be slipped around the pipe.

7. Place one strip of duct tape along the edge of the open top slit of the glovebag for reinforcement.
8. Place the glovebag around the section of pipe to be worked on and staple the top together through the reinforcing duct tape. Staple at intervals of approximately one inch. Next, fold the stapled top flap back and tape it down with a strip of duct tape. This should provide an adequate seal along the top. Next, duct tape the ends of the glovebag to the pipe itself, previously covered with plastic or duct tape (see step 4).

9. Using the smoke tube and aspirator bulb, place the tube into the water sleeve (two-inch opening to glovebag). By squeezing the bulb, fill the bag with visible smoke. Remove the smoke tube and twist the water sleeve closed. While holding the water sleeve tightly, gently squeeze the glovebag and look for smoke leaking out, especially at the top and ends of the glovebag. If leaks are found, they should be taped closed using duct tape and the bag should be re-tested with smoke.
10. Insert the wand from the water sprayer through the water sleeve. Using duct tape, tape the water sleeve tightly around the wand to prevent air leakage.
11. One person places his hands into the long-sleeved gloves while the second person directs the water spray at the work.
12. If the section of pipe is covered with an aluminum jacket, this is removed first using the wire cutters to cut any bands and the tin snips to remove the aluminum. It is important to fold the sharp edges in to prevent cutting the bag when it is placed in the bottom. Use caution to prevent cuts - these edges are sharp!

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13. With the insulation exposed, use the bone saw to cut the insulation at each end of the section to be removed inside the glovebag. Note: A bone saw is a serrated heavy-gauge wire with ring-type handles at each end. Throughout this process, water is sprayed on the cutting area to keep dust to a minimum.
14. Once the ends are cut, the section of insulation should be slit from end to end using the utility knife. The cut should be made along the bottom of the pipe and water continuously supplied. Again, care should be taken when using the knife not to puncture the bag. Some insulation may have wire to be clipped as well.
15. Spray all tools with water inside the bag and place back into pouch.
16. The insulation can now be lifted off the pipe and gently placed in the bottom of the bag.
17. Using the scrub brush, rags and water, scrub and wipe down the exposed pipe inside the glovebag. Note: The inexpensive horse rub-down mittens work well for this.

18. Wet the donut-shaped pieces of wettable cloth over the exposed ends of insulation remaining on the pipe. Wettable cloth is a plaster impregnated fiberglass webbing available at many hardware and/or plumbing supply stores.
19. Remove the water wand from the water sleeve and attach the small nozzle from the HEPA-filtered vacuum. Turn on the vacuum only briefly to collapse the bag.
20. Remove the vacuum nozzle and twist the water sleeve closed and seal with duct tape.
21. From outside the bag, pull the tool pouch away from the bag and twist it to separate it from the bag. Place duct tape over the twisted portion and then cut the tool bag from the glovebag, cutting through the twisted/taped section. In this manner, the contaminated tools may be placed directly into the next glovebag without cleaning. Alternatively, the tool pouch with the tools can be placed in a bucket of water, opened underwater, and the tools cleaned and dried without releasing asbestos into the air. Note: Rags and the scrub brush cannot be cleaned in this manner and should be

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discarded with the asbestos waste. If more than one adjacent section of pipe is to be removed, the glovebag may be loosened at each end and slid along the pipe to the next section. In this case, the tools would remain in the bag for continued use.

22. With the removed insulation in the bottom of the bag, twist the bag several times and tape it to keep the material in the bottom during removal of the glovebag from the pipe.
23. Slip a 6 mil disposal bag over the glovebag (still attached to the pipe). Remove the tape and open the top of the glovebag and fold it down into the disposal bag.
24. Remove the disposable suits and place these into the bag with the waste.
25. Twist the top of the bag closed, fold this over, and seal with duct tape. Label the bag with a warning label.
26. Using a clean damp rag, wipe the exterior of the respirator and leave the work area. Remove the respirator.

27. Asbestos-containing material must be disposed of at an approved landfill in accordance with EPA regulations.
28. Air sampling should be conducted during and after completion of glovebag projects to determine if undetected leakage occurred. Sampling should be done by qualified persons with immediate analyses provided. Once the area has met the criteria for re-entry by unprotected personnel, the barriers may be removed and reinsulation completed. For further information concerning sampling procedures and clearance criteria, see the section entitled, "Air Sampling Requirements."

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Appendix G to § 1926.58—Work Practices and Engineering Controls for Small-Scale, Short-Duration Asbestos Renovation and Maintenance Activities—Non-Mandatory

This appendix is not mandatory, in that construction industry employers may choose to comply with all of the requirements of OSHA's final rule for occupational exposure to asbestos in the construction industry, § 1926.58. However, employers wishing to be exempted from the requirements of paragraphs (e)(6) and (f)(2)(iii)(B) of § 1926.58 shall comply with the provisions of this appendix when performing small-scale, short-duration renovation or maintenance activities. OSHA anticipates that employers in the electrical, carpentry, utility, plumbing, and interior construction trades may wish to avail themselves of the final standard's exemptions for small-scale, short-duration renovation and maintenance operations.

Definition of Small-Scale, Short-Duration Activities

For the purposes of this appendix, small-scale, short-duration renovation and maintenance activities are tasks such as, but not limited to:

- Removal of asbestos-containing insulation on pipes;
- Removal of small quantities of asbestos-containing insulation on beams or above ceilings;
- Replacement of an asbestos-containing gasket on a valve;
- Installation or removal of a small section of drywall;
- Installation of electrical conduits through or proximate to asbestos-containing materials.

Evidence in the record (see the Summary and Explanation section of the preamble for paragraph (g), Methods of Compliance, for specific citations) suggests that the use of certain engineering and work practice controls is capable of reducing employee exposures to asbestos to levels below the final standard's action level (0.1 f/cc). Several controls and work practices, used either singly or in combination, can be employed effectively to reduce asbestos exposures during small maintenance and renovation operations. These include:

- Wet methods;
- Removal methods;

- Use of Glove bags
- Removal of entire asbestos insulated pipes or structures
- Use of mini-enclosures

- Enclosure of asbestos materials; and
- Maintenance programs.

This appendix describes these controls and work practices in detail.

Preparation of the Area Before Renovation or Maintenance Activities

The first step in preparing to perform a small-scale, short-duration asbestos renovation or maintenance task, regardless of the abatement method that will be used, is the removal from the work area of all objects that are movable to protect them from asbestos contamination. Objects that cannot be removed must be covered completely with a 6-mil-thick polyethylene plastic sheeting before the task begins. If objects have already been contaminated, they should be thoroughly cleaned with a High Efficiency Particulate Air (HEPA) filtered vacuum or be wet wiped before they are removed from the work area or completely encased in the plastic.

Wet Methods

Whenever feasible, and regardless of the abatement method to be used (e.g., removal, enclosure, use of glove bags), wet methods must be used during small-scale, short duration maintenance and renovation activities that involve disturbing asbestos-containing materials. Handling asbestos materials wet is one of the most reliable methods of ensuring that asbestos fibers do not become airborne, and this practice should therefore be used whenever feasible. As discussed in the Summary and Explanation section of the preamble for paragraph (g), Methods of Compliance, wet methods can be used in the great majority of workplace situations. Only in cases where asbestos work must be performed on live electrical equipment, on live steam lines, or in other areas where water will seriously damage materials or equipment may dry removal be performed. Amended water or another wetting agent should be applied by means of an airless sprayer to minimize the extent to which the asbestos-containing material is disturbed.

Asbestos-containing materials should be wetted from the initiation of the maintenance

or renovation operation and wetting agents should be used continually throughout the work period to ensure that any dry asbestos-containing material exposed in the work is wet and remains wet until disposal.

Removal of Small Amount of Asbestos-Containing Materials

Several methods can be used to remove small amounts of asbestos-containing materials during small-scale, short-duration renovation or maintenance tasks. These include the use of glove bags, the removal of an entire asbestos-covered pipe or structure, and the construction of mini-enclosures. The procedures that employers must use for each of these operations if they wish to avail themselves of the final rule's exemptions are described in the following sections.

Glove Bags

As discussed in the Summary and Explanation section of the preamble for paragraph (g), Methods of Compliance, evidence in the record indicate that the use of glove bags to enclose the work area during small-scale, short-duration maintenance or renovation activities will result in employee exposures to asbestos that are below the final standard's action level of 0.1 f/cc. This appendix provides requirements for glove-bag procedures to be followed by employers wishing to avail themselves of the standard's exemptions for each activities. OSHA has determined that the use of these procedures will reduce the 8 hour time weighted average (TWA) exposures of employees involved in these work operations to levels below action level and will thus provide a employee protection equivalent to that provided by compliance with all provisions of the final rule.

Glove Bag Installation. Glove bags are approximately 40-inch-wide times 64-inch-long bags fitted with arms through which the work can be performed (see Figure G-1(A)). When properly installed and used, they permit workers to remain completely isolated from the asbestos material removed or replaced inside the bag. Glove bags can thus provide a flexible, easily installed, and quickly dismantled temporary small work area enclosure that is ideal for small-scale asbestos renovation or maintenance jobs.

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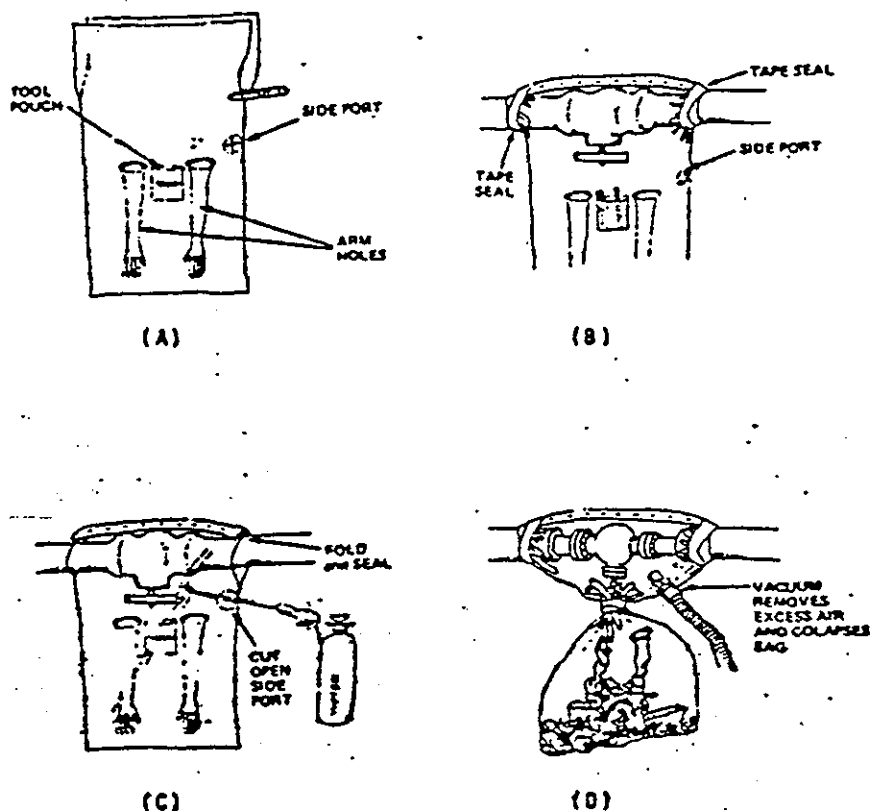


Figure G-1. Diagrams Showing Proper Use of Glove Bags in Small-Scale, Short-Duration Maintenance and Renovation Operations.

These bags are single use control devices that are disposed of at the end of each job. The bags are made of transparent 6-mil-thick polyethylene plastic with arms of Tyvek[®] material (the same material used to make the disposable protective suits used in major asbestos removal, renovation, and demolition operations and in protective gloves). Glove bags are readily available from safety supply stores or specialty asbestos removal supply houses. Glove bags come pre-labeled with the asbestos warning label prescribed by OSHA and EPA for bags used to dispose of asbestos waste.

Glove Bag Equipment and Supplies. Supplies and materials that are necessary to use glove bags effectively include:

- (1) Tape to seal the glove bag to the area from which asbestos is to be removed;
- (2) Amended water or other wetting agents;
- (3) An airless sprayer for the application of the wetting agent;

* Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

(4) Bridging encapsulant (a paste-like substance for coating asbestos) to seal the rough edges of any asbestos-containing materials that remain within the glove bag at the points of attachment after the rest of the asbestos has been removed;

(5) Tools such as razor knives, nips, and wire brushes (or other tools suitable for cutting wire, etc.);

(6) A HEPA filter-equipped vacuum for evacuating the glove bag (to minimize the release of asbestos fibers) during removal of the bag from the work area and for cleaning any material that may have escaped during the installation of the glove bag; and

(7) HEPA-equipped dust cartridge respirators for use by the employees involved in the removal of asbestos with the glove bag.

Glove Bag Work Practices. The proper use of glove bags requires the following steps:

(1) Glove bags must be installed so that they completely cover the pipe or other structure where asbestos work is to be done. Glove bags are installed by cutting the sides of the glove bag to fit the size of the pipe from which asbestos is to be removed. The glove

bag is attached to the pipe by folding the open edges together and securely sealing them with tape. All openings in the glove bag must be sealed with duct tape or equivalent material. The bottom seam of the glove bag must also be sealed with duct tape or equivalent to prevent any leakage from the bag that may result from a defect in the bottom seam (Figure G-1(B)).

(2) The employee who is performing the asbestos removal with the glove bag must do a half mask dual-cartridge HEPA-equipped respirator; respirators should be worn by employees who are in close contact with the glove bag and who may thus be exposed as a result of small gaps in the seams of the bag or holes punched through the bag by a razor knife or a piece of wire mesh.

(3) The removed asbestos material from the pipe or other surface that has fallen into the enclosed bag must be thoroughly wetted with a wetting agent (applied with an airless sprayer through the pre-cut port provided in most glove bags or applied through a small hole cut in the bag) (Figure G-1(C)).

(4) Once the asbestos material has been thoroughly wetted, it can be removed from the pipe, beam or other surface. The choice of tool to use to remove the asbestos-containing material depends on the type of material to be removed. Asbestos-containing materials are generally covered with painted canvas and/or wire mesh. Painted canvas can be cut with a razor knife and peeled away from the asbestos-containing material underneath. Once the canvas has been peeled away, the asbestos-containing material underneath may be dry, in which case it should be re-sprayed with a wetting agent to ensure that it generates as little dust as possible when removed. If the asbestos-containing material is covered with wire mesh, the mesh should be cut with nips, tin snips, or other appropriate tool and removed.

A wetting agent must then be used to spray any layer of dry material that is exposed beneath the mesh, the surface of the stripped underlying structure, and the inside of the glove bag.

(5) After removal of the layer of asbestos-containing material, the pipe or surface from which asbestos has been removed must be thoroughly cleaned with a wire brush and wet wiped with a wetting agent until no traces of the asbestos containing material can be seen.

(6) Any asbestos containing insulation edges that have been exposed as a result of the removal or maintenance activity must be encapsulated with bridging encapsulant to ensure that the edges do not release asbestos fibers to the atmosphere after the glove bag has been removed.

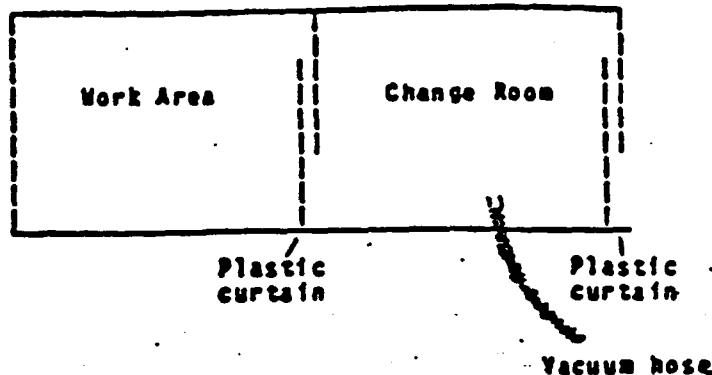
(7) When the asbestos removal and encapsulation have been completed, a vacuum hose from a HEPA filtered vacuum must be inserted into the glove bag through the port to remove any air in the bag that may contain asbestos fibers. When the air has been removed from the bag, the bag should be squeezed tightly (as close to the top as possible), twisted, and sealed with tape, to keep the asbestos materials safely in the bottom of the bag. The HEPA vacuum can

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then be removed from the bag and the glove

bag itself can be removed from the work area to be disposed of properly (Figure C-1(D)).

Top View



Side View

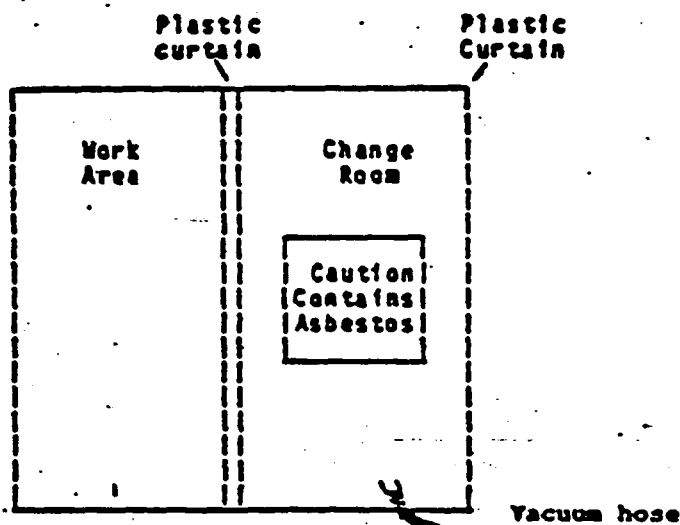


Figure C-2. Schematic of Mini-enclosure

Mini-Enclosures

In some instances, such as removal of asbestos from a small ventilation system or from a short length of duct, a glove bag may not be either large enough or of the proper shape to enclose the work area. In such cases, a mini-enclosure can be built around the area where small-scale, short-duration asbestos maintenance or renovation work is to be performed (Figure C-2). Such an

enclosure should be constructed of 6-mil-thick polyethylene plastic sheeting and can be small enough to restrict entry to the asbestos work area to one worker.

For example, a mini-enclosure can be built in a small utility closet when asbestos-containing duct covering is to be removed. The enclosure is constructed by:

(1) Affixing plastic sheeting to the walls with spray adhesive and tape;

(2) Covering the floor with plastic and sealing the plastic covering the floor to the plastic on the walls.

(3) Sealing any penetrations such as electrical conduits with tape; a

(4) Constructing a small change room (approximately 3 feet square) made of 6-mil-thick polyethylene plastic supported by 2-inch by 4-inch lumber (the plastic should be attached to the lumber supports with staple or spray adhesive and tape).

The change room should be contiguous to the mini enclosure, and is necessary to allow the worker to vacuum off his protective coveralls and remove them before leaving the work area. While inside the enclosure, the worker should wear Tyvek[®] disposable coveralls and use the appropriate HEPA filtered dual cartridge respiratory protection.

The advantages of mini-enclosures are that they limit the spread of asbestos contamination, reduce the potential exposure of bystanders and other workers who may be working in adjacent areas, and are quick and easy to install. The disadvantage of mini-enclosures is that they may be too small to contain the equipment necessary to create a negative pressure within the enclosure; however, the double layer of plastic sheeting will serve to restrict the release of asbestos fibers to the area outside the enclosure.

Removal of Entire Structures

When pipes are insulated with asbestos-containing materials, removal of the entire pipe may be more protective, easier, and more cost-effective than stripping the asbestos insulation from the pipe. Before such a pipe is cut, the asbestos-containing insulation must be wrapped with 6 mil polyethylene plastic and securely duct tape or equivalent. This plastic will prevent asbestos fibers from becoming airborne as a result of the vibration created by the power saws used to cut the pipe. If possible, the pipes should be cut at location that are not insulated to avoid disturbing the asbestos. If a pipe is completely insulated with asbestos-containing materials, small sections should be stripped using the glove-bag method described above before the pipe is cut at the stripped sections.

Enclosure

The decision to enclose rather than remove asbestos-containing material from an area depends on the building owner's preference, i.e., for removal or containment. Owners consider such factors as cost effectiveness, the physical configuration of the work area, and the amount of traffic in the area when determining which abatement method to use.

If the owner chooses to enclose the structure rather than to remove the asbestos-containing material insulating it, a solid structure (airtight walls and ceilings) must be built around the asbestos covered pipe or structure to prevent the release of asbestos-containing materials into the area beyond the enclosure and to prevent disturbing these

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