

EH&S FACT SHEET

Environment, Health and Safety Information for the Berkeley Campus

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Procedures to Control Dust and Debris When Mounting Seismic Wall Bracing

For the health and safety of people in buildings during earthquakes, it is advisable to brace furniture and equipment to walls and floors. However, drilling holes for the bracing devices often generates dust and debris that might contain asbestos or lead. This Fact Sheet presents procedures to control the dust and debris produced during non-structural seismic bracing of furniture and equipment to floors and walls.

Wall, floor, and ceiling samples have been collected over the years at UC Berkeley by Physical Plant-Campus Services (PP-CS) and the Office of Environment Health & Safety EH&S . Many samples were found to contain small amounts of asbestos mostly 1 to 5 and various amounts of lead. Because it is not possible to predict the asbestos or lead content in the walls without extensive sampling, and because it is impractical to sample and test for these materials each time a hole is to be drilled, it is prudent to assume that all walls contain some amount of asbestos and lead and to act accordingly.

UC Berkeley and other University of California facilities have conducted personal air sampling during activities similar to drilling holes in walls. They have found that there is no possibility of personnel being exposed to hazardous levels of asbestos or lead while drilling holes in walls if the following procedures are observed.

These procedures are intended for drilling holes in walls, floors, or ceilings in order to anchors and backing bars to secure furnishings and equipment.

Equipment and Supplies

1. A variable speed electric drill
2. Drill bits less than 0.5 inch in diameter
3. Disposable gloves
4. Disposable wet wipes
5. Zip lock™ bags
6. HEPA vacuum If one is not available, use aerosol shaving cream or petroleum jelly.
7. Drop cloth plastic or cloth



Drilling using a HEPA vacuum



Procedures

It is best to mark all the holes that will be drilled in each room before you start drilling. The most efficient way of controlling the dust and debris is to use a HEPA vacuum.

1. With one hand, hold the anchor or backing bar up to the wall or ceiling where it will be mounted. With the other hand, mark the location of at least two of the holes for a bar, one hole for an anchor.
2. Lay the drop cloth under the area where the holes will be drilled.
3. Place the drill bit in the drill motor chuck over the mark that was made to locate the hole.
4. With the vacuum on, hold the nozzle of the vacuum within two inches of the drill bit to collect the falling debris.
5. Hold a HEPA vacuum nozzle adjacent to the drill bit to capture all dust generated.
6. Use the vacuum to clean up any dust and debris in the room that was produced during the drilling.

If a HEPA vacuum is not available, follow these steps in place of 4, 5, and 6.

Drill using shaving cream and a wet wipe



- A. Squirt a golf ball sized lump of shaving cream on the wall surrounding the

drill. Slowly rotate the drill while the cream is being applied to distribute it evenly round the bit.

B. Hold a wet wipe under the bit and against the wall to catch the debris that falls out of the cream.

C. Using the lowest possible practical drill speed as if you were drilling metal, drill the hole.

D. After you've stopped the drill and removed it from the hole, use a wet wipe to swathe and wipe the drill bit.

E. Place the wet wipe in a zip lock™ bag that is used only for wet wipes and shaving cream.

F. Using another wet wipe, clean the shaving cream off the wall and wipe up any other debris from the wall or drop cloth that was produced during the drilling.

G. Place the wet wipes in the zip lock™ bag.

H. Label the bag as "Dry debris may contain asbestos or lead." Then take the bag to an area designated by your supervisor. Do not dispose of the bag in a regular trash container. It may contain small amounts of asbestos or lead.

If you have any questions or concerns about these procedures, please contact EH&S at 642 3073.

