ASBESTOS: WORKER AND EMPLOYER GUIDE TO HAZARDS AND RECOMMENDED CONTROLS

WHAT IS ASBESTOS?

Asbestos is a mineral fiber that occurs in rock and soil. Because of its fiber strength and heat resistance, asbestos has been used in many materials produced for building or home construction, particularly if they were manufactured prior to 1980, such as shingles, ceiling and floor tiles, and attic and pipe insulation. If these materials are broken, crushed, or disturbed, the asbestos fibers may be released into the air and become a health hazard. High exposures to asbestos may occur during demolition and rebuilding.

The Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), and state and local authorities have regulations to protect workers from the hazards of asbestos. We strongly recommend using a licensed or certified asbestos abatement contractor to perform any asbestos work.

WHAT ARE THE HAZARDS OF ASBESTOS?

Exposure to asbestos is a risk factor for developing disabling and deadly lung diseases years after the exposure. Inhaling asbestos fibers can lead to scarring of the lung tissue, which can result in the loss of lung function, disability and death. Asbestos exposure can also cause cancer in the lungs and cancer (known as mesothelioma) in the lining of the lungs or stomach. There is a higher risk of lung cancer for smokers who are also exposed to asbestos. There is no safe level of asbestos exposure.

WHERE IS ASBESTOS FOUND IN HOMES AND RESIDENTIAL BUILDINGS?

Water, hail, and wind can damage structures and contribute to the release of fibers from asbestos-containing materials (see examples below). When these materials dry out, they can break down into very small fibers, which can get into the air and be easily inhaled during cleanup work.

Sources of asbestos in homes and other residential buildings built prior to 1980 include:

- Roofing, shingles and siding
- Block insulation
- Heating and cooling systems
- Floor tiles and vinyl flooring, backing and mastic
- Adhesives
- Electrical insulation and panels
- Plaster, cement, putties, taping compounds and caulk
- Textured paints
- Appliance components
- Ceiling tiles and spray-on coatings
- Popcorn ceiling materials
- Attic insulation (vermiculite)
- Table pads
- Gardening products (vermiculite)
- Pipe, boiler, and duct insulation
- Wallboard
- Fireplace decorations
- Heat-resistant textiles

PROTECTING WORKERS

Employers are required to protect their workers from exposure to asbestos, even during disaster conditions. Generally, employers engaged in hurricane recovery operations are required to follow OSHA standards for asbestos in general industry (29 CFR 1910.1001) and/or construction (29 CFR 1926.1101). These standards require employers to protect workers by assessing asbestos levels, marking off regulated areas, posting hazard signs, using engineering controls (such as ventilation systems equipped with HEPA filters), and finding ways to control work practices to reduce levels of asbestos in the air. Employers are responsible for providing and ensuring proper use of personal protective equipment (PPE), including respirators, as appropriate. If respirators are being used, employers need to implement the requirements of the OSHA respiratory protection standard (29 CFR 1910.134).

Methods for Controlling Exposure:

- Avoid disturbing sources of asbestos until proper steps for assessment and control can be implemented.
- Never smoke, eat, or drink in areas where asbestos exposure is possible.
- Avoid dry sweeping, shoveling, or other dry clean-up of dust and debris containing asbestos.
- Wet materials before and during cutting, breaking, or other work that might release asbestos fibers into the air.
- Wear protective outer clothing that can be removed and cleaned or discarded.
- If work involving asbestos-containing materials must be done, use a NIOSH-approved respirator to protect workers from inhaling asbestos fibers.
- Wash exposed parts of the body with soap and water.
- Avoid carrying asbestos fibers out of a worksite where they can later be inhaled by others (e.g., by family members at home).

Medical Monitoring:

Per the OSHA standards for asbestos, exposure monitoring and medical surveillance of workers is required when:

- Workers are or will be exposed to airborne concentrations of fibers of asbestos at or above OSHA's exposure limits for a combined total of 30 or more days per year;
- Workers perform work that disturbs asbestos-containing material (ACM) or presumed asbestos-containing material (PACM) for a combined total of 30 or more days per year;
- For workers that wear negative-pressure respirators - the employer must provide a medical evaluation in accordance with Appendix D of OSHA's asbestos standards.

Demolition:

Demolition operations should be performed under the provisions of the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation, (EPA 40 CFR part 61, Subpart M). All employers who perform demolition work need to follow the requirements of 29 CFR Part 1926, Subpart T - Demolition. A certified asbestos abatement supervisor should be at the demolition site to provide guidance and assistance. Employers/workers also need to follow individual state guidelines for certification of workers for asbestos removal. Overexposures to asbestos can be prevented by using engineering controls, work practice controls, and, personal protective equipment. Engineering controls include isolating the exposure source or using other engineering methods, such as ventilation equipped with HEPA filters, to minimize exposure to asbestos.

All demolition workers must be provided and properly use equipment and personal protective equipment designed to protect them from asbestos exposure during demolition and handling of debris, including respirators as required by the OSHA respiratory protection standard (29 CFR 1910.134).

Training:

The employer must train each worker who may be exposed to airborne concentrations of asbestos at or above the Permissible Exposure Limit (PEL) and/or excursion limit and each worker who performs Class I through IV asbestos operations. Workers need to be trained prior to initial assignment and at least annually thereafter. The OSHA asbestos standards require hazard awareness training for work operations when there is any potential worker exposure to asbestos. The training must be in a language and format that the worker understands.

The training program must include information on:

- The health effects associated with asbestos exposure;
- The relationship between smoking and asbestos exposure in producing lung cancer;
- The quantity, location, manner of use, release, and storage of asbestos, and the specific nature of operations which could result in exposure to asbestos;
- The engineering controls and work practices associated with the worker's job assignment;

- The specific procedures implemented to protect workers from exposure to asbestos, such as appropriate work practices, emergency and clean-up procedures, and personal protective equipment to be used;
- The purpose, proper use, and limitations of respirators and protective clothing, if appropriate; and
- The purpose and a description of the medical surveillance program required by OSHA standards.

OTHER SAFETY AND HEALTH HAZARDS

Recovery workers involved in demolition and rebuilding may face additional hazards on the job site. Common hazards include downed electrical wires, carbon monoxide and electrical hazards from portable generators, fall and "struck-by" hazards from tree limbs or working at heights, working in unprotected excavations or confined spaces, burns, lacerations, musculoskeletal injuries, being struck by traffic or heavy equipment, and encountering contaminated water during cleanup and recovery efforts.

ADDITIONAL RESOURCES

- Occupational Safety and Health Administration (OSHA) Safety and Health Topics page on asbestos: http://www.osha.gov/SLTC/asbestos/
- National Institute for Occupational Safety and Health (NIOSH) Workplace Safety & Health Topics page on asbestos: http://www.cdc.gov/niosh/topics/asbestos/
- U.S. Department of Health and Human Services, Public Health Service Agency for Toxic Substances and Disease Registry (ATSDR), http://www.atsdr.cdc.gov/toxprofiles/tp61.pdf
- U.S. Environmental Protection Agency (EPA), Subpart M— Rule and Implementation Information for Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) - EPA 40 CFR part 61, Subpart M. http://www.epa.gov/ttn/atw/asbes/asbespg.html
- Occupational Safety and Health Administration Asbestos Standard for Construction (OSHA 3096) http://www.osha.gov/Publications/osha3096.pdf
- OSHA standard for asbestos in general industry (29 CFR 1910.1001): https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9995
- OSHA standard for asbestos in construction (29 CFR 1926.1101): https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10862
- OSHA standard for respiratory protection (29 CFR 1910.134): https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12716
- OSHA standards for demolition (29 CFR Part 1926, Subpart T): https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10942
- CDC / NIOSH Protect Your Family: Reduce Contamination at Home: http://www.cdc.gov/niosh/docs/97-125/

ASSISTANCE FOR EMPLOYERS

OSHA's On-site Consultation Program offers free and confidential advice to small and medium-sized businesses in all states across the country, with priority given to high-hazard worksites. On-site Consultation services are separate from enforcement and do not result in penalties or citations. Consultants from state agencies or universities can also work with employers to identify workplace hazards, provide advice on compliance with OSHA standards, and assist in establishing safety and health management systems. To locate the OSHA On-site Consultation Program nearest you, call 1-800-321-6742 (OSHA) or visit http://www.osha.gov/dcsp/smallbusiness/index.html.

This guidance document creates no new legal obligations. It contains recommendations as well as descriptions of OSHA safety and health standards. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available by the OSHA Office of Communications to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.