Reed College Asbestos Management Program

May 2024

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1.0 Purpose and Scope

Asbestos is a naturally occurring, flexible, fibrous mineral that takes the form of hollow microscopic fibers that are nearly indestructible. It is resistant to heat, fire, and chemicals; does not conduct electricity; and, pound for pound, is stronger than steel. As a result, in the last century, businesses in the United States used more than 30 million tons of asbestos in over 3000 different consumer, industrial, textile, maritime, automotive, scientific, and building products.

When a material containing asbestos is disturbed or damaged, it may release the fibers that can remain in the air for hours or even days. Regrettably, workers may easily inhale these microscopic fibers, unbeknownst to them. As asbestos accumulates in the lungs, several types of slowly progressive diseases can develop. The fibers can scar the lungs, cause cancer, disability, and death. There is no safe level of exposure.

Asbestos is only dangerous when it becomes airborne. As long as asbestos-containing materials (ACM) are not damaged, the fibers do not become airborne and do not pose a health hazard to building occupants. For this reason, Reed College manages in-place ACMs in buildings and ensures proper and safe removal before renovations, maintenance, and demolitions.

The Asbestos Management Program applies to all employees and contractors who do construction, maintenance and custodial work with potential for exposure to asbestos at Reed College. It also applies to employees who might disturb or damage presumed asbestos-containing materials.

2.0 Responsibilities of Positions

2.1 Environmental Health and Safety Department (EHS)

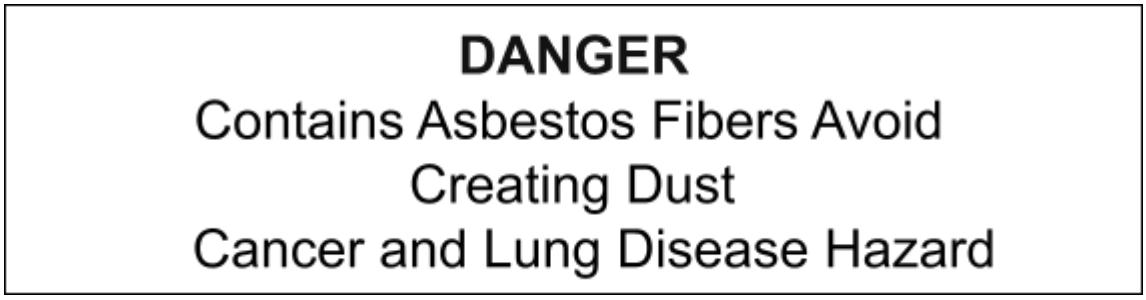
- Assist departments in evaluating potential asbestos exposures, facilitate employee training, make necessary program revisions, and provide updates to affected employees.
- Provide air monitoring, as needed.

2.2 Reed College Administration

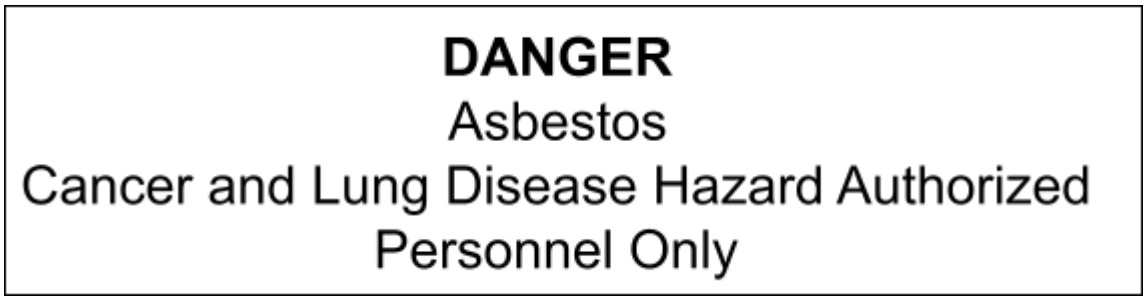
- Provide commitment, leadership, and financial resources to support this program and reasonable assurance that all provisions of the asbestos program are met.
- Establish and approve the policies and procedures for asbestos management at Reed College.

2.3 Supervisors

- Inform employees of the location and the hazards of asbestos.
- Label products and containers of asbestos, including waste containers and installed asbestos products, with the following:



- Provide necessary personal protective equipment (PPE) at no cost to the employee.
- Ensure Class III and Class IV asbestos workers receive appropriate training and are medically qualified to use a respirator.
- Post the entrances to rooms and areas which have asbestos-containing material (ACM) or presumed asbestos-containing material (PACM) with the following:



- Work with EHS to identify ACM or PACM and to review and update the Asbestos Program as needed.
- Inform contractors about the Asbestos Program and coordinate all operations.

2.4 Affected Employees

Class III Trained Employees

Class III trained employees are a select few employees in maintenance staff who have taken the Asbestos Class III training. Class III employees must:

- Complete an initial Class III training program.
- Maintain up-to-date certification by doing refresher classes annually.
- Consult with the Facilities Maintenance Supervisor before disturbing ACM or PACM.

Class IV Trained Employees

Class IV trained employees include all employees on building services staff and maintenance staff (who are not Class III trained). Class IV employees must:

- Participate in annual training and follow policies and procedures in this program.
- Consult with the Facilities Maintenance Supervisor before disturbing ACM or PACM.

3.0 Categories of Asbestos-Containing Materials in Buildings

The OR-OSHA identifies three categories of ACM used in buildings:

- **Surfacing Materials**
  ACM that is sprayed, troweled, or otherwise applied to surfaces (walls, ceilings, structural members) for acoustical, decorative, or fireproofing purposes. This includes plaster and fireproofing insulation.
- **Thermal System Insulation (TSI)**
  Insulation used to inhibit heat transfer or prevent condensation on pipes, fittings, boilers, tanks, ducts, various other components of hot and cold water systems, and heating, ventilation, and air conditioning (HVAC) systems.
- **Miscellaneous Materials**
  Other largely non-friable products and materials such as floor tile, ceiling tile, roofing felt, concrete pipe, outdoor siding, and fabrics.

ACMs installed outside a building (e.g. roofing felt, siding) and most fabric materials are exempt from inspection as defined by the Asbestos Hazard Emergency Response Act (AHERA).

3.1 Friable vs. Non-friable Asbestos Containing Materials

Friable ACM contains more than 1% asbestos and is easily “crumbled, pulverized, or reduced to powder in your hand when dry.” Friable ACM has the potential to release asbestos fibers that can become airborne and create a health hazard. A licensed contractor must remove friable asbestos. Non-friable asbestos will not crumble or reduce to powder by hand pressure.

4.0 Work Classification and Training

OR-OSHA and OR-DEQ designate the following categories of asbestos work:

Work Classification	Description	Training	
		Initial	Annual Refresher
Building inspector	● Identifies potential asbestos hazards in the workplace. ● Conducts physical assessment of suspect material. ● Collects bulk samples for analysis.	Three days, Mock building inspection, exam	Half Day
Project Designer	● Interprets results of physical assessment. ● Conducts Hazard Assessment; prioritizes hazards. ● Determines plan of action for abatement. ● Done by a certified or licensed contractor.	Three days, Workshop, field trip, exam	One day

Supervisor of Class I and II Workers	• Has the authority to correct hazards as determined by the project designer. • Ensures worker safety & health during abatement. • Done by a contractor certified by OR-DEQ.	Five days, Hands-on training, exam	One day
Competent Person of Class III and IV Workers	• Ensures worker safety and health while working with asbestos. • *Inspect the job site frequently while work is done.*	Equivalent in length & content to 16-hour Class III training	4 hours
Abatement Worker, Class I	• Removes thermal system insulation (TSI) and surfacing materials asbestos-containing materials (ACM). • Done by a contractor certified by OR-DEQ.	Four days, including 14 hours of hands-on training, exam	8 hours
Abatement Worker Class II	• Removes all other types of asbestos such as flooring and roofing materials. • Done by a contractor certified by OR-DEQ.	Four days, hands-on training, exam	8 hours
Operations & Maintenance Worker Class III	• Maintenance or custodial workers who may disturb ACM through their work. • Only trained and certified Reed employees, who remove less than three linear or three square feet of asbestos as part of the specific repair operation, and licensed contractors will do this work.	Two days, Hands-on training, exam.	4 hours
Operations & Maintenance Worker Class IV	• Maintenance and custodial work that may come in contact with, but do not disturb ACM or PACM.	Two hours, Awareness training	2 hours

Building services staff and building maintenance staff are Operations & Maintenance Worker Class IV. A select few maintenance staff are Operations & Maintenance Worker Class III.

5.0 Methods of Compliance (General Rules)

Employers must follow several provisions to comply with the OR-OSHA asbestos standard. The following practices and procedures are minimum requirements. Additional safeguards may also be used.

5.1 Employee exposure limits

No employee exposure shall exceed an airborne concentration of 0.1 fibers per cubic centimeter (0.1f/cc) in an eight (8) hour time-weighted average (TWA).

No employee exposure shall exceed an airborne concentration of 1 fibers per cubic centimeter (1f/cc) averaged over 30 minutes of sampling time.

5.2 Control measures

For all covered work, employers must use engineering controls and work practices for all operations, regardless of exposure levels:

- Vacuum cleaners equipped with high efficiency particulate air (HEPA) filters to collect debris and dust.
- Wet methods to control employee exposure.
- Prompt cleanup and disposal of asbestos-contaminated wastes and debris in leak-tight containers.

The following work practices may *never* be used regardless of the level of exposure:

- High-speed abrasive disc saws that are not equipped with a point-of-cut ventilator or enclosures with HEPA-filtered exhaust air.
- Compressed air to remove ACM, unless used in conjunction with an enclosed ventilation system to capture all dusts.
- Dry sweeping, shoveling, or other dry clean-up of ACM and PACM dust and debris.
- Employee rotation to reduce employee exposure.

5.3 Respiratory protection

Use respirators for the following:

- Class III jobs where asbestos-containing thermal insulation or surfacing material is cut, abraded, or broken.
- Class IV jobs within a regulated area where respirators are required.

5.4 Protective clothing

Employers must provide and require the proper use of protective clothing for any employee exposed to asbestos.

5.5 Hygiene practices

Employers must ensure that employees performing any class of asbestos work do not smoke in the work area with asbestos exposure.

5.6 Housekeeping

Collect and dispose of asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing in sealed, labeled, impermeable bags or other sealable containers. Employees must use HEPA filtered vacuuming equipment and empty it to minimize asbestos reentry into the workplace.

6.0 References

- Agency for Toxic Substances and Disease Registry (ATSDR). Cigarette Smoking, Asbestos Exposure, and Your Health. June 2006.

- Environmental Protection Agency (EPA). Asbestos Worker Protection Rule. 40 Code of Federal Regulations (CFR) Part 763 Subpart G. 2000.
- Environmental Protection Agency (EPA). Asbestos-in-Schools Rule. 40 CFR Part 763 Subpart E. 2004.
- Environmental Protection Agency (EPA). National Emission Standards for Hazardous Air Pollutants (NESHAP). 40 CFR 61 Subpart M. 2006.
- Occupational Safety and Health Administration (OSHA). General Industry Standard 29 CFR 1910.1001. 2008.
- Occupational Safety and Health Administration (OSHA). Construction Standard 29 CFR 1926.1101. 2012.
- Oregon Department of Environmental Quality (OR-DEQ). OAR 340.248. Asbestos Requirements. 2015.

7.0 Glossary

Asbestos-Containing Material (ACM) – any material that contains more than 1% asbestos by polarized light microscopy (PLM).

Asbestos in Schools Hazard Abatement Reauthorization Act (ASHARA) – reauthorized AHERA in 1990 and applied regulations for asbestos to public and commercial buildings.

Asbestos Hazard Emergency Response Act (AHERA) – in 1986, signed into law as Title II of the Toxic Substance Control Act (TSCA).

Asbestosis – a disabling, progressive, long-term, and often fatal scarring of the deep portions of the lung caused by exposure to all types of asbestos; develops 10 to 30 years after initial exposure.

Asbestos fibers – generally, fibers whose length is greater than five microns with an aspect ratio of 3:1, under PLM.

Asbestos disposal – requires specific packaging and labeling, and disposal at a landfill authorized to receive asbestos waste.

Chrysolite – “white asbestos,” the only asbestiform mineral which contains approximately 40% each of silica and magnesium oxide; the most common form of asbestos used in buildings in the U.S.

Hazard assessment – the AHERA interpretation and evaluation of physical assessment data in order to set abatement priorities and rank areas for response actions.

Hazard communication – employers are required to make available to all workers, information about all hazardous chemicals on the job site. This usually takes the form of MSDS sheets, collected in a book, and made available to workers.

Mesothelioma – a malignant cancer that develops in the lining of the chest or abdomen and has no cure; considered to be exclusively related to asbestos exposure; latency period is often 30 – 40 years.

Polarized light microscopy (PLM) – an optical microscopic technique used to distinguish between different types of asbestos fibers by their shape and unique optical properties.

Presumed asbestos-containing material (PACM) -- thermal system insulation (TSI) and surfacing material found in a building constructed no later than 1980. OSHA requires that building owners identify PACM in their buildings and treat the PACM as asbestos-containing materials (ACM) until the materials are proven not to contain asbestos.

Appendix 1: Recording Form for Physical Assessment Data

Building:_____

Functional Space #:_____Type:_____Location:_____

Type of Suspect Material:_____Surfacing,_____TSI,_____

Other_____

Approximate amount of material (linear or square ft.):_____

Condition

Percent Damage:_____%, ☐ Localized ☐Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description:_____

Overall Rating: ☐ Good ☐ Fair ☐ Poor

Potential for Disturbance

	High	Moderate	Low
Frequency of Potential Contact	☐	☐	☐
Influence of Vibration	☐	☐	☐
Potential for Air Erosion	☐	☐	☐
Overall Damage Potential	☐	☐	☐

Description of Potential Disturbances:

Signed:_____Date:_____