



BRIGHAM YOUNG UNIVERSITY – IDAHO

ENVIRONMENTAL, HEALTH & SAFETY

SAFETY DEPARTMENT

ASBESTOS MANAGEMENT PROGRAM

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Asbestos Management Program

1.0 Purpose

BYU-Idaho is committed to providing a safe work place for all individuals working on campus. The primary purpose of this plan is to ensure that BYU-Idaho employees, students, and visitors are protected from asbestos hazards, and that applicable asbestos regulatory requirements are followed. BYU-Idaho will fulfill the requirements of 29 CFR 1926.1101 by conducting, or having conducted an asbestos survey on each of the pre-1981 buildings that exist on campus. Furthermore, in our continuing effort to provide for the protection of human health and the environment, BYU-Idaho will conduct asbestos inspections on any campus buildings that were constructed prior to 1981 before they are renovated or demolished. BYU-Idaho will also test any suspect material that becomes damaged, dislodged, or disturbed within a pre-1981 building for which an asbestos survey has not yet been completed.

2.0 Scope

This plan applies to all university personnel engaged in the removal, inspection, disturbance, or maintenance of asbestos containing materials (ACM) or presumed asbestos containing materials (PACM) in university facilities. Certain reporting requirements also apply to non-BYU-Idaho construction personnel working in BYU-Idaho facilities.

3.0 References

- 3.1 29 CFR 1926.1101 - Asbestos
- 3.2 29 CFR 1910.134 – Respiratory Protection
- 3.4 40 CFR 61(subpart M) – National Emission Standard for Asbestos
- 3.5 29 CFR 1010.1001 - Asbestos

4.0 Definitions

Aggressive method means removal or disturbance of building material by sanding, abrading, grinding or other method that breaks, crumbles, or disintegrates intact ACM.

Amended water means water to which surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM.

Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that has been chemically treated and/or altered. For purposes of this standard, "asbestos" includes PACM, as defined in this section.

Asbestos-containing material (ACM), means any material containing more than one percent asbestos.

Authorized person means any person authorized by the employer and required by work duties to be present in regulated areas.

Building/facility owner is the legal entity, including a lessee, which exercises control over management and record keeping functions relating to a building and/or facility in which activities covered by this standard take place.

Category I non-friable asbestos-containing material (ACM) means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II non-friable ACM means any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined using the methods specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Certified Industrial Hygienist (CIH) means one certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.

Class I asbestos work means activities involving the removal of TSI and surfacing ACM and PACM.

Class II asbestos work means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III asbestos work means repair and maintenance operations, where "ACM", including TSI and surfacing ACM and PACM, is likely to be disturbed.

Class IV asbestos work means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Clean room means an uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

Closely resemble means that the major workplace conditions which have contributed to the levels of historic asbestos exposure, are no more protective than conditions of the current workplace.

Competent person means, one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure. This person has the authority to take prompt corrective measures to eliminate hazards, as specified in 29 CFR 1926.32(f). In addition, for Class I and Class II work the "competent person" is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor, or its equivalent and, for Class III and Class IV work, is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92 (a)(2).

Critical barrier means one or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

Decontamination area means an enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.

Demolition means the wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

Disturbance means activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

Employee exposure means exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.

Equipment room (change room) means a contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

Fiber means a particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

Glovebag means not more than a 60 x 60 inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.

High-efficiency particulate air (HEPA) filter means a filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

Homogeneous area means an area of surfacing material or thermal system insulation that is uniform in color and texture.

Industrial hygienist means a professional qualified by education, training, and experience to anticipate, recognize, evaluate and develop controls for occupational health hazards.

Intact means that the ACM has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix.

Modification means a changed or altered procedure, material or component of a control system, which replaces a procedure, material or component of a required system. Omitting a procedure or component, or reducing or diminishing the stringency or strength of a material or component of the control system is not a "modification" for purposes of this section.

Negative Initial Exposure Assessment means a demonstration by the employer, which complies with the criteria of this section, that employee exposure during an operation is expected to be consistently below the PELs.

PACM means "presumed asbestos containing material" see below.

Presumed Asbestos Containing Material means thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as "PACM" may be rebutted pursuant to this section.

Project Designer means a person who has successfully completed the training requirements for an abatement project designer established by 40 U.S.C. Sec. 763.90(g).

Regulated asbestos-containing material (RACM) means (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Regulated area means: an area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit.

Removal means all operations where ACM and/or PACM is taken out or stripped from structures or substrates, and includes demolition operations.

Renovation means the modifying of any existing structure, or portion thereof.

Repair means overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates, including encapsulation or other repair of ACM or PACM attached to structures or substrates.

Surfacing material means material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

Surfacing ACM means surfacing material which contains more than 1% asbestos.

Thermal system insulation (TSI) means ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

Thermal system insulation ACM is thermal system insulation which contains more than 1% asbestos.

5.0 Asbestos Inspections and Inventory

BYU-Idaho will determine the presence, location, and quantity of ACM and or PACM in all university facilities. This determination shall be primarily accomplished through inspections and bulk sample analysis of all building materials installed prior to 1981. Suspect building material (installed prior to 1981 that could contain asbestos or that in the opinion of a competent person could contain asbestos) shall be considered and treated as ACM unless it is determined to be non-ACM through sample analysis, building records, or other methods in accordance with 29 CFR 1926.1101. Bulk sample collection will be performed by those who have completed an accredited asbestos inspector training course.

All bulk samples will be analyzed at laboratories accredited by the AIHA and NVLAPS for asbestos analysis. Once completed, the asbestos inventory will be available at the Safety Office and the University Operations Construction Management Office.

6.0 Requirements for Asbestos Work

All asbestos assessment and abatement work shall be done in accordance with state and federal regulatory requirements. BYU-Idaho personnel do not perform Class I, II, or III work. All Class I, II, and III asbestos work (abatement) shall be performed by asbestos abatement contractors that are certified, licensed, bonded, and insured to work in the state of Idaho. Non-BYU-Idaho abatement contractors will be solely responsible for the training, respiratory protection, exposure monitoring, and medical surveillance of their own workers.

6.1 The following are general requirements for working with asbestos containing materials:

6.1.1 All asbestos work in regulated areas shall be supervised by a competent person.

6.1.2 Eating, drinking, smoking, chewing tobacco or gum, or applying cosmetics, is prohibited in regulated areas.

6.1.3 Access to regulated areas is limited to authorized personnel only.

6.1.4 A competent person shall perform an exposure assessment immediately before the initiation of any asbestos work.

6.1.5 Unless a negative exposure assessment is determined, personal monitoring shall be conducted to assess employee exposures.

6.1.6 Vacuums equipped with HEPA filters shall be used to collect all dust and debris containing ACM.

6.1.7 Sanding, dry sweeping or other dry clean up, compressed air, mechanical chipping, or other abrasive methods shall be prohibited on all ACM or PACM.

6.1.8 Wet methods, or wetting agents shall be used on all asbestos work.

6.1.9 Breaking, crumbling, or any other activity that generates airborne asbestos fibers shall be avoided to the extent feasible.

7.0 Requirements for Class IV Asbestos Work

Class IV asbestos work consists of maintenance or custodial activities during which employees contact but do not disturb ACM or cleanup waste and debris resulting from Class I through III activities. Class IV work includes the following additional requirements:

7.1 When asbestos containing roofing material is removed, it shall not be dropped or thrown to the ground, but shall be hand carried to the ground or lowered to the ground in a covered, dust-tight chute. Such material must be removed no later than the end of the work shift.

8.0 Personal Protective Equipment

As university personnel do not perform Class I, II, or III asbestos work, it is not expected that respirator use will be required. Non-university workers who perform abatement work at BYU-Idaho facilities will be responsible for their own respiratory protection programs. Should it become necessary for university personnel to wear respirators for asbestos concerns, the applicable portions of the BYU-Idaho Respiratory Protection Program will be followed.

9.0 Training

Training will be provided to all university employees engaged in Class IV asbestos work.

9.1 Training will be provided prior to the initial assignment and at least annually thereafter.

9.2 Training for Class IV workers will be asbestos awareness training and will consist of approximately 1 hour of training.

10.0 Waste Disposal

ACM waste shall be collected and disposed of in sealed, labeled, impermeable bags or other containers. Asbestos abatement contractors shall dispose of the asbestos waste in accordance with all federal, state, and local regulations. The BYU-Idaho Safety Office shall ensure that asbestos waste from university facilities is disposed of properly.

11.0 Notification to Regulatory Agencies

Prior to any demolition or renovation project, the university safety office or an asbestos contractor will make a determination of the total quantity of RACM that will be disturbed or removed during the project. The Asbestos Abatement Contractor will insure that proper notifications are sent to the Division of Air Quality if at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components,

or at least 1 cubic meter (35 cubic feet) of facility components where the length or area could not be measured previously, are stripped, removed, dislodged, cut, drilled, or similarly disturbed.

11.1 The following information will be included in the notification:

11.1.1 An indication of whether the notice is the original or a revised notification.

11.1.2 Name, address, and telephone number of both the facility owner and operator and the asbestos removal contractor owner or operator.

11.1.3 Type of operation: demolition or renovation.

11.1.4 Description of the facility or affected part of the facility including the size (square meters (square feet) and number of floors), age, and present and prior use of the facility.

11.1.5 Procedure, including analytical methods, employed to detect the presence of RACM and Category I and Category II non-friable ACM.

11.1.6 Estimate of the approximate amount of RACM to be removed from the facility in terms of length of pipe in linear meters (linear feet), surface area in square meters (square feet) on other facility components, or volume in cubic meters (cubic feet) if off the facility components. Also, estimate the approximate amount of Category I and Category II non-friable ACM in the affected part of the facility that will not be removed before demolition.

11.1.7 Location and street address (including building number or name and floor or room number, if appropriate), city, county, and state, of the facility being demolished or renovated.

11.1.8 Scheduled starting and completion dates of asbestos removal work (or any other activity, such as site preparation that would break up, dislodge, or similarly disturb asbestos material) in a demolition or renovation; planned renovation operations involving individual nonscheduled operations shall only include the calendar year included from January 1 to December 31 as the beginning and ending dates of the report period.

11.1.9 Scheduled starting and completion dates of demolition or renovation.

11.1.10 Description of planned demolition or renovation work to be performed and method(s) to be employed, including demolition or renovation techniques to be used and description of affected facility components.

11.1.11 Description of work practices and engineering controls to be used to comply with the requirements of this subpart, including asbestos removal and waste-handling emission control procedures.

11.1.12 Name and location of the waste disposal site where the asbestos - containing waste material will be deposited.

11.1.13 A certification that at least one person trained as required by the National Emission Standard for Hazardous Air Pollutants will supervise the stripping and removal described by this notification.

11.1.14 Description of procedures to be followed in the event that unexpected RACM is found or Category II non-friable ACM becomes crumbled, pulverized, or reduced to powder.

11.1.15 Name, address, and telephone number of the waste transporter.

12.0 Communication of Asbestos Hazards

Before any asbestos work is begun, BYU-Idaho safety personnel shall determine the presence, location, and quantity of ACM or PACM.

12.1 The university safety office shall notify the following individuals of its presence, location, and quantity:

12.1.1 Prospective employers applying or bidding for work in areas containing such material;

12.1.2 BYU-Idaho employees who will work in or adjacent to areas containing such material;

12.1.3 Non-BYU-Idaho employers of workers who will be performing work in or adjacent to areas containing such materials;

12.1.4 Tenants who will occupy areas containing such materials.

12.2 In addition, all employers who discover ACM or PACM on a worksite shall convey information concerning the presence, location, and quantity of such newly discovered material to the University Operations Construction Manager and/or the Safety Officer as soon as feasible. If asbestos is accidentally disturbed and could present a hazard to workers or building occupants, those who disturbed or discovered the material shall immediately contact the university safety office so that appropriate precautions can be implemented. If Safety Office personnel are unavailable then the Campus Security should be contacted.

13.0 Signs and Labels

All regulated areas shall be posted with warning sign(s) in accordance with 29 CFR 1926.1101, section k.

13.1 Signs shall also be posted at the entrance(s) to mechanical rooms or other such areas which employees can be expected to enter and which contain thermal system insulation or surfacing ACM or PACM.

13.1.1 These signs shall identify the material which is present, its location, and appropriate work practices to be followed to avoid asbestos disturbance.

13.2 Labels shall be affixed to all products containing asbestos and to all containers of ACM waste. This does not apply to asbestos fibers that have been modified by a bonding agent or coating provided that the asbestos manufacturer demonstrates that no fibers in excess of the PEL will be released during any reasonably foreseeable use or handling. Labels shall be marked in accordance with 29 CFR 1926.1101,(k)(8).

13.3 Asbestos warning signs, as noted above, may be used in lieu of labels so long as they convey the information required for labeling. Such signs and labels shall be attached in areas where they will clearly be noticed by employees who are likely to be exposed, such as at the entrance to mechanical rooms/areas.

14.0 Air Monitoring

Air sampling will be conducted for university personnel engaged in asbestos work who have the potential to be exposed to asbestos concentrations above the PEL. This exposure determination, as well as the actual air sampling will be performed by the Safety Office. Air monitoring will be conducted in accordance with NIOSH or other nationally recognized methods. Sample analysis will be performed at laboratories accredited by AIHA for asbestos analysis.

14.1 BYU-Idaho shall notify affected employees of monitoring results as soon as possible following receipt of laboratory results.

15.0 Responsibilities

15.1 Duties of the BYU-Idaho Safety Office:

15.1.1 Coordinate all asbestos abatement activities at university facilities.

15.1.2 Serve as the point of contact between BYU-Idaho and regulatory agencies.

15.1.3 Request asbestos clearance sampling from Safety Office or from a qualified consultant.

15.1.4 Ensure that all persons performing asbestos work are following the requirements in this plan as well as applicable State, Federal, and local requirements.

15.1.5 Coordinate asbestos abatement activities and contracts with non-university employers and employees and inform them of possible asbestos hazards.

15.1.6 Ensure that ACM is disposed of in accordance with regulations.

15.1.7 Ensure that clearance sampling is performed for all asbestos abatement projects performed by non-university employees.

15.2 The BYU-Idaho Safety Office will have the following duties:

15.2.1 Perform clearance sampling as requested by university personnel

15.2.2 Conduct asbestos awareness training for university personnel.

15.2.3 Conduct personal air sampling of university employees exposed to asbestos as applicable.

15.2.4 Review and/or revise the BYU-Idaho Asbestos Management Plan on a regular (at least annual) basis.

15.2.5 Develop and maintain a current inventory of the amount, type and location of ACM by means of surveys, analysis of material and using consultants when necessary.

15.2.6 Attach labels and signs to ACM in accordance with section 13.

15.2.7 Perform assessments of BYU-Idaho workers involved in asbestos activities to determine if any employees are exposed at or above the PELs.

15.2.8 Inform university employees of their exposures after receiving sampling results.