

## Proof of Training

Print name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### **Asbestos Awareness Program**

#### Purpose

The purpose of this program is to provide information about asbestos, the potential health effects associated with exposure, and safety procedures that should be followed to reduce exposure and protect the health of employees.

#### Scope

This policy will apply to all work performed by employees and subcontractors including, but not limited to the following activities: construction, installation, demolition, remodeling, relocation, refurbishment, testing, and servicing or maintenance of equipment or machines and at other times when Asbestos Containing Material (ACM) or Potentially Asbestos Containing Materials (PACM) could be encountered.

### **Responsibilities**

#### Management (Board of Directors and Project Managers)

Management is responsible for ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this program are readily available where and when they are required. Additionally, management will monitor the effectiveness of the program, provide technical assistance as needed, and review the program bi-annually.

#### Program Manager

Dave Simpson is responsible for the development, documentation, training and administration of the program. This position carries the responsibility of insuring this program is adhered to and that proper reporting is executed.

#### Supervisors (Superintendents and Foreman)

Supervisors are responsible for ensuring that a task specific job hazard analysis (JHA), also known as a safe work plan, is developed. The JHA will select, implement and document the appropriate site-specific control measures as defined within this policy. Additionally, supervisors will direct the work in a manner that ensures the risk to workers is minimized, adequately controlled and that practices defined by this policy will be followed. Supervisors are responsible for ensuring Unger Construction employees and subcontractors are following expectations. Supervisors will be held accountable for enforcing the requirements of this program. Undesirable behavior will not resolve itself, therefore supervisors must be directly involved with modifying behaviors inconsistent with program expectations. Additionally, supervisors will be held accountable for enforcing Unger Construction's disciplinary program.

## Workers (Employees and Subcontractors)

Unger Construction has high expectations and requires safety excellence for each employee, crew, project and for our entire company. Workers are required to follow the minimum procedures outlined in this program. Workers are responsible for knowing the hazards and the control measures established in the JHA. Workers are responsible for using the assigned PPE in an effective and safe manner. Workers are responsible for stopping unsafe acts and correcting unsafe conditions on the spot as soon as they are discovered. Any deviations from this program must be immediately brought to the attention of your supervisor. Workers that choose to conduct themselves in a manner that is inconsistent with these expectations will be held accountable for those decisions and may incur disciplinary actions.

## Training

Before any worker is allowed to perform work in areas that are known to contain or are suspected of containing asbestos materials the must be trained in Asbestos Awareness. Asbestos awareness training is required for employees whose work activities may contact asbestos containing material (ACM) or presumed asbestos containing material (PACM) but do not disturb the ACM or PACM during their work activities. Training shall include the following information: Health effects associated with asbestos, types of asbestos, methods of recognizing/identifying asbestos, safe work practices, permissible exposure levels, and materials that could potentially contain asbestos. Each employee must demonstrate an understanding of the required training before being allowed to perform work. For Unger Construction, employee's proof of training is available on the "S" drive. All Sub-contractors will provide evidence of asbestos awareness training before starting their activities.

## Retraining

The need for retraining will be indicated when: A workers work habits or knowledge indicates a lack of necessary understanding, motivation or skills required to properly work with or around ACM.

## Discussion

Asbestos is a naturally occurring mineral that is found throughout the world. Asbestos has several characteristics that make it desirable for many commercial uses. The fibers are extremely strong, flexible, and very resistant to heat, chemicals and corrosion. Asbestos is also an excellent insulator and the fibers can be spun, woven, bonded into other materials, or pressed to form paper products. For these reasons and because it is relatively inexpensive, asbestos has been widely used for many years and found in over three thousand different commercial products.

Exposure to asbestos fibers can cause serious health risks such as lung cancer, asbestosis, mesothelioma, and cancer of the stomach and colon. The major risk from asbestos comes from inhaling the fibers. Asbestos is composed of long silky fibers that contain hundreds of thousands of smaller fibers. These fibers can be subdivided further into microscopic filaments that will float in the air for several hours.

Although exposure to asbestos is potentially hazardous, health risks can be minimized. In most cases the fibers are released only if the ACM is disturbed. Intact and undisturbed asbestos materials do not pose a health risk. The mere presence of asbestos does not mean that the health of employees is endangered.

When ACM is properly managed, release of fibers into the air is prevented or minimized, and the risk of asbestos related disease can be reduced to a negligible level.

### Background

Just about every renovation project that Unger Construction works on will require a hazardous materials survey. However, as we perform work within a facility we will build a data base of materials that are known to contain asbestos and materials that are known to be free of asbestos.

There is no safe “build year” as back stock of asbestos materials entered construction well after it was banned from manufacturing. Additionally, the asbestos ban on American manufacturing firms did not affect overseas suppliers. Suspect materials are entering the workplace in new construction.

### Types of Asbestos

Asbestos can be defined as friable or non-friable. Friable means that the material can be crumbled with hand pressure and is therefore likely to emit fibres. The fibrous or fluffy sprayed-on materials used for fireproofing, insulation, or sound proofing are considered to be friable and they readily release airborne fibers if disturbed. Materials such as vinyl-asbestos floor tile or roofing felts are considered non-friable and generally do not emit airborne fibers unless subjected to sanding or sawing operations.

### Identifying Asbestos

There are many substances workers contact that may contain asbestos and have the potential to release fibers. Only rarely can asbestos in a product be determined from labeling or by consulting the manufacturer. The presence of asbestos cannot be confirmed visually. The only way to positively identify asbestos is through laboratory analysis of samples. If the presence of asbestos is suspected do not disturb the material and always assume that it is a PACM and have it analyzed.

Several of our clients have identified asbestos through their own asbestos survey program. For these clients, an additional hazardous materials survey does not need to be conducted.

### Hazardous Material Survey

Unger Construction requires hazardous materials surveys before demolition or renovation work begins. The survey shall include all of the following: A visual inspection of a facility or a portion thereof for suspect materials, sampling and laboratory analysis of any suspect materials found for the presence of asbestos. The hazardous materials survey will also furnish a written report that includes: a description of the area(s) visually inspected, a detailed description of any suspect material sampled, the results of any laboratory analysis of suspect materials, the method of analysis, and the total amount of asbestos containing material. Typically a floor or roof plan is included with the report to reference the written information visually.

The person conducting the survey must be certified pursuant to OSHA and/or EPA regulations. The survey may be performed by a certified Site Surveillance Technician (SST) under the supervision of a licensed consultant. Note: The survey may be performed by a certified Site Surveillance Technician (SST) under the supervision of a licensed consultant. Note: The survey needs to be kept in a project file so that it can be accessed when working on future projects.

If lead or asbestos have been confirmed to be present employees and subcontractors must follow Unger Construction's Lead and/or Asbestos program. If hazards such as asbestos or lead will be disturbed during remediation, a properly licensed professional must perform the work and follow appropriate regulations.

### Environmental Protection Agency (EPA)

The EPA, through the regional air quality management district's office requires a hazardous materials survey be performed prior to any work commencing or any disturbance of Regulated Asbestos Containing Materials (RACM). The Air Pollution Control Officer shall be notified at least **ten working days prior** to commencement of demolition or planned renovation. Forms and fees can be located on the website for each district within their asbestos rules and regulations. For the Sacramento Metropolitan Area it is Rule 902 and for Yolo-Solano it is Rule 9.9. The rules are in essence the same for the entire state of California.

The following definitions are per the regional air quality management district.

ACM = Asbestos containing material is any material containing 1% or more of asbestos, tremolite, anthophyllite, or actinolite.

Demolition = the wrecking, taking out, or burning of any load-supporting structural member of any facility.

A structural member = any load supporting member, such as beams and load-supporting walls; or any non-load-supporting member, such as ceilings and non-load-supporting walls.

Removing = The taking out, cutting, dislodging, drilling, or similarly disturbing of Regulated Asbestos Containing Materials (RACM) covering or coating of any element from any facility, or portion thereof.

Renovation = an operation, other than a demolition, involving the removing or stripping of material from any element of a facility.

### **Exemptions**

The asbestos rule does not apply to: Renovations or demolitions of residential facilities comprised of four or fewer dwelling units, or for renovation operations where the combined amount of suspect material being removed from the facility, is less than: 260 lineal feet on pipes, or 160 square feet of other facility components, or 35 cubic feet of facility components.

Though small projects fall below the permit requirements Unger Construction and our subcontractors will follow the best management practices to protect workers, clients and the environment anytime ACM materials are confirmed to be present.

### Specialty Contractors

OSHA and EPA regulations are very specific about work practices and equipment required to work safely with asbestos. These requirements may include proper respirators, special enclosures, training, exposure monitoring, long term record keeping, and medical surveillance. Unger Construction does not

self-perform asbestos removal or repair work. Unger Construction chooses to subcontract these functions to specialized firms with proper licensing, insurance and training. All removal or repair work involving asbestos must be done by specially trained personnel.

Based upon the hazardous material survey, an assessment will be made by the specialty contractor as to the best method to prevent exposure to asbestos fibers. Before any asbestos related work begins the specialty contractor must produce a method of procedure or safe work plan (plan). The plan will include control measures as appropriate for the type of asbestos work being undertaken.

The plan must include the following details as a minimum: type of asbestos, method of removal, anticipated fiber release, control measures to minimize the release of fiber, details of enclosures, testing of enclosures, viewing panels, emergency procedures, decontamination procedures, personal protective equipment (PPE), air monitoring arrangements, removal of waste, transit routes and clearance certificates.

Asbestos work has four classifications.

Class 1 is for activities involving the removal of Thermal System Insulation (TSI), ACM surfacing and/or PACM surfacing.

Class 2 is for activities involving the removal of asbestos containing wallboard, floor tile, sheeting, roofing, and construction mastics.

Class 3 is for repair and maintenance activities where ACM is likely to be disturbed.

Class 4 is for custodial activities cleaning up dust, waste and debris from Class 1,2,3 activities.

#### Multi- Employer Worksites

Unger Construction does not want our employees or subcontractors exposed to asbestos work being performed by other companies. When working on multi-employer worksites, Unger Construction's employees and our subcontractor's employees shall be protected from exposure.

If employees/subcontractors working adjacent to an asbestos abatement are potentially exposed to asbestos due to inadequate containment, Unger Construction shall either stop the work of the abatement contractor or remove our employees/subcontractors from the area until the containment enclosure breach is repaired and the area is cleaned. The employer responsible for erecting the containment enclosure shall repair the breach immediately.

On multi-employer worksites, an employer performing work requiring the establishment of a regulated area shall inform other employers on the site of the nature of the employer's work with asbestos and/or PACM, of the existence of and requirements pertaining to regulated areas, and the measures taken to ensure that employees of such other employers are not exposed to asbestos.

All employers of employees working adjacent to regulated areas established by another employer on a multi-employer work-site shall take steps on a daily basis to ascertain the integrity of the enclosure and/or the effectiveness of the control method relied on by the primary asbestos contractor to assure that asbestos fibers do not migrate to such adjacent areas.

Even though Unger construction is not qualified to serve as the asbestos “competent person” as the supervisor of the entire project, Unger Construction shall ascertain whether the asbestos contractor is in compliance with regulatory standards.

### Regulated Areas

All Class 1, 2 and 3 asbestos work shall be conducted within regulated areas. No employee should enter an area, unless they are certified.

Demarcation -the regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Signs shall be provided.

Access- access to regulated areas shall be limited to authorized persons.

### Potential Asbestos Containing Materials

Caulking/Adhesives - packing materials (for wall/floor penetrations), caulking, adhesives joint tape or spackling compounds used on dry wall. Wall/Ceiling Materials - drywall/wallboard , vinyl wall panels, cementitious wallboard, wall coverings, ceiling tiles and lay-in panels, wallboard joints/seams, Blown-in insulation. Roofing Materials - roofing shingles, roofing felt, base flashing, roofing mastics, roofing products such as asphalt asbestos shingles, asbestos cement shingles, roofing felts and patching compounds. Surfacing Materials - spray-applied fireproofing materials added to protect metal beams, ceilings, or supports, acoustical/decorative plaster or treatment, smooth plaster, textured paints/coatings, sprayed-on or trowel-applied acoustic insulation on ceilings or walls, taping compounds, paints and textured coatings. Flooring materials - floor tile, vinyl sheet flooring, linoleum floor covering, flooring mastics, vinyl asbestos tile, asphalt tile, backing, 9-inch and, occasionally 12-inch, square vinyl or asphalt floor tiles. Insulating materials -walls and floors around furnaces, fireproofing insulation; soundproofing and duct wrap.

### Health Effects of Asbestos

The ability to recognize the kinds of material that contain asbestos, knowing under what conditions they are dangerous, and understanding basic safety precautions, are all important in keeping exposures to a minimum. The most dangerous exposure to asbestos is from inhaling airborne fibers. Exposure to asbestos has been shown to cause respiratory diseases such as lung cancer, asbestosis, mesothelioma and various types of cancer of the stomach and colon.

### Permissible Level of Exposure

OSHA regulations are designed to protect workers who handle ACM. OSHA has set standards for the number of fibers that a worker can be exposed to, called the permissible exposure limit (PEL). The eight (8) hour OSHA Permissible Exposure Limit for asbestos is 0.1 fibers/cubic centimeter of air. This is equivalent to approximately six fibers in a volume of air the size of a baseball.

## General Safety Precautions

Exposure to asbestos fibers can be hazardous. The health risks associated with exposure to asbestos occur when it is disturbed and releases fibers into the air. To reduce exposure, it is important to know where asbestos is located and to minimize activities that will release fibers into the air. The potential for a particular form of asbestos to release fibers will depend on several factors including the degree of friability, wear, age, and location.

The following general precautions will reduce exposure and lower the risk of asbestos related health problems:

Procedures to minimize and/or contain asbestos fibers may include wet methods, HEPA vacuuming, area isolation, PPE, and avoidance of certain activities, such as sawing, sanding, and drilling ACM. Handling of asbestos material, for removal, shall be the responsibility of the specialty contractor.

Drilling, cutting, or using nails on asbestos materials can release asbestos fibers and shall be avoided at all times.

Floor tiles, ceiling tiles or adhesives that contain asbestos should never be drilled without contacting the safety director. Special training and care must be followed when drilling into asbestos flooring, ceilings, and walls.

If you come in contact with Asbestos STOP all work and leave the area. Contact your supervisor immediately. Avoid touching or disturbing asbestos materials on walls, ceilings, pipes, ducts, or floors.

Asbestos should always be handled wet to help prevent fibers from being released. If asbestos is soaked with soapy water, shaving cream, or a mixture of water and liquid detergent before it is handled, the fibers are too heavy to remain suspended in the air.

If in the presence of asbestos dust above the PEL (permissible exposure limits), the use of a respirator approved for asbestos work is required. A dust mask is not acceptable because asbestos fibers will pass through it. The use of respirators must be approved by our safety director.

Dusting, sweeping, or vacuuming dry asbestos with a standard vacuum cleaner will put the fibers back into the air. A vacuum cleaner with a special high efficiency filter (HEPA) must be used to vacuum asbestos dust. If a HEPA vacuum is not available, cleanup must be done with a wet cloth or mop. Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing shall be collected and disposed of in sealed, labeled impermeable bags of greater than 6 mils thickness or other closed, labeled, impermeable containers before being disposed in an EPA approved landfill.

If employees are working immediately adjacent to an asbestos abatement job and they are exposed to asbestos due to the inadequate containment of that job, they shall immediately evacuate the area and notify their supervisor. They cannot return until the enclosure breach is repaired and an air clearance report has been issued.

If conditions will not allow for an employee to wait for results of the hazardous materials evaluation, the material in question must be considered asbestos and certified asbestos abatement contractor obtained to handle this material.

## Respiratory Protection

Asbestos work that requires respiratory equipment beyond the PEL should be performed by a qualified specialty contractor. In the presence of asbestos dust above the PEL, the use of a respirator approved for asbestos work is required. A dust mask is not acceptable because asbestos fibers will pass through it.

The only circumstances that will necessitate Unger Construction employees using respiratory equipment for protection against asbestos is during the asbestos exposure assessment process, while confirming that the engineering controls and work practices designed and employed for a particular work activity are adequate to maintain exposure levels below the PEL/excursion limit. Unger employees shall be provided respirators and other PPE at no cost to the employee. Before purchasing or wearing a respirator, Unger employees must demonstrate proof of training, have a current annual medical evaluation and fit test. See the respiratory policy for more details.