

Asbestos Abatement Supervisor Syllabus

Time: 40 hours

Maximum Class Size: 12

Prerequisites: Asbestos Awareness & Asbestos Abatement Worker

Course Description: This course is designed to empower the CCL Asbestos Abatement Supervisor with the skills and knowledge to safely, effectively, and efficiently on an asbestos abatement job site. It will instruct the participant in the proper asbestos abatement techniques as well as provide safety and health information regarding this hazardous substance. It will provide the new supervisor with guidelines on the importance of and methods for effective supervision; including what special skills are needed for abatement projects, how to interact with personnel, clients, and the public, and how to function as the employer's representative.

Standards Addressed:

OSHA Asbestos Standard: 29 CFR 1926.1101

OSHA 1926.1101 Subpart Z: Toxic and Hazardous Substances

Goals/Objectives/Student Learning Outcomes:

- Define the following terms and acronyms:
 - ACM
 - EPA
 - Asbestos fiber
 - Friable asbestos-containing material
 - Micron
 - Non-friable asbestos-containing material
 - OSHA
 - PACM
 - PEL
 - SM
 - TSI
 - Carcinogen
 - Ingestion
 - Inhalation
 - Latency period
 - Routes of entry

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Goals/Objectives/Student Learning Outcomes-continued:

- Synergism
- FEV 1
- FVC
- NIOSH
- PFT
- Accident
- Confined space
- Engineering controls
- GFCI
- Hazardous atmospheres
- Oxygen deficiency
- Lock out and Tag out
- Personal Fall Arrest System
- Heat stress
- LFL
- Personal hygiene
- UFL
- Clean room
- Equipment room
- HVAC
- Shower room
- Waste load-out area
- Amended water
- Encapsulation
- Enclosure
- Glove bag
- HEPA vacuum
- NESHAPS
- Aggressive sampling
- Area sampling
- Breathing zone
- Bulk sampling
- PCM
- Personal sampling
- PLM
- Static sampling
- TEM
- ACBM
- AHERA
- Bonding
- Contract
- Insurance
- Tort Liability
- List the six types of asbestos as defined by OSHA.
- List the two most common types of asbestos used in construction.

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Goals/Objectives/Student Learning Outcomes-continued:

- Explain the difference between friable and non-friable asbestos-containing materials.
- Know and understand the OSHA permissible exposure limit for asbestos.
- Describe a Class I asbestos work activity.
- Describe a Class II asbestos work activity.
- Describe a Class III asbestos work activity.
- Describe a Class IV asbestos work activity.
- Identify the two major routes of entry for asbestos into the body.
- Explain the relationship between smoking and exposure to asbestos.
- List three diseases linked to occupational asbestos exposure and the symptoms of each disease.
- Name the body organs affected by asbestos exposures, and explain how asbestos affects each one.
- List the three protective mechanisms the body uses to rid itself of asbestos fibers, and explain how these mechanisms work.
- List the three reasons for establishing a medical monitoring and surveillance program.
- List the five required elements of an initial/pre-placement examination for asbestos abatement workers, the five required elements of an annual examination and list two additional recommended tests.
- State the number of years an employer must keep medical records of each employee.
- List 10 legal rights workers have under the Occupational Safety and Health Act of 1970.
- List the seven responsibilities workers have under the Occupational Safety and Health Act of 1970.
- List the seven steps workers should follow if they are punished for exercising any OSHA legal right.
- Explain the purpose of the following EPA standards:
 - NESHAP
 - AHERA
 - ASHARA
- Describe the following three air-purifying respirators and list the assigned protection factors (APF) for each:
 - Half-Face Air Purifying Respirator (Half-Face APR)
 - Full-Face Air Purifying Respirator (FFAPR)
 - Powered Air Purifying Respirator (PAPR)
- List and explain six limitations of APRs.
- List and explain the three filter series and three filter efficiency levels for particulate filters.
- Explain the term breakthrough and warning properties, and list four steps that should be taken if breakthrough occurs.
- Explain the term assigned protection factor (APR) for a respirator and given the five different respirators, state the correct APF in four of the five examples.
- Explain the differences between an air-purifying respirator and an atmosphere-supplying respirator.
- Explain the abbreviation MUC as it relates to a respirator and calculate the correct MUC for at least four out of five sample respirators.

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Goals/Objectives/Student Learning Outcomes-continued:

- Explain the differences between the three delivery systems for breathing air:
 - Continuous Flow
 - Demand
 - Pressure Demand
- Explain how a supplied air respirator (SAR) works. List three limitations of the SAR and the APFs for both the SAR and the SAR with escape.
- Explain how an open-circuit pressure demand SCBA works, its limitations, and APF.
- Given the proper equipment, demonstrate the proper procedures for refilling a SCBA cylinder.
- List and explain the nine requirements of a Respirator Protection Program.
- Explain the difference between a qualitative and quantitative fit test and give two examples of each.
- Demonstrate and explain the proper procedure for performing a positive and negative user seal check on an APR. Using a variety of respirators, demonstrate how to put on, use, take-off and maintain each respirator according to the guidelines presented.
- List and explain the three different types of leakage that can occur with chemical protective clothing.
- List and explain five factors that can affect your work mission duration on an environmental project
- Describe the four levels of protection that may be used when doing Hazardous Waste work.
- Given a variety of protective clothing and specific instructions for putting on and taking off various PPE sets, demonstrate the correct procedures according to the guidelines presented.
- Understand the different levels of heat stress and the dangers they pose to workers.
- Given a variety of site scenarios, demonstrate safe work practices around the following hazards:
 - Electrical
 - Ladders
 - Scaffolds
 - Housekeeping
 - Falls
 - Confined spaces
 - Hazardous atmospheres
- Understand what fire hazards exist in a controlled area and how to prepare for the occurrence of an accidental fire.
- List and explain four reasons for preplanning asbestos abatement operations
- List the 12 steps in preparing the work area.
- Define the purpose of decontamination on an asbestos abatement project.
- List the elements of the decontamination chamber and explain the function of each.
- Explain the purpose and function of a negative pressure air unit. Using several example spaces, calculate the number of machines needed to meet air change requirements.
- Give the proper materials and equipment, prepare the work area, set up the required number of negative air machines, and set up a three-chamber decontamination unit according to the guidelines presented.

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Goals/Objectives/Student Learning Outcomes-continued:

- Describe the differences between bridging and penetrating sealants.
- List three advantages and seven disadvantages of encapsulation.
- List three advantages and seven disadvantages of enclosure.
- List 10 tools commonly used with a glove bag.
- Describe the two stages of asbestos abatement.
- List the 19 stages of the final cleanup.
- Explain how and why air sampling is done on an asbestos abatement project.
- List the analytical methods used in final clearance of asbestos abatement projects.
- Explain the difference between static sampling and aggressive sampling.
- Describe bulk sampling, settled dust sampling, and wipe sampling methods.
- List and briefly describe the limitations of three analytical methods used in asbestos abatement.
- Explain the purpose for taking area samples from outside the work area (but inside the building) and from outside the building.
- Describe a Good Faith Survey
- Describe a pre-bid walk-through.
- List three types of bonds that are commonly issued in construction.
- List the three types of insurance coverage that owners, consultants, and contractors should have.
- List the four types of contracts under which asbestos abatement projects are performed.
- Identify three personnel roles on a large asbestos abatement project.
- Explain the purpose of project plans, specifications, and contracts. Give at least four examples of how they impact project planning.
- Define the following terms and explain their purpose on an asbestos abatement project:
 - Production schedule
 - Equipment schedule
 - Bar Chart
- Describe the role that pre-job meetings play on an asbestos abatement project.
- Describe the role the supervisor plays in effecting safety, quality, and production on an asbestos abatement project.
- Describe the supervisor's role in fostering a working relationship with the union.
- List four things that should be planned for when setting up the job site.
- Identify the five key points of communication.
- Identify the three rules of dealing with interpersonal conflict.
- List five behavior patterns that can be considered to be forms of sexual harassment.

Classroom Rules and Procedures

- All classes begin at 6:30 am and end at 3:00 pm
- Upon entering classroom, all participants must sign in and be seated by 6:30 am
- Class will consist of a combination of lecture, video, demonstration, coached group exercises, individual exercises and assessment.

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Classroom Rules and Procedures-continued:

- Students are required to report to class ready to work and maintain the provided PPE

Textbooks/Readings/Materials

- LIUNA *Asbestos Abatement Worker* Participant Guide
- LIUNA *Asbestos Abatement Supervisor* Instructor Guide
- *Asbestos Abatement Supervisor* Student Handout Packet
- Environmental Training Program Evaluation Form
- *Asbestos Abatement Supervisor* Exit Exam A or B
- *Asbestos Abatement Supervisor* Exit Exam Answer Sheet
- DVD: *Asbestos Abatement Techniques*
- DVD: *Work Area Prep*
- PPT: *Asbestos Abatement Supervisor*

Tools/Equipment/Other Materials:

- Equipment for Decon
- Simulated asbestos containment area
- Rolling scaffold
- Step ladder
- Utility knives
- One or more negative air units with flex duct
- Decontamination facility materials:
 - 6-mil polyethylene
 - 4-mil polyethylene
 - Duct tape
 - Spray adhesive
 - Staple gun and staples
 - Aspirator bulb
 - Detection smoke tubes
- Simulated asbestos material such as cellulose insulation or “popcorn” ceiling material
- Sprayer with amended water
- Garden hose with nozzle
- Scrapers
- Nylon scrub brushes

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Tools/Equipment/Other Materials:

- Disposable bags
- Plastic shovels
- Squeegees
- HEPA vacuum
- Disposable coveralls
- Respirators
- 2" duct tape
- Rolling scaffold with guardrail
- Lighting (string or halogen if needed)
- Extension cords
- High flow pump or picture of high flow pump
- Plastic cassette
- Filter
- Electric fan to demonstrate aggressive sampling
- Materials to demonstrate the different sampling techniques (e.g. powder)
- 10" x 10" gauze pads to demonstrate wipe sampling
- Powder and other materials to simulate asbestos and other contaminants

Personal Protective Equipment:

- 12 pairs of gloves
- 12 pairs of Safety Glasses
- 20 pairs of Ear plugs
- 12 hard hats
- 12 Tyvek suits
- 12 pairs of boots
- 12 masks

Course Requirements:

In order to receive credit for the course, participants must:

- Be present for full forty hours
- Participate in all classroom exercises
- Pass a written exam
- Pass hands-on exams

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Course Policies

- Participants must be on-time and ready to work.
- Participants must return from breaks on-time.
- Participants must participate in each exercise and assignment
- Participants who are on “light duty” are not allowed to take this course due to the physically demanding requirements.

Assessment and Grading

Participants will be assessed on the following:

- All written exams must be passed with a score of 80% or above.
- All hands-on exercises are graded on performance and participation. They are pass/fail and must be passed with a score of 80% or above.

Safety

Failure to maintain and use PPE may result in dismissal from the course.