Welcome to the course. I’m glad you’re here. My name is Alex Carter, and I’ve spent the past 25 years working in environmental compliance and occupational health on construction projects across the country. If there’s one thing I’ve learned, it’s this: lead and asbestos don’t announce their danger, they work quietly, invisibly, and relentlessly.

You won’t smell them. You won’t see them. But if you ignore them, you’re gambling with lives. Yours, your coworkers’, and sometimes even the families we all go home to at the end of the day. So let’s begin where all responsible management does, with awareness.

**What Are Lead and Asbestos?**

Lead and asbestos are two of the most persistent and dangerous environmental hazards on a jobsite.

**Lead**, once widely used in paint, plumbing, and solder, is a neurotoxin. It doesn’t belong in your body. It doesn’t belong in your lungs, in your bloodstream, or on your skin. And yet, many older buildings still contain it — in coatings, on steel structures, even in dust.

**Asbestos**, on the other hand, was once called a miracle fiber. Fireproof. Durable. Insulating. But behind that reputation lies a brutal reality: asbestos exposure can lead to diseases like asbestosis, mesothelioma, and lung cancer — often decades after the exposure took place.

**Why Are They Still a Problem?**

You might be wondering, "If we know how dangerous these materials are, why are they still on job sites?"

Because much of America’s infrastructure was built when these materials were still legal and widely used. Schools. Hospitals. Bridges. Military bases. Demolition, remodeling, cutting, grinding, or even disturbing these materials can release toxic dust into the air — where it’s inhaled, absorbed, or ingested.

**Real Consequences, Not Just Paperwork**

Let me be clear. This isn’t just about avoiding fines from OSHA or USACE. This is about real people. I’ve personally reviewed incident reports where workers unknowingly disturbed lead-based coatings in confined spaces and suffered severe blood poisoning within weeks. I’ve seen projects shut down by the Army Corps because asbestos protocols weren’t followed, putting entire crews at risk.

These are preventable tragedies, but only if you know what to look for and what to do.

**Regulatory Framework: Who Sets the Rules?**

Let’s talk about the agencies that govern how we manage lead and asbestos on construction sites.

**OSHA**, the Occupational Safety and Health Administration, sets enforceable standards:

29 CFR 1926.62 governs lead in construction.

29 CFR 1926.1101 covers asbestos work, broken into Classes I–IV depending on the activity.

**USACE**, through its EM 385-1-1 manual, has stricter protocols when it comes to military and federal projects. You’ll hear me refer to it often — it’s not optional when you're working under Corps jurisdiction.

Then there’s **EPA**, the Environmental Protection Agency. They regulate asbestos under TSCA and lead under the RRP Rule (Renovation, Repair and Painting). If your work disturbs more than six square feet of lead-painted surface, you’d better know the EPA’s rules.

We also reference **NIOSH**, who, while not regulatory, sets exposure guidelines and best practices you’d be smart to follow.

And don’t forget state and local agencies. States like California and New York often have tougher requirements than federal minimums.

Here’s how we’ll structure the rest of the course:

Lesson 2 will break down OSHA and USACE requirements specific to lead.

Lesson 3 will dive into asbestos: how it’s regulated, how we classify work, and what the rules say.

Lesson 4 focuses on risk assessments, exposure monitoring, and your role in communication and documentation.

Lesson 5 brings it all together: safe work practices, engineering controls, and the right way to decontaminate and clean up.

**The Bottom Line**

You don’t get to choose whether lead or asbestos were used on a job years ago, but you do get to choose how you respond today. Are you going to be the person who says, “I didn’t know”? Or the one who leads by example and ensures your crew works smart and safe?

Because at the end of the day, compliance isn’t just about checking a box. It’s about taking ownership, of the environment, the site, and most importantly, the lives under your watch.

Let’s get started.

## Lesson 1 Quiz. Introduction to Lead and Asbestos

**Question 1. (True/False) Lead and asbestos hazards are usually easy to detect by sight or smell on a construction site.**

A. True

**2. (Select One) Which regulatory agency enforces lead and asbestos standards on construction sites through 29 CFR 1926?**

A. NIOSH

B. USACE

C. OSHA

D. EPA

**3. (Select Two) Select TWO common health effects of long-term exposure to lead:**

A. Liver failure

B. Neurological damage

C. Reproductive issues

D. Hair loss

**4. (Select Three) Select THREE materials or surfaces that may still contain lead or asbestos in older buildings:**

A. Steel beams painted before 1978

B. Fiberglass insulation

C. Pipe wrap insulation

D. Floor tiles

**5. (True/False) NIOSH is a regulatory agency with the authority to enforce jobsite shutdowns for asbestos violations.**

Correct Answer: False

6. (Select One) Why are lead and asbestos still commonly encountered in construction today?

A. They are still required in commercial construction

B. They are actively used in energy-efficient building materials

C. They are commonly found in older structures still being renovated or demolished

D. They are only present in international sites

**8. (Select One) Which of the following was asbestos most valued for before it was banned or limited?**

A. Lightweight properties

B. Fire resistance

C. Colorfastness

D. Energy generation

**9. (Select Two) Select TWO common routes of exposure to lead and asbestos on job sites:**

A. Touching dry concrete

B. Inhalation of airborne fibers or dust

C. Contact with contaminated PPE

D. Using PVC piping

**10. (Select One) Which EPA regulation governs lead-safe work practices during renovation, repair, or painting in schools and child-occupied facilities?**

A. TSCA Title IV

B. CERCLA

C. RRP Rule

D. Clean Air Act

## Lesson 2 Script

Let’s talk about lead — not the kind used in pencils, but the kind that still shuts down job sites, puts workers in hospitals, and racks up serious violations.

I’ve stood on job sites where lead dust poured from overhead work like a fine powder. I’ve seen people dry-sanding lead-based paint with nothing more than a bandana. And I’ve witnessed federal projects come to a complete halt because supervisors failed to understand the regulations you’re about to learn.

This lesson is not a formality, it’s your protection. It’s how you prevent injury, liability, and lasting damage to everyone involved.

Let’s begin with the Occupational Safety and Health Administration’s lead standard for construction. OSHA’s regulation for lead is found in 29 CFR 1926.62. It applies to all construction work where employees may be exposed to lead, including demolition, surface prep, welding, renovation, painting, plumbing, and similar tasks.

One of the most critical elements of this standard is the Permissible Exposure Limit, or PEL. This is the legal limit for airborne lead exposure, and it is set at 50 micrograms per cubic meter of air, averaged over an eight-hour workday. But the standard also includes an Action Level of 30 micrograms per cubic meter. If you even suspect that exposure may meet or exceed this level, you must act, and that means initiating exposure monitoring and control measures immediately.

Exposure assessments are not optional. Before work begins, employers must assess each worker’s potential lead exposure using representative air sampling. If monitoring results show exposure above the action level or the PEL, employers must implement a series of controls, starting with engineering controls, and followed by work practices and personal protective equipment. Regular re-monitoring is also required until exposure is reliably under control.

Engineering controls are the first line of defense. OSHA expects employers to use tools and methods that prevent or minimize dust generation at the source. This includes HEPA-filtered vacuum attachments, wet methods that suppress dust, and localized exhaust ventilation. For example, dry sanding or dry scraping painted surfaces without dust control is considered a serious violation under this standard.

When engineering and work practice controls alone are not enough to protect the worker, employers must provide respiratory protection. This includes NIOSH-approved respirators, assigned based on the exposure level, and accompanied by a full respiratory protection program as required by OSHA 1910.134. Respirators must be individually fit-tested, workers must be trained in their use and maintenance, and facial hair must not interfere with the seal. Annual fit testing is required, no exceptions.

In addition to respirators, employers must provide protective clothing. This includes disposable or washable coveralls, gloves, head coverings, and shoe covers. These items must be removed before leaving the contaminated area and must never be taken home. All contaminated clothing must be either properly laundered or disposed of in accordance with safety regulations. Handling lead-contaminated PPE like regular laundry is a violation that can cause cross-contamination — even outside the job site.

When workers are exposed to airborne lead at or above the action level for more than 30 days in a calendar year, they must be enrolled in a medical surveillance program. This includes blood lead level testing, medical evaluations, and documentation of their work and exposure history. If a worker’s blood lead level reaches 50 micrograms per deciliter or higher, they must be removed from exposure until their level drops below 40. That’s not a suggestion, that’s the law.

Worker training is another critical requirement. Before an employee begins work that could expose them to lead, they must receive training. This training must be conducted in the language and vocabulary the worker understands, and it must cover health hazards, exposure sources, the use of personal protective equipment, hygiene practices, medical surveillance, and emergency procedures. Annual refresher training is also required. If your team doesn’t know what the symptoms of lead poisoning look like, or how to distinguish a HEPA vac from a regular vacuum, your training is not sufficient.

Now let’s talk about the U.S. Army Corps of Engineers and their safety requirements under EM 385-1-1. When working on military or federally funded projects, you’re required to meet a higher standard. EM 385-1-1 mandates a written lead compliance plan for every project involving lead.

You must appoint a Lead Competent Person, someone who is trained, experienced, and authorized to identify existing and predictable hazards in the work environment. In addition to pre-job hazard analyses, the Corps often requires daily air monitoring and third-party testing of airborne lead samples.

USACE projects also have strict requirements for work involving abrasive blasting, torch cutting, and heat guns, including full containment, air filtration, and waste management procedures. You’ll be expected to show documentation that proves your compliance — not just say that it’s happening.

To sum this up, if you work around lead, and especially if you’re on a federal site, there is no room for guesswork. OSHA sets the rules. USACE often takes them further. As a leader on the job, you are responsible for making sure your team is monitored, trained, protected, and safe. Because when lead enters the body, through inhalation, ingestion, or absorption the effects are long-lasting and, in many cases, permanent.

We don’t get a second chance with exposure like this. This is your chance to get it right the first time.

## Lesson 2 Quiz

**1. (True/False) Employers are required to implement engineering controls before relying on personal protective equipment for lead exposure.**

Correct Answer: True

**2. (Select One)**
**What is the Permissible Exposure Limit (PEL) for airborne lead as defined by OSHA?**A. 20 micrograms per cubic meter (µg/m³) over 4 hours
B. 30 micrograms per cubic meter (µg/m³) over 8 hours
C. 50 micrograms per cubic meter (µg/m³) over 8 hours
D. 100 micrograms per cubic meter (µg/m³) over 12 hours
✅ **Correct Answer: C. 50 micrograms per cubic meter (µg/m³) over 8 hours**

**3. (Select Two) Select TWO actions that must occur when employee lead exposure exceeds the action level.**A. Employees must be terminated immediately
B. Air monitoring must be conducted
C. Respiratory protection must be provided
D. Project must be shut down permanently
✅ **Correct Answers: B. Air monitoring must be conducted, C. Respiratory protection must be provided**

**4. (Select Three) Select THREE responsibilities of the Lead Competent Person on USACE projects.**

A. Identify and predict lead-related hazards

B. Approve federal funding requests

C. Oversee daily hazard analyses

D. Ensure implementation of lead safety controls

E. Sign off on environmental permits

**5. (True/False) Workers may take contaminated PPE home to wash as long as it is sealed in a bag.**

✅ Correct Answer: False

**6. (Select One) At what blood lead level must a worker be removed from further exposure according to OSHA?**

A. 30 micrograms per deciliter

B. 40 micrograms per deciliter

C. 50 micrograms per deciliter

D. 60 micrograms per deciliter

✅ Correct Answer: C. 50 micrograms per deciliter

**7. (Select Two) Select TWO required components of a respiratory protection program.**

A. Randomized mask distribution

B. Annual fit testing

C. Training in use and maintenance

D. Written approval by OSHA

**8. (Select One) What is the first method employers must use to control worker exposure to lead?**

A. Medical removal

B. Respirator assignment

C. Engineering controls

D. Employee counseling

**9. (Select Three) Select THREE key features of the USACE EM 385-1-1 requirements for lead.**

A. Written lead compliance plan

B. Use of heat guns without restrictions

C. Daily air monitoring on high-risk jobs

D. Designation of a Lead Competent Person

E. Mandatory reuse of PPE

**10. (Select One) Which OSHA regulation specifically addresses lead in construction?**

A. 29 CFR 1910.1200

B. 29 CFR 1926.1101

C. 29 CFR 1926.62

D. 29 CFR 1910.134

## Lesson 3. OSHA & USACE Asbestos Standards.

Let’s shift our attention to asbestos. If lead is dangerous because of its slow, cumulative effects on the body, asbestos is dangerous because it quietly embeds itself in your lungs and stays there for the rest of your life.

I’ve seen projects shut down not because of a visible hazard, but because someone drilled into a ceiling tile that happened to contain a few percent of chrysotile asbestos. It only takes one mistake to release thousands of microscopic fibers into the air. Fibers that don’t break down. Don’t leave your lungs. And don’t show symptoms for 20 to 40 years.

You can’t afford to wait until someone starts coughing. When asbestos is disturbed, it’s already too late.

Let’s break down what the regulations require, and what your crews need to do to stay safe and in compliance.

The Occupational Safety and Health Administration regulates asbestos in construction under 29 CFR 1926.1101. This standard covers all work involving the demolition, removal, repair, maintenance, or disturbance of asbestos-containing materials. Whether you’re tearing out old flooring, replacing pipe insulation, or drilling into drywall, this rule applies.

The first thing OSHA requires is a clear understanding of work classifications. There are four classes.

Class I includes the most hazardous work, removal of thermal system insulation and sprayed-on or troweled-on surfacing materials.

Class II refers to the removal of other asbestos-containing materials that are not insulation, like wallboard, floor tiles, and roofing.

Class III covers repair and maintenance operations where asbestos-containing materials are likely to be disturbed.

And, Class IV involves custodial or cleanup work in areas where asbestos-containing materials may be present.

Each class has different requirements for controls, PPE, training, and air monitoring. If you misclassify the work, you misapply the safety requirements, and that puts everyone at risk.

Before any work begins, a competent person must assess the site and materials. This means performing an asbestos survey using historical data or direct sampling. If asbestos is identified or presumed to be present, you must develop a site-specific compliance plan.

The plan must detail the scope of work, exposure control methods, decontamination procedures, and emergency response steps. It must also identify the competent person and describe how they will ensure compliance throughout the project.

Now let’s talk about engineering controls and safe work practices.

OSHA requires you to use methods that minimize the release of asbestos fibers. That includes using wet methods to suppress dust, HEPA-filtered vacuums to capture particles, and containment systems like negative-pressure enclosures and glove bags. Dry sweeping, high-pressure air, or compressed air without a HEPA filter is strictly prohibited.

Workers must wear the right level of respiratory protection based on exposure risk. This typically starts with half-face air-purifying respirators for lower-risk tasks, but may escalate to full-face respirators or powered air-purifying respirators, depending on fiber concentrations. These respirators must be part of a written respiratory protection program, with proper fit testing and maintenance.

Protective clothing is also mandatory. Disposable coveralls, gloves, boots, and head coverings must be provided and removed before leaving the regulated area. Decontamination units with clean and dirty sides, showers, and equipment cleaning stations must be used on Class I and many Class II jobs.

Medical surveillance is required for any employee who works in regulated areas for 30 or more days per year. This includes a medical exam, pulmonary function tests, and a review of the employee’s work and exposure history. Surveillance must be repeated every year for as long as the employee continues this work.

Workers must also be trained before performing any asbestos-related tasks. Class I and II work requires a minimum of 32 hours of training, including hands-on exercises. Class III workers must receive at least 16 hours of training, and Class IV workers need a minimum of two hours of awareness-level instruction. All training must be renewed annually.

Recordkeeping is another major part of the standard. You are required to maintain training records, exposure assessments, air monitoring results, medical surveillance documentation, and project-specific compliance plans. These records must be kept for at least 30 years in most cases.

Let’s talk briefly about air monitoring. If you're performing Class I or II work, you must conduct initial exposure monitoring unless you have objective data showing that exposure will remain below the permissible exposure limit. The OSHA PEL for asbestos is 0.1 fibers per cubic centimeter of air, averaged over an 8-hour shift. There’s also an excursion limit of 1.0 fibers per cubic centimeter over any 30-minute period.

If your monitoring shows that exposure is above the PEL or excursion limit, you must take immediate steps to improve controls and reduce exposure. Continued monitoring is required until exposures are reliably below the limits.

Now let’s look at what the U.S. Army Corps of Engineers adds to the equation under EM 385-1-1.

For all federal and military projects involving asbestos, the Corps requires a written asbestos hazard control plan. This plan must identify the presence of asbestos, the classification of work, the competent person responsible, and all engineering controls that will be used. It must also include procedures for air sampling, waste handling, and decontamination.

The Corps also requires third-party oversight. Independent industrial hygienists may be required to conduct inspections, review procedures, and approve work practices before and during abatement activities.

Waste generated during asbestos abatement must be double-bagged, labeled according to EPA and DOT rules, and disposed of at an approved landfill. Transport documentation, often referred to as a waste manifest, must be retained.

Failure to follow these procedures can lead to immediate project shutdowns, federal violations, and permanent removal from bidding eligibility. In short, USACE does not tolerate asbestos mismanagement.

To wrap this up, remember that asbestos doesn’t give you a second chance. Its damage is invisible, delayed, and permanent. But it is entirely preventable with the right procedures and the right leadership.

Know the class of work. Follow the controls. Train your crew. Monitor the air. And document everything. Because when it comes to asbestos, protecting your team starts with respecting the risk.

## Lesson 3 Quiz

**1. (True/False) Class I asbestos work includes the removal of insulation or surfacing materials that contain asbestos.**

✅ Correct Answer: True

**2. (Select One) What is the OSHA permissible exposure limit (PEL) for asbestos over an 8-hour time-weighted average?**

A. 1.0 fibers per cubic centimeter

B. 0.1 fibers per cubic centimeter

C. 5.0 fibers per cubic centimeter

D. 0.5 fibers per cubic centimeter

**3. (Select Two) Select TWO examples of engineering controls used to limit asbestos fiber release during work.**

A. Wet methods

B. Pressurized air

C. HEPA-filtered vacuums

D. Open-air sanding

**4. (Select Three) Select THREE requirements that apply to Class I asbestos work.**

A. Use of glove bags or full enclosures

B. Annual training for all involved workers

C. Mandatory decontamination units

D. Use of unfiltered fans for ventilation

5. (True/False) According to OSHA, Class IV work includes full removal of asbestos pipe insulation.

✅ Correct Answer: False

**6. (Select One) What must a competent person do before asbestos work begins on a construction site?**

A. Order supplies and schedule the crew

B. Conduct a hazard assessment and identify materials

C. Contact local media

D. Perform a financial risk analysis

**7. (Select Two) Select TWO components that must be included in the asbestos hazard control plan under USACE EM 385-1-1.**

A. Location of nearby restrooms

B. Engineering controls to be used

C. Identification of the competent person

D. Personal income verification

**8. (Select One) Which regulation governs asbestos in construction under OSHA?**

A. 29 CFR 1926.1101

B. 29 CFR 1910.1020

C. 40 CFR 763 Subpart E

D. EM 385-1-1 Appendix G

**9. (Select Three) Select THREE responsibilities of workers performing Class II asbestos work.**

A. Wear disposable protective clothing

B. Dispose of asbestos waste in any nearby dumpster

C. Follow site-specific work practices

D. Participate in a minimum of 32 hours of training

E. Use HEPA vacuums and wet methods

✅ Correct Answers: A. Wear disposable protective clothing, C. Follow site-specific work practices, E. Use HEPA vacuums and wet methods

**10. (Select One) What is the short-term exposure limit, also called the excursion limit, for asbestos exposure over any 30-minute period?**

A. 1.0 fibers per cubic centimeter

B. 0.5 fibers per cubic centimeter

C. 0.3 fibers per cubic centimeter

D. 2.0 fibers per cubic centimeter

## Lesson 4. Risk Assessment, Monitoring, and Communication

If you’re in charge of a job site, your ability to manage environmental risk comes down to one thing — information. You can’t control what you haven’t measured, and you can’t protect workers from hazards you haven’t identified or communicated.

When it comes to lead and asbestos, the most dangerous thing on a construction site isn’t the material itself. It’s the false sense of security that comes from guessing instead of assessing.

In this lesson, we’re going to cover how to properly assess risk, conduct monitoring, and communicate hazards clearly. These aren’t just tasks for a safety officer. They’re core responsibilities for any supervisor, competent person, or contractor operating under OSHA, USACE, or EPA oversight.

Let’s begin with exposure assessments. OSHA requires employers to determine if workers are exposed to airborne lead or asbestos at levels above the action threshold. For lead, this is 30 micrograms per cubic meter of air. For asbestos, it’s 0.1 fibers per cubic centimeter over an eight-hour period. These numbers aren’t suggestions, they’re regulatory limits. And the only way to know if your project exceeds them is to monitor.

Air monitoring must be done using proper sampling methods. For asbestos, this usually means personal air sampling performed in the breathing zone of the worker. For lead, it may also include task-based or area sampling, depending on the scope of work. The data must be analyzed by an accredited laboratory, and results must be reviewed by a competent person.

If exposure is at or above the action level, you are required to implement a full range of controls. These include engineering and work practice controls, medical surveillance, and sometimes respiratory protection. You are also required to monitor exposure at regular intervals until the results consistently show levels below the threshold.

It’s not just about collecting data. It’s about what you do with it. Results must be documented, interpreted, and acted upon. Employers must notify workers of their personal exposure results within five working days. If the results are above permissible limits, that notification must also include a written description of the corrective actions taken to reduce exposure.

Now let’s talk about the competent person. This individual must be on-site, fully trained, and authorized to identify existing and predictable hazards. Their job is to conduct visual inspections, evaluate air monitoring results, and make changes to work practices or controls when needed. They are also responsible for updating the site-specific safety plan and making sure it reflects current conditions.

If you’re working on a federal site under USACE jurisdiction, the expectations are even higher. The Corps requires written hazard analyses and exposure assessments for each activity involving lead or asbestos. These documents must be submitted and approved before work begins. The competent person is responsible for daily inspections, verifying that controls are in place and functioning, and confirming that the air monitoring program is active and current.

Communication is just as critical as monitoring. Workers must be informed about the presence of lead or asbestos-containing materials before they begin any task that may disturb them. This means clear signage, labels, and documentation. Materials that are known or presumed to contain asbestos must be labeled accordingly, and access to those areas must be restricted to trained personnel only.

Safety Data Sheets, or SDSs, must be available for any hazardous material on-site, including encapsulants, coatings, or abatement chemicals. These documents must be accessible at all times and in a language workers understand.

You also need to establish clear methods for communicating hazards to subcontractors. General contractors are responsible for informing all affected parties about the location and condition of hazardous materials. This includes written communication before the job begins and verbal reinforcement during toolbox talks or safety meetings.

Another critical element of communication is documentation. Training records, air sampling data, hazard analyses, and written plans must be kept for the duration of the project and, in most cases, for years afterward. OSHA requires many of these records to be retained for 30 years. If you can’t produce documentation during an inspection, regulators will treat it as if it never happened — even if the work was done safely.

Let’s talk briefly about hygiene practices. These are often overlooked but play a massive role in exposure control. Workers must be trained to avoid eating, drinking, smoking, or chewing gum in contaminated areas. Handwashing facilities must be provided near the work area, and workers must use them before breaks and before leaving the site.

For higher-risk work, you’ll need designated clean and dirty zones, along with decontamination units and storage for PPE. These zones should be clearly marked and communicated to every worker entering the site.

When it comes to asbestos, a regulated area must be established where Class I, II, or III work is taking place. This area must be demarcated with warning signs and controlled access. No unauthorized personnel should enter. The signs must clearly state the hazard, the required protective equipment, and the prohibition of eating, drinking, and smoking.

Finally, let’s talk about your role as a leader. Workers will only take these risks seriously if you do. If you enforce monitoring, communicate results, post warnings, and lead by example, your team will follow. But if you cut corners, so will they — and in this line of work, shortcuts get people sick or killed.

Risk isn’t just about probability. It’s about consequences. And when it comes to lead and asbestos, the consequences are permanent.

Measure. Monitor. Communicate. Document. Repeat. That’s how you lead a safe site, and that’s how you stay compliant.

## Lesson 4. Quiz

**1. (True/False) Employers must notify workers of their personal exposure monitoring results within five working days.**

✅ Correct Answer: True

**2. (Select One) Which individual is responsible for identifying existing hazards, evaluating monitoring results, and ensuring safety controls are in place?**

A. Project estimator

B. Safety Data Sheet coordinator

C. Competent person

D. Equipment manager

**3. (Select Two) Select TWO situations where exposure monitoring is required on a construction site.**

A. When asbestos-containing material is found in sealed packaging

B. When tasks may disturb presumed asbestos-containing materials

C. When lead paint will be sanded during demolition

D. When drywall is removed in a new construction build

**4. (Select Three) Select THREE communication elements required when hazardous materials are present.**

A. Verbal notice to subcontractors

B. Hazard signs posted at access points

C. Approval from the property owner

D. Worker training in a language they understand

E. Labels on known asbestos-containing materials

**5. (True/False) OSHA requires employers to retain air monitoring and medical surveillance records for only one year.**

Correct Answer: False

**6. (Select One) What is the action level for lead exposure in construction, according to OSHA?**

A. 50 micrograms per cubic meter

B. 0.1 fibers per cubic centimeter

C. 30 micrograms per cubic meter

D. 100 micrograms per cubic meter

**7. (Select Two) Select TWO hygiene-related practices that help reduce lead and asbestos exposure on job sites.**

A. Drinking bottled water on-site

B. Washing hands before breaks or meals

C. Designating clean and dirty zones

D. Wearing cotton T-shirts under PPE

**8. (Select One) What must be included in a regulated area where asbestos work is taking place?**

A. Live security camera feed

B. Recreational break space

C. Signage that restricts entry and lists required PPE

D. Daily employee questionnaires

✅ Correct Answer: C. Signage that restricts entry and lists required PPE

**9. (Select Three) Select THREE responsibilities of a competent person on an asbestos-affected job site.**

A. Conduct daily inspections

B. Deliver lunch to workers

C. Monitor air sampling data

D. Adjust work practices as conditions change

E. Approve housing for subcontractors

**10. (Select One) Which type of monitoring is required to determine actual worker exposure to airborne contaminants like lead and asbestos?**

A. Background noise monitoring

B. Personal air sampling in the breathing zone

C. Soil analysis from surrounding areas

D. Electrical discharge monitoring

## Lesson 5. Safe Work Practices, Abatement, and Cleanup.

We’ve spent the last four lessons discussing the dangers of lead and asbestos, the regulations that govern them, and the importance of monitoring and communication. But none of that matters if the actual work being done in the field doesn’t follow best practices.

This final lesson focuses on doing the work safely, from preparation to final cleanup. We’ll look at what OSHA and USACE require when it comes to safe work practices, abatement protocols, waste handling, and project closeout.

Let’s start with engineering controls and safe work methods. OSHA makes it very clear — exposure must be reduced as much as possible using engineering controls first, not just PPE. That means you are expected to plan the work so that it prevents contamination, not just reacts to it.

For both lead and asbestos, wet methods are critical. Using water to keep materials saturated during cutting, scraping, or removal prevents dust and fibers from becoming airborne. Water should be applied gently, not sprayed under high pressure. Your goal is to keep surfaces damp, not to splatter contaminants across the job site.

HEPA-filtered vacuums must be used to capture dust at the point of generation. Standard shop vacs or industrial vacuums are not acceptable substitutes. HEPA filtration is required for negative air machines, point-of-source collection, and even powered tools used for surface prep.

When it comes to containment, there’s no one-size-fits-all approach. Class I and II asbestos work usually requires negative pressure enclosures with airlocks and decontamination units. For lead work involving abrasive blasting, full tenting and filtration systems may be necessary. The key is to prevent the spread of contaminants to adjacent work areas or the environment.

Work practice controls are just as important. Workers must follow proper decontamination procedures. That means removing PPE in designated areas, cleaning or discarding it correctly, and never wearing contaminated clothing outside the regulated work area.

For high-hazard work, a decontamination unit with separate clean and dirty areas is required. This setup must include a shower and storage for clean clothing and equipment. Even if your site is smaller, you still need a clear plan for cleaning personnel and tools before they leave the work area.

Once materials are removed, you must handle them as hazardous waste. This means sealing them in double bags or leak-tight containers, clearly labeling them, and storing them in a secure area until proper disposal. Asbestos-containing waste must have warning labels in accordance with EPA and DOT standards, including the name and address of the generator and a description of the hazard.

Lead-contaminated debris must also be tested to determine if it is classified as hazardous under the Resource Conservation and Recovery Act, or RCRA. If the waste exceeds regulatory limits for lead, it must be managed as hazardous waste and transported with proper documentation.

Project closeout involves clearance procedures. For asbestos, this includes final visual inspections and air sampling to confirm that the area is safe for reoccupation. Air samples must be analyzed by an accredited laboratory, and clearance levels must meet federal, state, or project-specific requirements, often less than 0.01 fibers per cubic centimeter.

For lead abatement projects, final wipe sampling may be required to confirm that no residual dust remains on surfaces. This is especially important in residential or child-occupied facilities. Even if it’s not required by regulation, post-abatement sampling is a best practice that protects your crew and your reputation.

Let’s not forget about documentation. Every step of the abatement process must be recorded. This includes work procedures, daily logs, air sampling results, personnel training, PPE use, equipment maintenance, and waste manifests. These records must be made available to regulators and retained for the required period, often 30 years or more.

If you’re working under USACE guidelines, you will also be required to submit after-action reports, including a summary of monitoring results, waste handling procedures, and confirmation that final clearance criteria were met. These reports must be reviewed and approved by the Corps’ quality assurance representatives.

Emergency response planning is another essential part of your protocol. What happens if a containment system fails? What if someone accidentally enters a regulated area without PPE? These aren’t hypothetical situations. Your team needs a written response plan and must be trained to act on it immediately.

And here’s the truth. Safe work practices are not just about avoiding citations or passing inspections. They are about ensuring that the people on your site, many of whom are just trying to earn a living, go home safe, with clean lungs and clean hands.

You have the training. You have the authority. Now you have the responsibility. Because the way you manage abatement and cleanup sets the tone for everything else on the site. Sloppy work spreads contamination. Tight, clean operations save lives.

There is no shortcut to doing this right. Only systems, procedures, training, and discipline. The kind that shows in the air samples. The kind that shows in the attitude of your crew. The kind that lasts long after the last bag of debris is hauled away.

This is how we close out a job — safely, responsibly, and by the book.

## Lesson 5 Quiz: Safe Work Practices, Abatement, and Cleanup

**1. (True/False) HEPA-filtered vacuums must be used instead of standard shop vacs during lead and asbestos abatement.**

Correct Answer: True

**2. (Select One) What is the primary purpose of using wet methods during asbestos or lead removal?**

A. To cool down the tools used for cutting

B. To reduce flammability of materials

C. To prevent airborne dust and fiber release

D. To soften material for easier handling

**3. (Select Two) Select TWO proper containment or control methods required for high-risk asbestos or lead work.**

A. Use of high-pressure air for cleanup

B. Full negative pressure enclosure

C. Glove bag systems

D. Open windows for natural ventilation

✅ Correct Answers: B. Full negative pressure enclosure, C. Glove bag systems

**4. (Select Three) Select THREE required steps for handling and disposing of asbestos-containing waste.**

A. Bag waste using standard black trash liners

B. Label containers with hazard warnings

C. Store in a secured designated area

D. Transport without manifests if under 50 pounds

E. Dispose at an approved facility

**5. (True/False) Final visual inspections and air sampling are not required if abatement is completed according to the initial work plan.**

Correct Answer: False

**6. (Select One) What is the purpose of a decontamination unit on a lead or asbestos abatement site?**

A. To test tools before use

B. To provide a break area for workers

C. To clean workers and equipment before exiting the work area

D. To mix sealants and adhesives

**7. (Select Two) Select TWO safe work practices required for final cleanup on lead or asbestos abatement jobs.**

A. Use of dry sweeping to speed up dust collection

B. Use of HEPA-filtered vacuums

C. Wipe sampling of surfaces (lead-specific)

D. Airing out the space with unfiltered fans

✅ Correct Answers: B. Use of HEPA-filtered vacuums, C. Wipe sampling of surfaces (lead-specific)

**8. (Select One) Which document must be completed and submitted to confirm proper disposal and clearance on a USACE project?**

A. Financial summary sheet

B. Daily log

C. After-action report

D. Incident summary form

**9. (Select Three) Select THREE key elements that must be included in post-abatement documentation.**

A. Worker payroll logs

B. Air sampling results

C. Equipment maintenance logs

D. Project photos for advertising

E. Waste manifests

✅ Correct Answers: B. Air sampling results, C. Equipment maintenance logs, E. Waste manifests

**10. (Select One) Why is emergency response planning essential for abatement projects?**

A. To comply with financial reporting requirements

B. To reduce the number of site meetings

C. To respond quickly if containment fails or unauthorized entry occurs

D. To satisfy local permit officials during inspections

✅ Correct Answer: C. To respond quickly if containment fails or unauthorized entry occurs