


**Planning for Asbestos & Lead
Paint**

**Pennsylvania Department of Transportation
Webinar Training**

Sponsored by Design Community Program

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DEPARTMENT OF TRANSPORTATION
www.dot.state.pa.us

Good morning students, my name is __<Quang Dinh>__ and this PennDOT webinar training is called “Planning for Asbestos and Lead Paint”.

I have prepared this webinar at the request of the Pollution Prevention Section/Environmental Quality Assurance Division of the Bureau of Design; this is one of several sessions the PPS is preparing.

I wanted to mention a couple of points before we begin. For your comfort and to minimize distractions during the presentation, please take a moment to silence your cell phone and shut your door.

Please feel free to take notes as we move through our material today using the handouts; but these slides speaker notes will be posted on the “P” for everyone to access following the presentation.

Most webinars are set up so that all attendees are automatically muted, and we have set up today’s session consistent with that option. This is by design so that one location’s background noise does not disrupt other locations from listening to the presentation.

However, while we have a couple designed breaks when questions can be asked, you might have questions during the presentation. The Webinar has the ability to submit written questions throughout the presentation, and the instructor can see the question on our screen. So, if you think of a question during the session, please jot it down and submit it to your prompter at each location. This allows us to determine whether to answer the question immediately, determine that the question will be answered in a subsequent slide, or whether we wait for the programmed break. Your location proctor knows how the submit a question using the GoToWebinar Q&A pane.

Now that we’ve taken care of those few housekeeping items....I know your time is important, so let’s get started.

Outline

- **Objective**
- **Descriptions**
- **Uses**
- **Health hazards**
- **Regulations**
- **Inspections and abatements**
- **Licensing and training**
- **PennDOT operations**



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The purpose of this webinar training is to provide an overview of asbestos and lead paint regulations, hazards and materials handling issues affecting PennDOT's operations. We will be covering the items identified on this slide including descriptions of asbestos-containing material (ACM) and lead-based paint (LBP), and some of the common uses of ACM and LBP.

We will also briefly cover some the health hazards and the State and Federal regulations pertaining to ACM and LBP, particularly the inspection, abatement, personnel training and licensing requirements.

Understand, this is an overview of a regulated practice within which PennDOT operates. There are specific licenses and training required to conduct this work, and this 2-hour class is NOT intended as a substitute for the requisite training. Rather, this is intended to give you a better understanding of these hazardous substances, where they might exist, and the proper methods to abate these materials.

1.0 Introduction

- **What is Pennsylvania's definition of asbestos-containing material (ACM)?**
 - >1% ACM
- **What is Pennsylvania's definition of lead-based paint (LBP)?**
 - Equal to or > 1.0 mg/cm² by XRF, or 0.5% by weight by AA, or 0.06% by weight/dry film
- **What is the objective of this training?**



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But the first item we ought to address is, "What is asbestos?". Definitions that are commonly used when determining ACM and LBP include:

- a) Pennsylvania's definition of ACM is any material containing more than 1% asbestos.
- b) Pennsylvania's definition of LBP is a paint containing equal to or more than 1.0 mg/cm² by XRF, 0.5 % by weight by atomic absorption spectrometric (AAS) and 0.06 % by weight/dry film by AAS for new paint.

So, we can establish the **objectives** of this training. It is to:

- Have a general knowledge of ACM and LBP;
- Be able to recognize common uses of ACM and LBP;
- Be aware of potential health effects of long-term exposure to ACM and LBP;
- Be able to identify ACM and LBP related to PennDOT operations; and last
- Understand Federal, State and PennDOT regulations and how they apply to your work.

Note that these objectives are prefaced with "general knowledge, awareness, understanding". The completion of this training does **not** certify you to handle, disturb, identify, remove or repair ACM and LBP

2.0 Asbestos Training

- **General awareness**
- **Inspection and abatement**
- **Related to PennDOT operations**



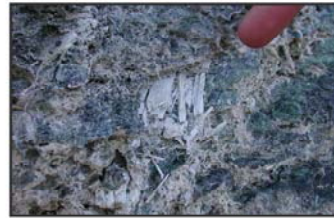
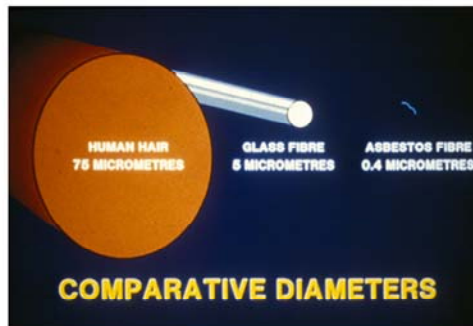
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In this first section, we will discuss the asbestos topics listed on this page:

- General awareness to identify origin, qualities, types, common uses, health effects and categories of workers.
- Inspection and abatement protocols.
- PennDOT operations where ACM is typically encountered.

2.1 General Awareness

- **What is asbestos?**
- **Qualities of asbestos**
- **Origin and types of asbestos**
- **Friable and non-friable asbestos**



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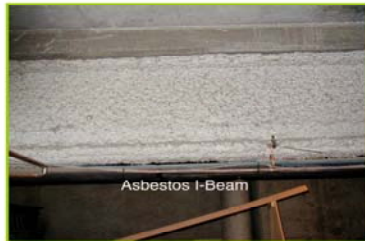
Some of the questions you might have about asbestos are listed on this slide.

- What is asbestos and what does it look like?
- What are the qualities of asbestos that make it so commonly used?
- Where does it come from and what are the known types of asbestos?
- What is the definition of friable versus non-friable asbestos?

Additional awareness questions are also discussed on the next slide.

2.1 General Awareness

- **Uses of asbestos**
- **Asbestos health hazards**
- **Classes of asbestos work**
- **Categories of non-friable ACM**



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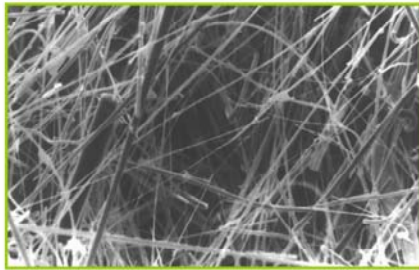
These topics are certainly prevalent to understanding where ACM might be found.

- What are the common uses of friable and non-friable asbestos?
- What are the asbestos-related diseases, routes of asbestos exposure, latency and medical surveillance?
- What are the different classes of asbestos workers?
- What are the different categories of non-friable ACM and how can non-friable ACM become a Regulated Asbestos-Containing Material (RACM)?

2.1 General Awareness

- **What is asbestos**

- A mineral fiber
- Individual fibers not visible to the naked eye
- Fibers float in air when disturbed
- Does not dissolve inside the human body



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So, first question – what is asbestos? Asbestos is a naturally-occurring mineral that characteristically separates into strong, very fine fibers.

Individual fibers are not visible to the naked eye, but can be seen with a high-power microscope. If you can see the picture on this slide, it shows the fibrous nature of this mineral.

Of particular note, these mineral fibers float in the air when disturbed, and will settle to the ground or other surfaces, including attaching to clothing. More importantly, the fibers can be ingested by humans and animals.

Because the fibers do not dissolve inside the human body, and there are no known medical treatments to remove the fibers from the human body, asbestos is considered a health issue.

2.1 General Awareness

- **Qualities of asbestos**
 - Strong but flexible
 - Flame retardant
 - Excellent binding qualities and inexpensive



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Some other qualities of asbestos that made its use in industry so prevalent include:

- Fibers are strong and flexible making it very useful in construction.
- Fibers are flame retardant which is why older buildings use asbestos tiles and ceiling spray-on to contain building fires.
- Fibers are excellent binding qualities and are inexpensive.
 - Fibers are mixed with concrete and mastic to enhance the bonding of this material to another surface.

2.1 General Awareness

- **Origin and types of asbestos**

- What are the types of asbestos

- Serpentine
 - Chrysotile
- Amphibole
 - Amosite, Crocidolite, Actinolite, Anthophyllite and Tremolite



Tremolite Asbestos



AMOSITE
(Brown)
ASBESTOS



CHRYSOTILE
(White)
ASBESTOS



CROCIDOLITE
(Blue)
ASBESTOS

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Some of the common names of asbestos include:

- Chrysotile aka “white asbestos” which makes up 95% of all asbestos products. It is a soft, fibrous silicate mineral that may be spun into thread and woven into cloth.
- Amosite, aka “brown or gray asbestos” (hydrophobic – repels water)
- Crocidolite, aka “blue asbestos”
- Actinolite
- Anthophyllite
- Tremolite

The Occupational Safety and Health Administration (OSHA) regulates all forms of asbestos under a single mandate because it is nearly impossible to tell one from another without the use of a microscope.

2.1 General Awareness

- **Uses of asbestos surfacing materials**



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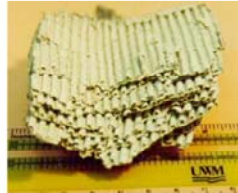
Because of its properties, asbestos was used in many commercial, industrial and residential applications; and some are listed on this and the next few slides.

- Surfacing materials are ACM that are sprayed, troweled-on or otherwise applied to surfaces for acoustical, decorative or fireproofing purposes.
 - Some examples are plaster, concrete, mortar and spray-on fire proofing.
 - Pictures on the top row, from left to right, are examples of asbestos-containing building materials (ACBMs).
 - Picture 1 - Sprayed on fire proofing material on metal beams and ceiling.
 - Picture 2 - Acoustical plaster on a wall.
 - Picture 3 - Cement containing asbestos fibers.
 - Pictures on the bottom row, from left to right, are examples of ACBMs.
 - Picture 4 - Industrial sand floor underlayment and nine-inch composite floor tile used to minimize vibration.
 - Picture 5 - Insulation sprayed on the pipes and ceiling.

Other forms of asbestos use includes thermal system insulation (TSI) ACBMs as shown on the next slide....

2.1 General Awareness

- **Uses of asbestos thermal system insulation (TSI) materials**



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Thermal system insulation (TSI) are ACM that applies to pipes, fittings, boilers, breechings, tanks, ducts or other structural components to prevent heat loss or gain and condensation.

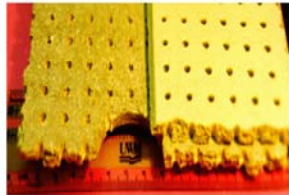
Some examples are pipe and wall insulation, pipe lagging, pipe wrap; block, batt and blanket insulation and a variety of other products such as a gasket and rope. This type of ACM is **normally friable**. Examples of TSI are shown in the pictures on this slide:

- Pictures on the top row, from left to right, are examples of ACBMs.
 - Picture 1 - Damaged pipe wrap.
 - Picture 2 - Gray corrugated, cardboard-like material is AirCell (or Air-O-Cell) insulation.
 - Picture 3 - Asbestos gasket on a redundant valve.
- Pictures on the bottom row, from left to right, are examples of ACBMs.
 - Picture 4 - Damaged fiberglass insulation that was applied directly over existing asbestos insulation.
 - Picture 5 - Redundant CO2 tank coated with asbestos.

Some examples of **miscellaneous** ACBMs will be discussed on the next slide.

2.1 General Awareness

- **Uses of asbestos miscellaneous materials**



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Miscellaneous materials are other ACM largely made up of non-friable products and materials. Note that we are characterizing these materials as typically non-friable, but the condition of the material or method of removal MAY make a non-friable material friable. This will be discussed a bit later.

Some examples are floor tile, ceiling tile, roofing felt, concrete pipe, outdoor siding, transite, fabric and brake pads.

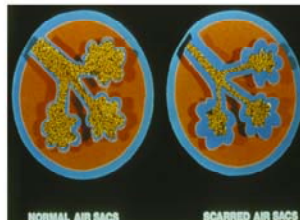
- Pictures on the top row from left to right are examples of ACMs.
 - Picture 1 - Transite board.
 - Picture 2 - Ceiling tile.
 - Picture 3 - Brake pads.
- Pictures on the bottom row from left to right are examples of ACMs.
 - Picture 4 – Black floor mastic (the adhesive).
 - Picture 5 – Vinyl floor tile.

Are there any questions on the information presented so far?

2.1 General Awareness

• Asbestos health hazards

- Asbestosis
 - Develops in 10 plus years
- Lung cancer
 - Develops in 15 plus years
- Mesothelioma
 - Develops in 20 plus years



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Long term exposure to asbestos fibers can cause several significant health hazards such as those listed on this slide.

- **Asbestosis is a chronic inflammatory medical condition affecting the parenchymal tissue of the lungs.**
 - Occurs after long-term, heavy exposure to asbestos, e.g. in mining, and is therefore regarded as an occupational lung disease.
- **Lung cancer starts in the lining of the bronchi, the tubes into which the trachea or windpipe divides.**
 - However, asbestos lung cancer can also begin in other areas such as the trachea, bronchioles (small branches of the bronchi) or alveoli (lung air sacs).
- **Mesothelioma is a form of cancer that is almost always caused by previous exposure to asbestos.**
 - Malignant cells develop in the mesothelium, a protective lining that covers most of the body's internal organs
 - Its most common site is the pleura (outer lining of the lungs and internal chest wall), but it may also occur in the peritoneum (the lining of the abdominal cavity), the heart, the pericardium (a sac that surrounds the heart) or tunica vaginalis.

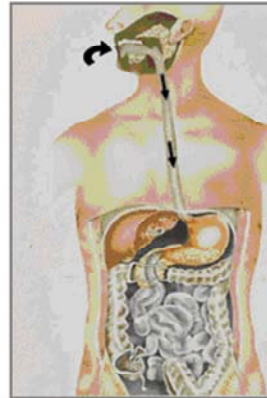
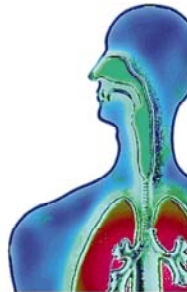
NOTE TO SPEAKER – ONLY READ THE FIRST BULLETS ON THE SLIDE

2.1 General Awareness

- **Asbestos health hazards**

- Routes of exposure

- Inhalation
- Ingestion
- Skin



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It should be obvious after discussing the health hazards that the routes of asbestos exposure into the human body includes inhalation, ingestion, and skin exposure.

- Inhalation is the most common route of exposure and can occur during:
 - Work with asbestos and not having proper Personnel Protective Equipment (PPE);
 - In homes and buildings where renovations or demolitions disturb ACBMs.
- Ingestion is a minor pathway of exposure that can occur as a result of:
 - Drinking water contaminated with asbestos;
 - Not washing hands prior to eating food.
- Skin exposure is caused by the handling of asbestos without proper personal protection.
 - Asbestos fibers could become lodged in the skin, producing a callus or corn.

2.1 General Awareness

- **Friable and non-friable asbestos**
 - Friable
 - Crumble, flake or release dust when disturbed
 - Can reduce to powder by hand pressure
 - Non-friable
 - Cannot reduce to powder by hand pressure
- **NESHAP defines as friable material containing >1%**



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Ok, we've mentioned friable and non-friable ACM in slides prior to this, so let's discuss that characteristic a bit more.

Asbestos can be either friable or non-friable.

NESHAP defines regulated ACM (RACM) as any material containing more than 1% asbestos and it is or will become friable.

By regulation:

- Friable asbestos is:
 - Loose degraded material that will crumble, flake or otherwise release dust when disturbed.
 - When dry can be crumbled, pulverized or reduced to a powder by hand pressure.
- Non-friable asbestos is:
 - Any material does not easily release dust when disturbed.
 - Can not be easily crumbled, pulverized or reduced to a powder by hand pressure.

We will go over this again in detail later in this session.

2.1 General Awareness

- **Classes of asbestos work**

- Class I asbestos work
- Class II asbestos work
- Class III asbestos work
 - Includes inspection
- Class IV asbestos work



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OSHA classifies asbestos work into **four categories** shown on this slide:

- Class I asbestos work consists of activities involving the removal of TSI or surfacing ACM and PACM. (Again, TSI is thermal system insulation)
- Class II asbestos work consists of activities involving the removal of ACM which is not TSI or surfacing material.
 - Examples include removal of asbestos-containing wallboard, floor tile and roofing shingles.
- Class III asbestos work consists of repair and maintenance operations where ACM and/or PACM is likely to be disturbed.
 - Inspections for ACM are also considered Class III work.
- Class IV asbestos work consist of 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.

Generally speaking, PennDOT's workers fall under the Class IV category. **But I remind you that Classification I, II, and III require training and a Pennsylvania license to conduct this work.**

2.1 General Awareness

- **Categories of non-friable ACM**

- Category I
- Category II



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And these four classes of asbestos work are grouped into either non-friable or Regulated Asbestos-Containing Material (RACM). As shown on this slide, the **non-friable ACM** is grouped into **two** different categories.

- Category I non-friable materials include asbestos packing, gasket, resilient floor covering and asphalt roofing products.
 - Category I non-friable materials are not subject to regulation under National Emission Standards for Hazardous Air Pollutants (NESHAP) for renovation as long as they are in good condition and not made friable by the demolition project.
- Category II non-friable materials include any non-friable ACM not included in Category I.
 - Category II non-friable materials are presumed under the NESHAP to be more likely to become friable during renovations.

This last bullet, Category II non-friable ACM, should be a 'red flag' if identified on site – depending on how it is handled or treated, it may become friable and therefore, RACM

2.1 General Awareness

Regulated Asbestos-Containing Material (RACM)

- Friable ACM where >260 lf/160 sf/35 cf
 - Allegheny County:
 - Friable and non-friable >260 lf/160 sf
 - City of Philadelphia
 - Friable and non-friable >80 lf/40 sf
- Category I that has become friable
- Category II with high probability
- Category I and II subjected to actions to induce friability

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So, we defined non-friable ACM and the worker categories. Regulated Asbestos-Containing Material (RACM) is defined on this slide by the following:

- Friable ACM that is present in quantities > 260 linear feet on pipes, 160 square feet on other facility components or 35 cubic feet on other facility components where the area could not be measured previously (Pub 611).
- Category I non-friable ACM that has become friable as the other materials in them have broken down with age and weather.
- Category II non-friable ACM that has a high probability of becoming or have become crumbled, pulverized or powdered by the forces expected to act on the material in the course of demolition or renovation operations.
- Category I and II non-friable ACM that ***will be, or have been, subjected to sanding, grinding, cutting or abrading acts but the demolition itself that cause them to become friable.***

As some of you may know, there are differing regulations that apply in Allegheny County and Philadelphia.

- For projects in **Allegheny County**, all friable and non-friable ACM is considered RACM that exceeds 260 linear feet on pipes or 160 square feet on other facility components.
- For projects in the **City of Philadelphia**, all friable ACM is considered RACM that exceeds 80 linear feet on pipes or 40 square feet on other facility components.

For more information on these specifics, Publication 611 contain details on these nuances.

Are there any questions on this material.

2.2 Inspection and Abatement

- **Demolition**
- **Acquisition**
- **Personnel protective equipment (PPE)**
- **Licensing requirements**



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In the following slides we will discuss Inspection and Abatement; but first, **are there any questions on what we've discussed so far?**

If not, then let's get into the inspection and abatement requirements that PennDOT may be required to follow for :

- Demolition –the requirements for identifying and removing ACM.
- Acquisition requirements for identifying and removing ACM.
- Personnel protective equipment (PPE) requirements for identifying and removing ACM.
- Licensing requirements for identifying and removing ACM.

2.2 Inspection and Abatement

- **Demolition**

- Commercial and multi-unit residential buildings

- Inspection and abatement



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Commercial and multi-unit residential building demolition requires the identification and removal of ACM under certain conditions:

- **Inspection** is required for **buildings** built before 1981 that are assumed to contain ACM as follows:
 - Inspections are performed by homogenous sampling in accordance to Asbestos Hazard Emergency Response Act (AHERA) guidelines.
 - Friable materials must be sampled to identify ACM prior to demolition.
 - Category I and II non-friable materials can be assumed ACM prior to demolition because sampling of non-friable materials may be a difficult task.
- **Abatement** requirements for buildings built before 1981 include:
 - Friable ACM that does not exceed the NESHAP threshold quantities (> 260 linear feet on pipes or > 160 square feet on other components) is unregulated and is not required to be removed prior to demolition or renovation activities (Pub 611).
 - **If the friable ACM is not abated prior to demolition/renovation, all debris commingled with the friable ACM must be disposed of as residual asbestos-containing waste (Pub 611).**
 - **RACM must be removed prior to any demolition or renovation activities by a licensed contractor company.**
 - Category I and II non-friable ACM must be inspected and tested for friability if it is in poor condition before demolition to determine whether or not it is subject to NESHAP regulations.
 - If the non-friable ACM has become friable, it must be handled in accordance with the NESHAP.
 - Asbestos-containing packings, gaskets, resilient floor coverings and asphalt roofing materials must be removed before demolition only if they are in poor condition and are friable.
 - Category I and II non-friable ACM in good condition it does not have to be removed prior to demolition if demolition activities does not render them friable.
 - Non-friable ACM in good condition must be segregated during demolition to dispose of as non-friable asbestos.
 - Abatements must be performed in accordance to federal, state and city guidelines.
 - **ACM should be disposed in accordance to the Resource Conservation and Recover Act (RCRA) and the Hazardous and Solid Waste Amendments (HSWA).**
 - **The PennDOT NESHAP Policy should be implemented regarding waste disposal for all PennDOT bridge projects.**
 - **Non-friable, non-regulated ACM may be disposed of as municipal C&D waste (Pub 611).**
 - **Air monitoring for pre-test, during removal activities and post clearance testing is required for asbestos abatements.**

There are other listed requirements in the speaker notes on this slide.

2.2 Inspection and Abatement

- **Demolition**
 - Single-unit residential buildings
 - Inspection and abatement
- **Acquisition**
 - All buildings
 - Inspection and abatement



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Single-unit residential building demolition requires the identification and removal of ACM for buildings built before 1981 that are assumed to contain ACM are as follows:

- Inspections are exempt under the NESHAP regulations if the project contains only a single residential home to be demolished.
- If there are two or more residential homes, then these homes are regulated under NESHAP and must be inspected and notifications made as applicable.
 - If an asbestos inspection is required, they should be performed by homogenous sampling in accordance to AHERA guidelines.
- Abatements and waste disposal are exempt under the NESHAP regulations if the project contains only a single residential home to be demolished.
- If there are two or more residential homes, then these homes are regulated under NESHAP and any RACM must be abated prior to demolition.
 - If an asbestos abatement is required, they should be performed in accordance to NESHAP guidelines.
 - Air monitoring for pre-test, during removal activities and post clearance testing is required for asbestos abatements.
 - Must provide documentation confirming that it is a single-unit residential building.

PennDOT acquisition guidelines requires the following for all properties.

- Inspections are not required for acquisitions unless it is specified. The buyer has the “Right to Know” and must disclose all past asbestos inspections or known ACM identified on the property.
- Abatement is not required for acquisitions unless it is specified. There are no regulatory requirements that ACM must be removed prior to the sale/acquisition of a property.

<Note to speaker – only read the primary bullets>

2.2 Inspection and Abatement

- **Personnel protective equipment (PPE)**
 - Inspection and abatement



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Depending on the scope of work, different levels of personnel protective equipment (PPE) is required for identifying and removing ACM.

- PPE required during inspections and abatements for ACM includes:
 - Inspections may require PPE such as a hard hat, eye protection, ear protection, respirator, tyvek suit, gloves and steel toe boots.
 - Abatements will require PPE such as a hard hat, eye protection, ear protection, respirator, tyvek suit, gloves and steel toe boots.
 - Additional standards on PPE can be found in OSHA 29 CFR 1910 and 29 CFR 1919 PPE guidelines.
- OSHA Appendix D to Sec. 1910.134 “(Mandatory) Information for Employees Using Respirators When Not Required Under the Standard” implements the guidelines to prevent the respirator itself from becoming a hazard to the worker.
 - These can be reviewed using the reference above.

2.2 Inspection and Abatement

Licensing requirements

- Inspection
 - Differences between state and city/county -
 - Licensing required for individuals
 - No Company license requirement



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Licensing and training requirements for identifying and removing ACM varies between the city and state.

For asbestos inspection, the licensing requirements for the State of Pennsylvania, Allegheny County and the City of Philadelphia are:

- The Pennsylvania Department of Labor and Industry (PA DL&I) requires individuals to obtain a Building Inspector license to perform asbestos inspections of buildings and structures in Pennsylvania and in Allegheny County.
- The City of Philadelphia Department of Air Management Services requires individuals to obtain an Asbestos Investigator license to perform asbestos inspections of buildings and structures in the City.

Neither the State of Pennsylvania, Allegheny County, nor the City of Philadelphia require a company license to perform asbestos inspection activities.

2.2 Inspection and Abatement

- **Licensing requirements**
 - Abatement
 - Job-specific licenses (air monitoring, handler, supervisor, company)
 - City/County license required of contractor's company
- **Training**
 - Required by State and City/County licensee
 - Initial and then annual refresher

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For asbestos abatement, the licensing requirements for the State of Pennsylvania, Allegheny County and the City of Philadelphia again vary slightly:

- The PA DL&I requires:
 - ❑ Individuals to obtain an asbestos handler license to perform removal activities of buildings and structures.
 - ❑ A licensed asbestos supervisor to be on-site during all asbestos removal activities of buildings and structures.
 - ❑ A contractor company to be licensed to perform asbestos removal activities of buildings and structures.
- **Allegheny County** requires a contractor company to be licensed by the Allegheny County Health Department.
- The **City of Philadelphia** requires a contractor company to be licensed by the City of Philadelphia Department of Air Management Services.
- The PA DL&I and Allegheny County **do not** require individuals to obtain a license to perform air monitoring.
- The **City of Philadelphia** requires an individual to obtain an asbestos project inspector (API) license to perform air monitoring for all "major" abatement projects (>than 80 linear feet on pipes or 40 square feet for other components).

Initial classroom training and documentation of training is required prior to applying for any initial types of asbestos license with the PA DL&I, City of Philadelphia or Allegheny County, and subsequent annual training is required to maintain these licenses.

- **It is the responsibility of every individual to maintain their license from being expired and taking the necessary refresher training to maintain these licenses.**

I remind you that this information can be obtained using the references provided at the end of this presentation.

Are there any questions on this information?

2.3 Related to PennDOT Operations

- **Facilities**

- Where ACM is identified:

- Inspection at rehabilitation/replacement
 - Licensed individual/company
 - Notification, permitting and disposal required



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We've now covered most of the background on asbestos – what it is, the detrimental health effects and why it is regulated, what is regulated, and when licenses are required. So let's briefly discuss some examples of where you might encounter ACM.

The guidelines I am going to provide are related to PennDOT facility and bridge maintenance operations. Additional information can be found in the PennDOT Publication 611.

In facilities where suspect ACM is identified, the following guidelines should be implemented.

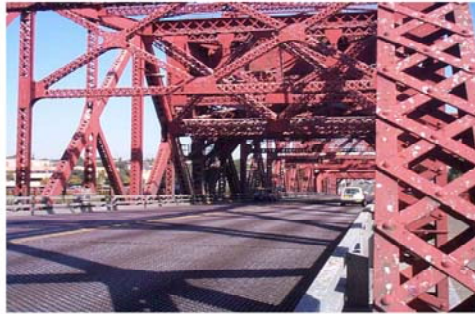
- Per Clean Air Act and NESHAP regulations [40 CFR 61], the owners of regulated facilities are **required to inspect** them, at least at the time of replacement or major rehabilitation, to determine the existence of asbestos (Pub 611).
 - Thus, all applicable NESHAP requirements apply to non-bridge facilities.
- Inspections should be performed by a properly licensed inspector in accordance to regulations prior to any demolition or renovation activities.
- Abatement should be performed by a proper licensed contractor company and individuals in accordance with the regulations.
- Notification and permitting should be performed in accordance to regulations.
- ACM should be disposed in accordance to the RCRA and the HSWA.

Now I said "should" here because we covered where licensed inspectors/abatement companies are required. Our recommendation? Since PennDOT has licensed inspectors, use them.

2.3 Related to PennDOT Operations

- **Bridges**

- Follow PennDOT's NESHAP Programmatic Policy
- Licensed inspectors/company may be required



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For PennDOT's designated "B List" bridges under the NESHAP Policy, where suspect ACM is identified, the following guidelines are to be implemented:

- Inspections are to be performed by a proper licensed inspector in accordance to regulations prior to any demolition or renovation activities.
- Notification and permitting should be performed in accordance to regulations
- RACM must be removed prior to the start of bridge demolition activities, or renovation activities, when the ACM is to be disturbed (Pub 611).
- Prior to bridge demolition activities, notification must be performed to appropriate agencies either through PennDOT's Annual Consolidated Notification program or independently when a change in the project schedule occurs (even if RACM is not present). For renovation activities, notification must be performed only if RACM is present (Pub 611).
- For bridge painting projects and contractor requirements, reference PennDOT's "Guidelines for Environmental Pollution Controls for Bridge Painting Contracts".
- Abatements should be performed by a proper licensed contractor company and individuals in accordance to regulations.
- .
- ACM should be disposed in accordance to the RCRA and the HSWA.
 - **Non-friable, non-regulated ACM may be disposed of as municipal C&D waste (Pub 611).**
 - **All debris commingled with the friable ACM must be disposed of as residual asbestos-containing waste (Pub 611).**

<DO NOT READ – Reference only regarding the "A" list bridges: Based on historical inspections of bridges and a review of standard bridge design specifications, it has shown that bridges that do not have attached utilities or span railroads, do not possess ACM, or they contain ACMs below regulatory thresholds. As such, the Bridge Quality Assurance Division (BQAD) utilizes the Bridge Management System (BMS) database to identify bridges that do and do not have attached utilities or span railroads and to consider the findings of asbestos bridge inspections (Pub 281 and Pub 611).>

2.3 Related to PennDOT Operations

- **Mobile homes**
- **Asphalt Pavement**



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We discussed the requirements for inspection and abatement related to residential home and commercial structures that PennDOT might acquire as part of a transportation project. Occasionally, mobile homes are also acquired, and the regulations governing them vary slightly. This information is also addressed, in part, in PennDOT Publication 281 and Publication 611.

- Mobile homes where suspect ACM is identified, the following guidelines should be implemented.
 - PennDOT construction projects which involve demolition of a single residential structure are exempt from NESHAP regulations. One or more residential structures within a PennDOT construction project are not exempt from NESHAP regulations (Pub 611).
 - No NESHAP inspection or notification is required if mobile homes/trailers are removed intact from PennDOT construction projects. However, if these units are to be disposed in a landfill, it must be disposed as ACM due to the fact that these structures are known to contain significant quantities of ACM (Pub 611).

2.3 Related to PennDOT Operations

- **Asphalt Paving operations**

- Reference PennDOT's "Bituminous Concrete Modified with Asbestos" document (*Pub 2*)



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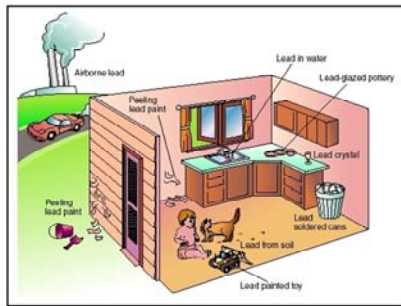
We are aware that PennDOT, and other state DOTs, used ACM in some portions of the Commonwealth's pavement. Where suspect ACM is identified, you should reference PennDOT's "Project Office Manual, Pub 2" document for protocol requirements. In summary, this reference states:

- Pavement layers constructed in the past which included asbestos material have been judged by the Department of Environmental Protection (PA DEP) as being a residual waste.
- When pavements are identified as containing asbestos, the layer(s) involved should be disturbed only as a last resort. Any proposed pavement treatment should avoid specifying milling or removal. Simply overlaying these layers without disturbing them is the most acceptable option.
- However, should there be no other option but to remove the material, PADEP has given approval for the disposal of bituminous concrete modified with asbestos as long as the following conditions are followed:
 - **Whenever the material is being broken, sawcut or milled for removal**, there will be some fine material that may be in a crumbling or pulverized condition. The road surface and all equipment involved in the sawing, milling and/or removal process should be heavily watered. Dry operations are **not** permitted.
 - **All** project personnel (Department, Consultants, and Contractors) must receive written notification that the bituminous concrete contains asbestos. The saw operator must wear a closed-system respirator. Others directly exposed should also use respirators.
 - The waste material may be disposed of on Department right-of-way, on site (if possible), and buried in an area where it will not be disturbed by future land use or construction activities. If the waste must be transported away from the generation site for disposal, it **must** be disposed of by a licensed transporter at an approved landfill.
 - The PA DEP Bureau of Air Quality Control must be notified at least 10-days before the project begins so that they can monitor the operation.

THAT COMPLETE THE ASBESTOS PORTION OF THIS WEBINAR...(NEXT SLIDE...)

3.0 Lead Paint Training

- **General awareness**
- **Inspection and abatement**
- **Related to PennDOT operations**



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Before we get into lead paint, are there any questions on asbestos?

For lead paint we are discussing the following information.

- General awareness to identify origin, qualities, common uses and health effects of lead.
- Inspection and abatement protocols.
- PennDOT operations where LBP is identified.

3.1 General Awareness

- **What is lead**

- Highly toxic metal
- Soft, malleable and heavy
- Bluish-white color cut, tarnishes exposed to air
- Shiny chrome-silver luster when liquid
- Reasons lead used in products



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Lead is:

- A highly toxic metal found in small amounts in the earth's crust.
- It is a soft, malleable poor metal and considered to be one of the heavy metals.
- It can be bluish-white color when freshly cut, but tarnishes to a dull grayish color when exposed to air.
- It becomes a shiny chrome-silver luster when melted into a liquid.

Lead was prevalently used in industrial products because it helped prevent corrosion, kills mold and mildew, is strong and easy to shape, blocks radiation and sound, and helps paint dry.

3.1 General Awareness

- **Uses of lead**

- Lead found in paint, ceramics, pipes, solders, gasoline, batteries, toys and cosmetics
- Homes built before 1978
- On inside and outside of steel structures

- **LBP in housing banned in 1978**

Year House Was Built	Percent of Houses with Lead-Based Paint
Before 1940	87 percent
1940-1959	69 percent
1960-1978	24 percent
All US Housing Stock	40 percent



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Because of its properties, lead was used in many commercial, industrial, and residential applications; some are listed on this slide.

- Lead is used in a wide variety of products including paint, ceramics, pipes, solders, gasoline, batteries, toys and cosmetics.
- It is common in private homes built before 1978.
- LBP is still used on bridges and on the inside and outside of steel structures to prevent rust and corrosion.

Because of the human health risks, the federal government banned lead-based paint from housing in 1978.

3.1 General Awareness

- **Health effects of lead by inhalation and ingestion**

- Heart and blood system
- Kidneys
- Nervous system
- Bone tissue
- Reproductive system
- Chelation

Lead exposure

About 310,000 U.S. children ages 1 to 5 have elevated blood lead levels, which can accumulate over months and years and cause serious health problems.

Effects on children

- Kids absorb up to 70 percent of lead, adults about 20 percent
- Often undetected; no obvious symptoms
- Can lead to learning disabilities, behavioral problems, malformed bones, slow growth
- Very high levels can cause seizures, coma, death

What parents can do

- Have child screened if there is concern of lead exposure
- Frequently wash child's hands, toys, pacifiers
- Only use cold tap water for drinking, cooking
- Test paint, dust in home if it was built before 1978

*Old toys with lead paint a known risk, but new toys from China now have opium under scrutiny.
Source: U.S. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services

Sources

- Lead-based paint, contaminated dust in homes built before 1978
- Drinking water from lead pipes
- Contaminated food
- Soil (lead does not biodegrade, decay)
- Toys*



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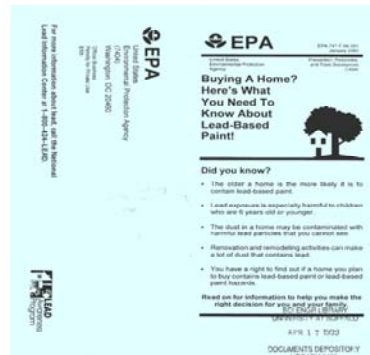
As noted on this slide, medical research has shown that exposure to lead varies between children under 6, adults, and seniors. The amount and length of lead exposure also factors into the adverse health affects and can affect the body systems noted on this slide through either ingestion or inhalation.

NOTE TO SPEAKER – GO TO NEXT SLIDE - DON'T READ THE FOLLOWING

- Lead particles enter the lungs when inhaled and can be swallowed and lead particles are slowly absorbed into the blood
- It affects the heart and blood system by attaching to and damaging red blood cells, preventing the red blood cells from carrying oxygen and iron, resulting in anemia, high blood pressure and increased risk of heart attacks and strokes.
- Lead can damage the kidneys to the point of kidney failure and death.
- Lead also damages the nervous system by killing brain cells resulting in depression, irritability, forgetfulness, clumsiness and can affect a person's ability to learn.
- Lead also is deposited into the bone tissue and blocks the ability to make new blood cells.
- Lead can cause infertility and decreased sex drive in men and women. In women lead can cause abnormal menstrual cycles, affect menopause and cause miscarriages or premature births.
- Chelation is a method of removing certain heavy metals from the bloodstream, used especially in treating lead poisoning. Chelation will not remove lead that has embedded into the body's tissues.

3.2 Inspection and Abatement

- **Demolition**
- **Acquisition**
- **Personnel protective equipment (PPE)**
- **Licensing requirements**



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As a result of the detrimental health effects, OSHA governs how LBP must be identified and abated. It is required for the following:

- Demolition requirements for identifying and removing LBP.
- Acquisition requirements for identifying and removing LBP.
- Personnel protective equipment (PPE) requirements for identifying and removing LBP.
- Licensing requirements for identifying and removing LBP.

3.2 Inspection and Abatement

- **Demolition**

- All buildings, bridges and steel structures
 - Inspection and abatement
 - Disposal may be hazardous waste



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For demolition of residential buildings acquired by PennDOT, re-occupied structures, bridges and steel structures, LBP must be considered.

- Inspections are not required by the Environmental Protection Agency (EPA) prior to demolition unless specified in PennDOT's scope of work. However, a LBP inspection is required for all renovation activities.
- Abatements are not required by the EPA prior to demolition unless specified in PennDOT's scope of work. However, a LBP abatement and clearance testing is required for all renovation activities.
- LBP from a non-residential renovation project can be discarded as construction debris at specified alternative, non-hazardous landfills (i.e., construction and demolition (C&D) landfills) after performing a Toxicity Characteristic Leaching Procedure (TCLP) and confirming that the construction debris is not hazardous waste (5 ppm).
- If the TCLP results for lead indicate a concentration greater than 5 ppm, the construction debris is considered to be hazardous and must be disposed of at a licensed hazardous waste disposal facility.
- LBP from a residential or non-residential whole building demolition project can be disposed at a C&D landfill.
- Metal salvageable materials contain or are assumed to contain lead-based paint and are transported to a recycling facility, a TCLP of the waste materials is not required (Note that the Contractor is the 'owner' of the bridge so they are responsible for characterization and proper handling, or disposal of waste materials transported to a recycling facility)

3.2 Inspection and Abatement

- **Acquisition of LBP Buildings/Structures**

- Inspection not require unless specified
- Abatement not required unless specified
- Residential LBP Hazard Reduction Act of 1992



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For acquisition of residential buildings acquired by PennDOT, re-occupied structures, bridges and steel structures LBP must be considered.

- Inspections are not required for acquisitions unless specified in PennDOT's sale agreement. The buyer has the "Right to Know" and must be disclosed of all past LBP activities or known LBP identified on the property.
- Abatements are not required for acquisitions unless specified in PennDOT's sale agreement. There are no regulatory requirements that LBP must be removed prior to the acquisition of a property.
- The Residential LBP Hazard Reduction Act of 1992, also known as Title X, in Section 1018 of this law directed HUD and EPA to require the disclosure of known information on LBP and LBP hazards before the sale or lease of most housing built before 1978.

3.2 Inspection and Abatement

- **Personnel protective equipment (PPE)**
 - Inspection and abatement



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When performing LBP inspection and abatement, workers must use appropriate protection. Depending on the scope of work, different levels of personnel protective equipment (PPE) is required.

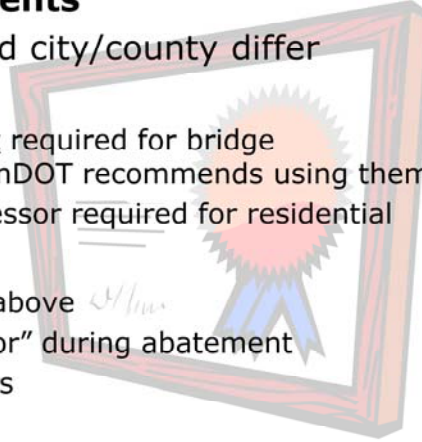
- Inspections may require PPE such as a hard hat, eye protection, ear protection, respirator, tyvek suit, gloves and steel toe boots.
- Abatements will require PPE such as a hard hat, eye protection, ear protection, respirator, tyvek suit, gloves and steel toe boots.

Additional standards on PPE can be found in OSHA 29 CFR 1910 and 29 CFR 1919 PPE guidelines.

3.2 Inspection and Abatement

- **Licensing requirements**

- Commonwealth and city/county differ
- Inspection
 - PA DL&I license not required for bridge inspection, but PennDOT recommends using them
 - Inspector/Risk Assessor required for residential
- Abatement
 - Licensing same as above
 - Licensed "Supervisor" during abatement
 - Licensed contractors
- Training



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Licensing and training requirements for identifying and removing LBP may vary between the city and state:

- LBP inspection licensing requirements for the State of Pennsylvania, Allegheny County and the City of Philadelphia are:
 - The PA DL&I does not require individuals to obtain licensing to inspect bridges, other structures or superstructures. **PennDOT recommends using a licensed inspector to perform LBP inspections for bridges, other structures or superstructures (this is addressed in PennDOT LRN 4300-08-1, and will be provided in future Pub 281 updates).**
 - The PA DL&I requires individuals to obtain an inspector or risk assessor license to perform lead inspections of residential buildings.
 - The State of Pennsylvania, Allegheny County and the City of Philadelphia do not require a contractor company to be licensed to perform LBP inspection activities.
- LBP abatement licensing requirements for the State of Pennsylvania, Allegheny County and the City of Philadelphia are as follows:
 - The PA DL&I does not require individuals to obtain licensing to abate bridges, other structures or superstructures. However, **PennDOT recommends using a licensed abatement company and individuals to perform LBP abatements for bridges, other structures or superstructures (again, PennDOT LRN 4300-08-1/Pub 281).**
 - The PA DL&I requires individuals to obtain a lead worker license to perform LBP removal activities of all buildings.
 - The PA DL&I requires a licensed lead supervisor to be on-site during all LBP removal activities of all buildings.
 - The PA DL&I requires a contractor company to be licensed to perform LBP removal activities of all buildings.
 - The PA DL&I requires individuals to obtain a risk assessor license to perform post abatement clearance testing of all buildings.

Initial class room training and documentation of initial training is required prior to applying for any initial types of lead license with the PA DL&I, City of Philadelphia or Allegheny County.

- **Similar to licensed asbestos workers, it is the responsibility of every individual to maintain their license from being expired and to take the necessary refresher training to maintain these licenses.**

Are there any questions?

3.3 Related to PennDOT Operations

- **Facilities**
- **Mobile homes**



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The following are guidelines related to PennDOT facility and mobile home operations. Additional information can be found in the PennDOT Publication 281 and Publication 611.

- Facilities and mobile homes constructed prior to 1978, where LBP is probable, the following guidelines should be implemented:
 - Inspections should be performed by a proper licensed inspector following HUD inspection guidelines prior to any renovation activities.
 - Abatement should be performed by a proper licensed contractor company and individuals according to regulations prior to any renovation activities.
 - Notification and permitting should be performed according to regulations.
 - LBP waste should be disposed of according to the RCRA and the HSWA.

3.3 Related to PennDOT Operations

- **Bridges**



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The following are guidelines related to PennDOT bridge operations. Additional information can be found in the PennDOT Publication 281 and Publication 611.

- Bridges where suspect LBP is identified, the following guidelines should be implemented.
 - **Lead-contaminated soil issues at Metal Truss Bridge sites should be addressed following PennDOT recommendation in Pub 281.**
 - Metal-truss bridges are usually coated with lead-based paint. The Districts have been employing proper waste management practices for many years for the handling of lead-painted trusses during bridge replacement/renovation, but many district staff are unaware of recommended procedures for identifying and properly managing lead-contaminated soil beneath such bridges.
 - Bridge replacement/renovation projects often involve the excavation of soil underneath the bridge for pier replacement, stormwater system construction, or stream relocation.
 - If the excavation of contaminated soil is anticipated, the "Potential Pollutants" section of the PAG-2 NPDES permit application for stormwater management during construction activities must be noted accordingly.
 - Soil underneath lead-painted metal-truss bridges is often contaminated with lead above Pennsylvania's Act 2 and Clean Fill standards, due to peeling and prior paint stripping activities. Paint stripping/ sandblasting residue is considered a waste by PADEP, and any soil contaminated by lead from paint stripping of metal bridge trusses is therefore considered waste as well. Therefore, in the current revision of Publication 281, Metal Truss Bridges has been added to the list of suspect waste site types.
 - For any excavated soil that exceeds Regulated Fill standards under DEP's Management of Fill Policy, DEP normally requires offsite disposal at a permitted landfill.
 - Any soil to be reused as fill offsite that exceeds Clean Fill standards but does not exceed Regulated Fill standards, must either be disposed of at a permitted landfill, or be managed as Regulated Fill in accordance with General Permit WMGR096. If the final placement of such soil is within the right-of-way, the Management of Fill policy does not apply, but contract special provisions may still be necessary in order to comply with NPDES permit requirements and PennDOT procedures.
 - Inspections are recommended to be performed by a proper licensed inspector according to regulations prior to any renovation activities.
 - Abatement is recommended to be performed by a proper licensed contractor company and individuals according to regulations prior to any renovation activities.
 - Notification and permitting should be performed according to regulations.
 - LBP waste should be disposed according to the RCRA and the HSWA.
 - **For bridge painting projects and contractor requirements, reference PennDOT's "Guidelines for Environmental Pollution Controls for Bridge Painting Contracts".**

There is a special provision for disposal of bridge paint waste and this should be included in the bid package

4.0 Permitting

- **Requirements for inspections and abatement:**

- Pennsylvania
- City of Philadelphia
- Allegheny County



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Before we get into permitting requirements, are there any questions on LBP and PennDOT operations?

For permitting requirements, the following guidelines should be followed:

- The State of Pennsylvania, City of Philadelphia and Allegheny County currently have no permitting requirements for asbestos or lead inspections.
- The State of Pennsylvania currently has no permitting requirements for asbestos or lead abatements.
- The **City of Philadelphia** currently has ‘major’ and ‘minor’ abatement permitting requirements.
 - Asbestos “Major” project - Projects that involve 80 or more square feet or 40 or more linear feet or 35 cubic feet of friable ACM and do not involve an exempted private residence, an asbestos permit must be submitted to the City of Philadelphia Air Management Services within 10 working days of the proposed project start date.
 - Asbestos “Minor” project - Projects that involve more than 12 square feet, but less than 80 square feet and more than or equal to 3 linear feet but less than 40 linear feet of piping of friable ACM, an asbestos permit is not required.
 - Lead projects – Depending on the type, size and scope of work, a “Request for Determination of Requirement for Installation Permit/Operating License” must be filled out and sent to the City of Philadelphia Air Management Services within 10 working days of the proposed project start date to determine if permitting is required. Contact the City of Philadelphia Air Management Services for additional permitting information.
- Allegheny County currently has specific permit requirements defined in the speaker notes.
 - Asbestos project - An Allegheny County DOH “Air Quality Permit Application Form” is required for projects involving more than 260 linear feet or 160 square feet of any ACM (Allegheny County treats all ACM as friable) within 10 working days of the proposed project start date. Permits must be approved by the Allegheny County DOH prior to the start of the project.
 - Lead projects - Depending on the type, size and scope of work, an “Air Quality Permit Application Form” must be filled out and sent to the Allegheny County DOH within 10 working days of the proposed project start date to determine if permitting is required. Contact the Allegheny County DOH for additional permitting information.

5.0 Notification

- **Pennsylvania**



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For notification requirements the following guidelines should be followed:

- The State of Pennsylvania, City of Philadelphia and Allegheny County currently have no notification requirements for asbestos or lead inspections.
- The State of Pennsylvania currently has abatement notification requirements that are provided in Pub 611 and the speaker notes.
 - Asbestos abatement projects - The PADEP in conjunction with the PA DL&I regulates the asbestos notification requirements for the removal of ACM. Projects that qualify as a NESHAP regulated asbestos project (asbestos renovations and all demolition projects that meet the > 260 linear feet on pipes or 160 square feet on other facility components) an "Asbestos Abatement and Demolition/Renovation Notification Form" must be submitted to the PA DEP within 10 working days of the proposed project start date.
 - **I should point out that the regulatory agencies have agreed to allow PennDOT to make an Annual Consolidated Notification for all bridge demolition and renovation projects scheduled for letting during the calendar year. Bridge Preservation Program (BPP) projects are not subject to notifications based on an evaluation of the eligible work items, except bridge bearing replacements (Pub 611).**
 - Lead abatement projects - Act 44 of 1995 and its regulations require that the PA DL&I be notified of work where LBP is present and that persons certified by the Department perform this work whenever the following will occur:
 - LBP is to be removed from housing in which children (less than 6 years old) are present and this removal is not taking place as part of a renovation/alteration of housing.
 - LBP is removed from "target housing", any housing constructed prior to 1978 or housing units that lack bedrooms (If the removal is part of a renovation/alteration project, no notification is required).
 - There is no threshold for this notification based on the amount of LBP present. If LBP is present and will be removed in the dwellings described above, notification must be sent and certified individuals must perform the abatement work.
 - When notification is required, a contractor must first mail a copy of the Department of Labor & Industry's Lead Abatement Notification Form (LIBI-600L).
 - This form must be mailed at least five (5) working days (Monday-Friday) before the date that abatement work will begin.

5.0 Notification

City of Philadelphia

- Asbestos
 - Major-Asbestos Abatement and Demolition/Renovation Form, 10 days before
 - Minor-5 days before
- Lead
 - Contact City of Philadelphia Air Management Services



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The City of Philadelphia currently has the following abatement notification requirements and classify them as Major and Minor projects:

- Asbestos “Major” project - Projects that involve 80 or more square feet or 40 or more linear feet or 35 cubic feet of friable ACM an “Asbestos Abatement and Demolition/Renovation Notification Form” must be submitted to the City of Philadelphia Air Management Services within 10 working days of the proposed project start date.
- Asbestos “Minor” project - Projects that involve more than 12 square feet, but less than 80 square feet and more than or equal to 3 linear feet but less than 40 linear feet of piping of friable ACM an “Asbestos Abatement and Demolition/Renovation Notification Form” must be submitted to the City of Philadelphia Air Management Services within 5 working days of the proposed project start date.
- Lead projects – Follow the previous State of Pennsylvania lead abatement project notification protocol and contact the City of Philadelphia Air Management Services for additional notification information.

5.0 Notification

Allegheny County

- Asbestos
 - County DOH Air Quality Program 10- days before (>260 lf or 160 sf)
- Lead Paint
 - Contact County DOH for information



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For Allegheny County, the following abatement notification is required:

- Asbestos project - Projects that qualify as a NESHAP regulated asbestos project (asbestos renovations and all demolition projects that meet the > 260 linear feet on pipes or 160 square feet on other facility components) an “Asbestos Abatement and Demolition/Renovation Notification Form” must be submitted to the Allegheny County DOH Air Quality Program within 10 working days of the proposed project start date.
- Lead projects - Follow the previous State of Pennsylvania lead abatement project notification protocol and contact the Allegheny County DOH Air Quality Program for additional notification information.

6.0 References

- **Federal**
 - OSHA
 - EPA
 - PADEP
 - NESHAP
 - HUD



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Before we get into references, are there any questions on notification requirements? For references, we have included contact information in the slides on the agencies and publications listed on this slide. Note that while OSHA does not apply to PennDOT workers, it does apply to your contractors.

- **OSHA - The United States Occupational Safety and Health Administration is an agency of the United States Department of Labor. Its mission is to prevent work-related injuries, illnesses and deaths by issuing and enforcing rules (called standards) for workplace safety and health.**
 - 29 CFR 1910.1001 is the general industry standard – This section applies to all occupational exposure to asbestos in all industries, except for construction work and asbestos exposure work in all shipyard employment.
 - 29 CFR 1926.1101 is the construction standard – This section regulates asbestos exposure in all work, including demolition or salvage of structures where asbestos is present; removal or encapsulation of materials containing asbestos; construction, alteration, repair, maintenance or renovation of structures that contain asbestos; installation of products containing asbestos; asbestos spills and emergency cleanup; transportation, disposal and storage on the site or location at which construction activities are performed.
 - 29 CFR 1910 and 29 CFR 1919 are the PPE guidelines.
- **EPA - The U.S. Environmental Protection Agency is an agency of the federal government of the United States charged to regulate chemicals and protect human health by safeguarding the natural environment (air, water and land).**
 - Title 2 - Asbestos Hazard Emergency Response
 - 40 CFR Part 61, Subpart M are the national emission standards for asbestos.
 - 40 CFR Part 763 – Asbestos are additional asbestos regulations.
 - 40 CFR PART 745 - Lead-Based Paint Poisoning Prevention in Certain Residential Structures.
 - In 1986, the Asbestos Hazard Emergency Response Act (ASHERA) was signed into law as Title II of the Toxic Substance Control Act (TSCA).
 - The Asbestos School Hazard Abatement Reauthorization Act (ASHARA), passed in 1990, required accreditation of personnel working on asbestos activities in schools, and public and commercial buildings.
- **PADEP - The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment. This agency is responsible for enforcing state environmental regulations.**
 - Right-to-Know Law, 65 P.S. §§67.101-67.3104; Pennsylvania Management Directive 205.36, as amended November 20, 2008 - This policy clarifies existing records management procedures of the Pennsylvania Department of Environmental Protection (Department or DEP) in order to fulfill the Department's obligations under the Pennsylvania Right-to-Know Law as amended by Act 2008-3, and to abide by Amended Management Directive 205.36 to establish written procedures and take certain actions to implement the Right-to-Know Law (Law or RTKL).
- **NESHAP - The National Emissions Standards for Hazardous Air Pollutants are emissions standards set by the United States EPA for an air pollutant not covered by NAAQS that may cause an increase in fatalities or in serious, irreversible or incapacitating illness. The standards for a particular source category require the maximum degree of emission reduction that the EPA determines to be achievable, which is known as the Maximum Achievable Control Technology (MACT). These standards are authorized by Section 112 of the Clean Air Act and the regulations are published in 40 CFR Parts 61 and 63.**
- **HUD - The United States Department of Housing and Urban Development was founded in 1965 to develop and execute policy on housing and cities.**
 - Public Law 102-550 - Residential Lead-based Paint Hazard Reduction Act of 1992.
 - Title X, Sections 1012 and 1013 - Requirements for the Notification, Evaluation and Reduction of Lead-Based Paint Hazards in Federally Owned Residential Property and Housing Receiving Federal Assistance.
 - Title X, Section 1016 - Requirements for the Disclosure of Known Lead-Based Paint and/or Lead-Based Paint Hazards in Housing (HUD's Lead-Based Paint Disclosure Rule web site has more information).
 - The HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (the Guidelines) provide detailed, comprehensive, technical information on how to identify lead-based paint hazards in housing and how to control such hazards safely and efficiently.

Reference publications for the State of Pennsylvania and PennDOT will be discussed on the next slide.

6.0 References

- **Pennsylvania**
 - Department of Labor and Industry
 - City of Philadelphia AMS
 - Allegheny County DOH
- **PennDOT Publications**
 - Publications 281 and 611



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The following State of Pennsylvania and PennDOT groups and references will be discussed where guidelines and regulations can be found.

- PA DL&I - The Pennsylvania Department of Labor and Industry originally inspected the working conditions in factories around the state. The PA DL&I enforces various laws and safety standards in the workplace including licensing requirements.
- AMS – The City of Philadelphia Air Management Services is responsible for enforcement of the Philadelphia Air Management Code, the Regulations of the Air Pollution Control Board, the Noise and Excessive Vibration Code, the Asbestos Code, Regulations of the Board of Health, and State & Federal Regulations controlling air pollution.
- The Allegheny County DOH assures quality public health services by promoting individual and community wellness, preventing injury, illness and premature death or disability, and protecting the population from harmful effects of chemical, biological and physical hazards within the environment.
- PennDOT Publication 281 – The Transportation Project Development Process, Waste Site Evaluation Procedures Handbook Volume I, May 2008.
- PennDOT Publication 611 – Waste Management Guidance Manual, June 2008.

OK – that WAS a quick overview of how asbestos and lead paint regulatory issues might affect your project. Clearly, this is not intended to make you an expert or substitute for the EPA-required initial or refresher training. But the intent was to provide descriptions of asbestos and lead paint containing materials, make you aware of the hazards and that these materials are governed by environmental regulations, and lastly, to discuss the licensing/certification requirements of assessing and mitigating these hazards from a PennDOT project.

I should also mention that the personnel in the Pollution Prevention Section, Environmental Quality Assurance Division under Ken Thornton are excellent resources and should be consulted for clarification on asbestos or lead paint projects.

I remind you that the question pane on your screen is open and your site's proctor can submit questions for our panel here to answer. So, let's get to the first question.

On behalf of the Pollution Prevention Section, Quality Assurance Division, thank you for this opportunity. And if you think of any questions after this presentation, or have a question when a project comes up, you can contact Ken Thornton at 717-787-0459.