Instructor's Guide

"Personal Protective Equipment"
Are You Covered?

Training for THE OSHA
Personal Protective Equipment STANDARD

The Occupational Safety & Health Administration (OSHA) 1910.132 General Requirement

WARRANTY/DISCLAIMER

Advice, graphics, images and information contained in this video is presented for general educational and information purposes and to increase overall safety awareness. It is not intended to be legal, medical or other expert advice or services, and should not be used in place of consultation with appropriate professionals. The information contained in this video should not be considered exhaustive and the viewer should seek the advice of appropriate professionals.

In no event shall Atlantic Training and its trustees, officers and employees be liable for any liability, loss, injury or risk (including, without limitation, incidental and consequential damages, personal injury/wrongful death, lost profits or damages) which is incurred or suffered as a direct or indirect result of the use of any of the material, advice, guidance or services on this video, whether based on warranty, contract, tort, or any other legal theory. ATLANTIC TRAINING TO THE FULLEST EXTENT PERMITTED BY LAW, DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OF THIRD PARTIES' RIGHTS AND FITNESS FOR PARTICULAR PURPOSE.

TABLE OF CONTENTS

Introduction
- Background
- Course Outline
- Course Review

Preparing for the Session
- Structuring the Presentation
- Creating the Environment / Setting up the Session

Facilitating the Session
- Getting Started
- Facilitating the Discussion
- Review Learning Outcomes

Core Curriculum
- Section 1: Requirements for PPE
- Section 2: Hazard Assessment
- Section 3: Training
- Section 4: Types of PPE
- Section 5: Review

Course Learning Outcomes
- Key Points to Remember

Supplemental Resources
- **Appendix A**: Power Point Presentation
- **Appendix B**: Quiz
- **Appendix C**: Answer Key
- **Appendix D**: Training Certificate

Introduction

The instructor guide is designed to be a comprehensive tool for facilitating the course. Thoroughly reviewing this document, as well as all related course materials and resources, will prepare you to teach the course.

Background

The Occupational Safety & Health Administration (OSHA) 1910.132 General Requirement (Personal Protective Equipment) requires the use of personal protective equipment to reduce employee exposure to hazards when engineering and administrative controls are not feasible or effective.

Yet, nearly two million people have a debilitating work-related injury each year, with more than a quarter of these injuries involving the hands, eyes, head and feet.

Many of these accidents could have been prevented if the injured workers wore the proper personal protective equipment to shield their body from occupational dangers.

Personal Protective Equipment, or PPE, is designed to protect workers from serious workplace injuries or illnesses resulting from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards. Examples of PPE include items such as gloves, foot and eye protection, protective hearing devices (earplugs, muffs), hard hats, respirators, and full body suits.

Controlling a hazard at its source is the best way to protect employees. Depending on the hazard or workplace condition, OSHA recommends the use of engineering or work practice controls to manage or eliminate hazards to the greatest extent possible.

When engineering, work practices and administrative controls are not feasible or do not provide sufficient protection, employers must provide personal protective equipment (PPE) to their employees and ensure its use.

Personal protective equipment is not a substitute for good engineering or administrative controls but should be used in conjunction with these controls to ensure the safety and health of employees.

Course Outline

This course is organized by sections. Within each section there may be multiple lessons.

The sections in this course are as follows:

- Requirements for PPE
- Hazard Assessment
- Training
- Types of PPE
- Review

Course Review

These materials are to be used as guidance for facilitating the presentation. As with any educational program, the facilitator should go through the entire program at least once to become familiar with the content and make sure the program is consistent with company policy and directives.

Preparing for the Session

Structuring the Presentation

- Share the learning objectives with the participants.
- Determine target audience to adjust training if needed.
- Establish plan to actively involve participants in the learning experience.
- Practice training techniques to build rapport with audience.

Creating the Environment / Setting up the Session

- Confirm the training dates, location, and number of participants.
- Ensure the room is set up properly, e.g., tables and chairs are arranged to maximize whole-class and small group interaction without participants needing to turn chairs around, projectors do not block participants' line of sight, flip charts are convenient to you and visible to participants, and so forth.
- Start on time and stay on track. Keep exercises within their time limits. End discussions when they cease to be productive.

Facilitating the Session

Getting Started

- Introduce yourself as the session leader.
- Circulate the session roster before the training begins.
- Introduce the title of the program (Are You Covered) and begin playing the PPE training video.
- If you are using the DVD version of the course you have several options as to how you can move through the program and what employees see.
- The DVD menu has three "selection bars":
    - "Play"
    - "Scene Index"
    - "Contact Info"
- To just play the program from beginning to end, select "Play".
- All of our DVDs, both English and Spanish, are subtitled (similar to closed captioning). If there are hearing impaired employees participating in your training session, or you want people to be able to read the program narration as well as hear it, push the "subtitle" button on your DVD player's remote control or the player's control panel. A print version of the narration will then appear on the screen as the video plays.

Facilitating the Discussion

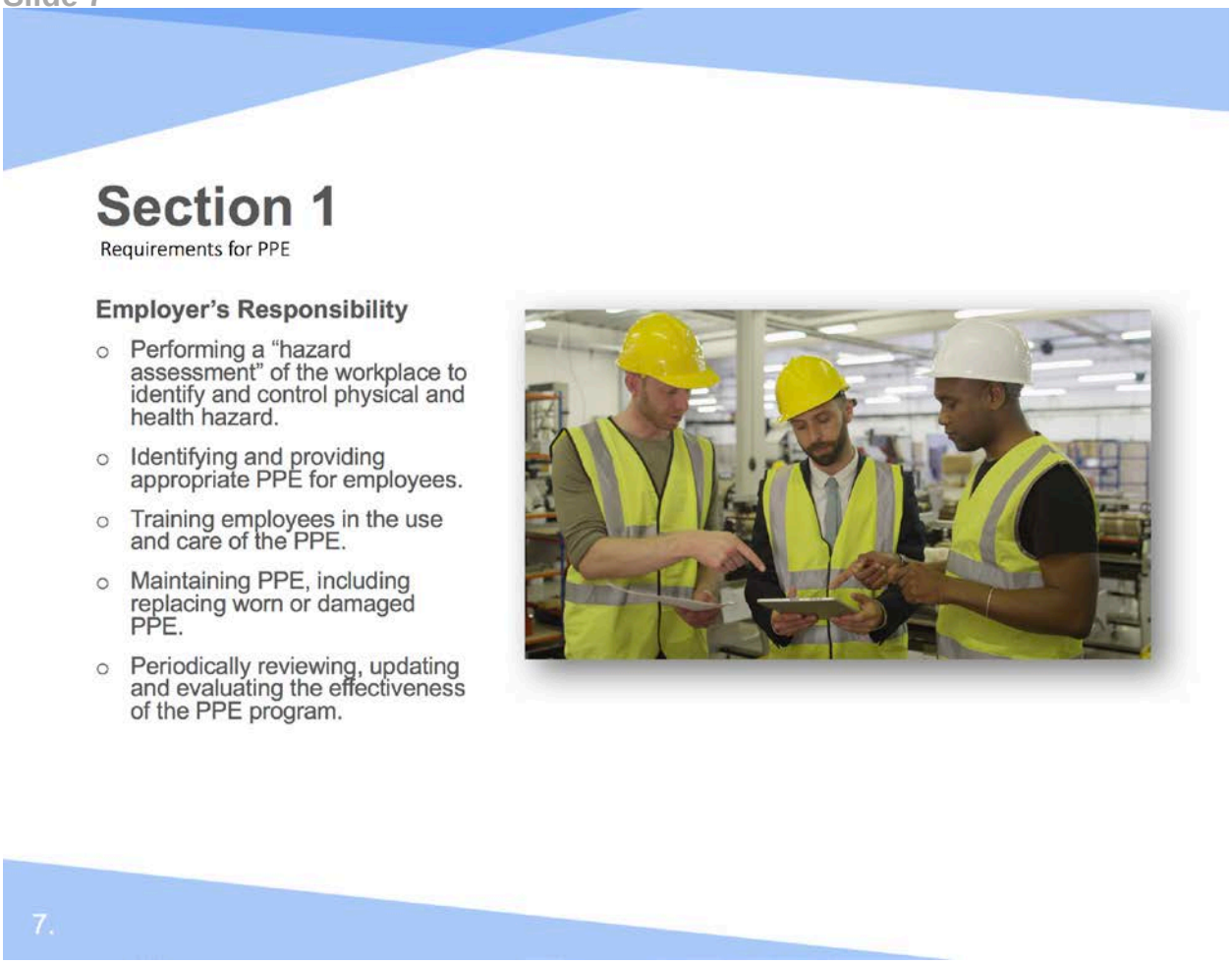
- After the program has been shown, it is time for the group discussion on the information contained in the session.
- The instructor facilitates the activities and guides the conversation so that learners take away the ability to apply that knowledge in the field and internalize best practices.
- Closely monitor group activities. Walk among groups as they work; answer questions and offer guidance as appropriate. Give constructive feedback during the share-out sessions and discussions.

Review Learning Outcomes

- Check to make sure that all attendees signed the session roster.
- Ensure that each participants completes end of course quiz.
- Distribute course certificates

Core Curriculum

Slide 7



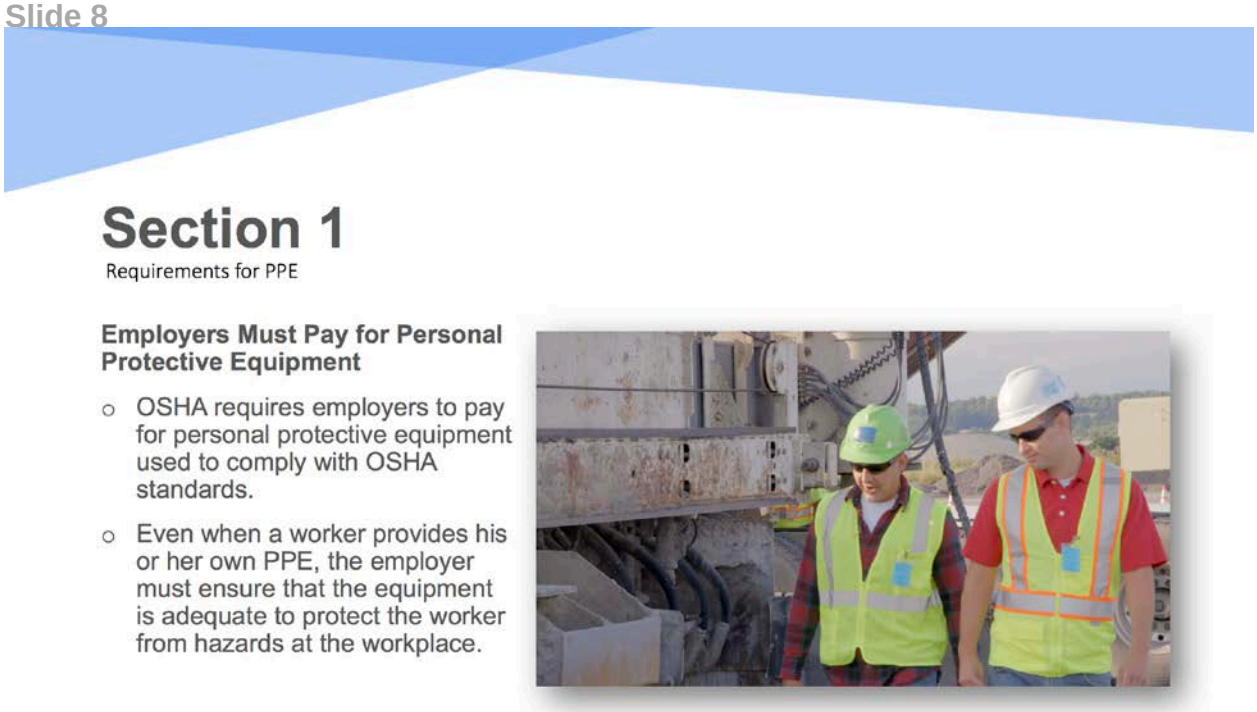
Facilitation Guidance:

To ensure the greatest possible protection for employees in the workplace, the cooperative efforts of both employers and employees will help in establishing and maintaining a safe and healthful work environment.

Employer's Responsibility:

- Performing a "hazard assessment" of the workplace to identify and control physical and health hazard.
- Identifying and providing appropriate PPE for employees.
- Training employees in the use and care of the PPE.
- Maintaining PPE, including replacing worn or damaged PPE.
- Periodically reviewing, updating and evaluating the effectiveness of the PPE program.

Slide 8



Facilitation Guidance:

Employers Must Pay for Personal Protective Equipment

OSHA requires employers to pay for personal protective equipment used to comply with OSHA standards.

The standard makes clear that employers cannot require workers to provide their own PPE and the worker's use of PPE they already own must be completely voluntary.

Even when a worker provides his or her own PPE, the employer must ensure that the equipment is adequate to protect the worker from hazards at the workplace.

Slide 9

Facilitation Guidance:

Examples of PPE that Employers Must Pay for Include:

- Metatarsal foot protection
- Rubber boots with steel toes
- Non-prescription eye protection
- Prescription eyewear inserts/lenses for full face respirators
- Goggles and face shields
- Firefighting PPE (helmet, gloves, boots, proximity suits, full gear)
- Hard Hats
- Hearing Protection
- Welding PPE

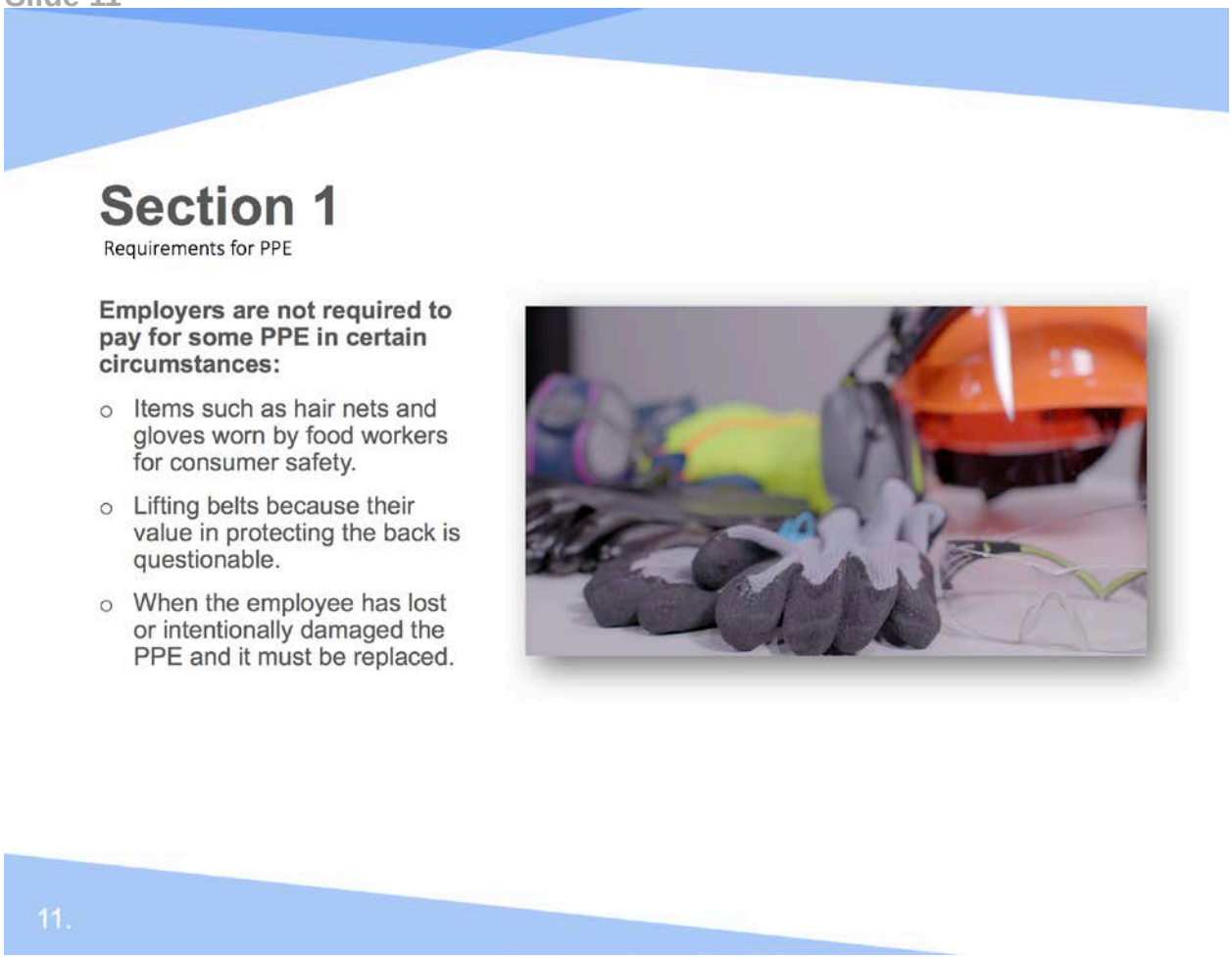
Slide 10

Facilitation Guidance:

Employers are not required to pay for some PPE in certain circumstances:

- Non-specialty safety-toe protective footwear (including steel-toe shoes or boots) and non-specialty prescription safety eyewear provided that the employer permits such items to be worn off the job site.
- Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots.
- Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber roots, hats, raincoats, ordinary sunglasses, and sunscreen.

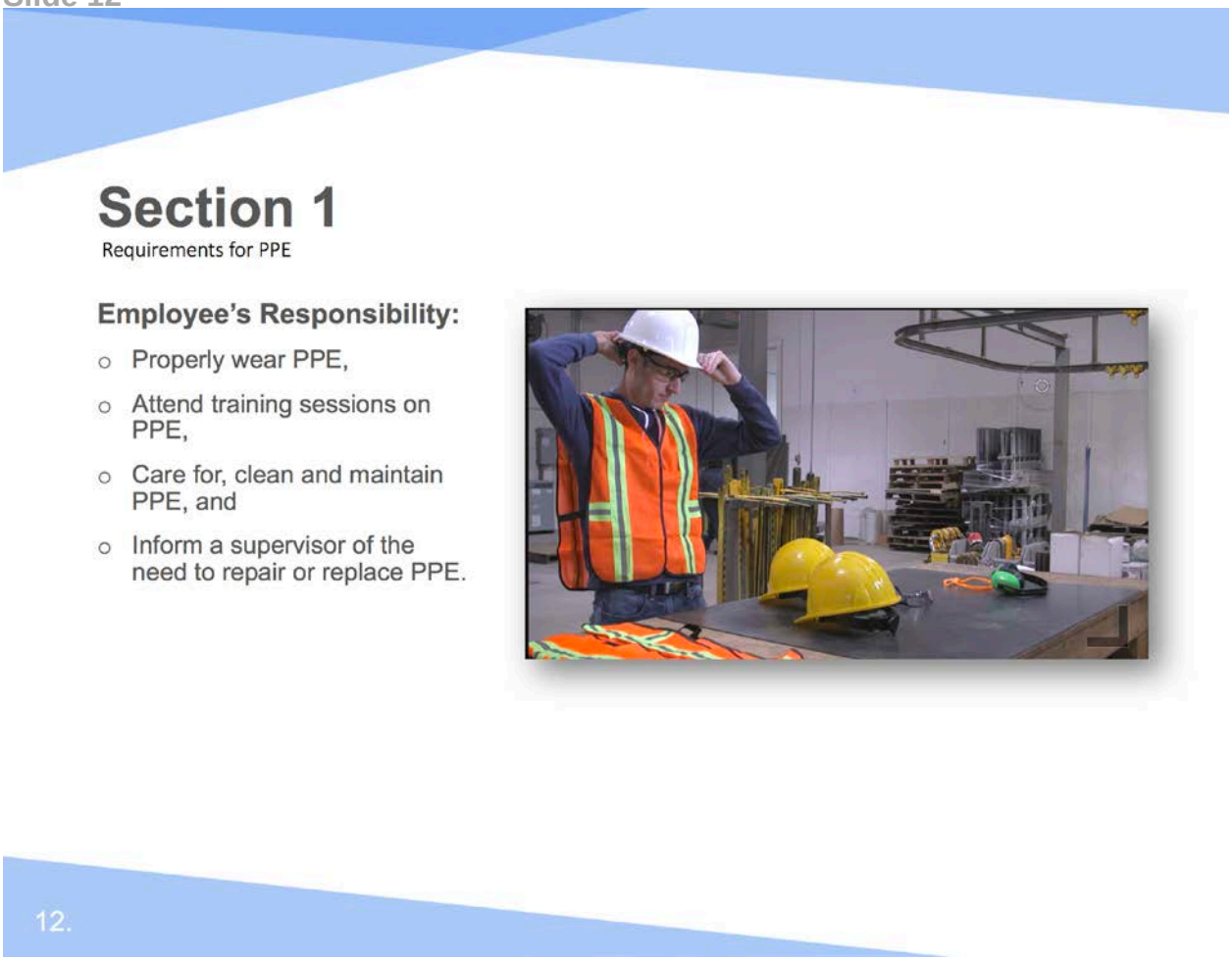
Slide 11



Facilitation Guidance:

- Items such as hair nets and gloves worn by food workers for consumer safety.
- Lifting belts because their value in protecting the back is questionable.
- When the employee has lost or intentionally damaged the PPE and it must be replaced.

Slide 12

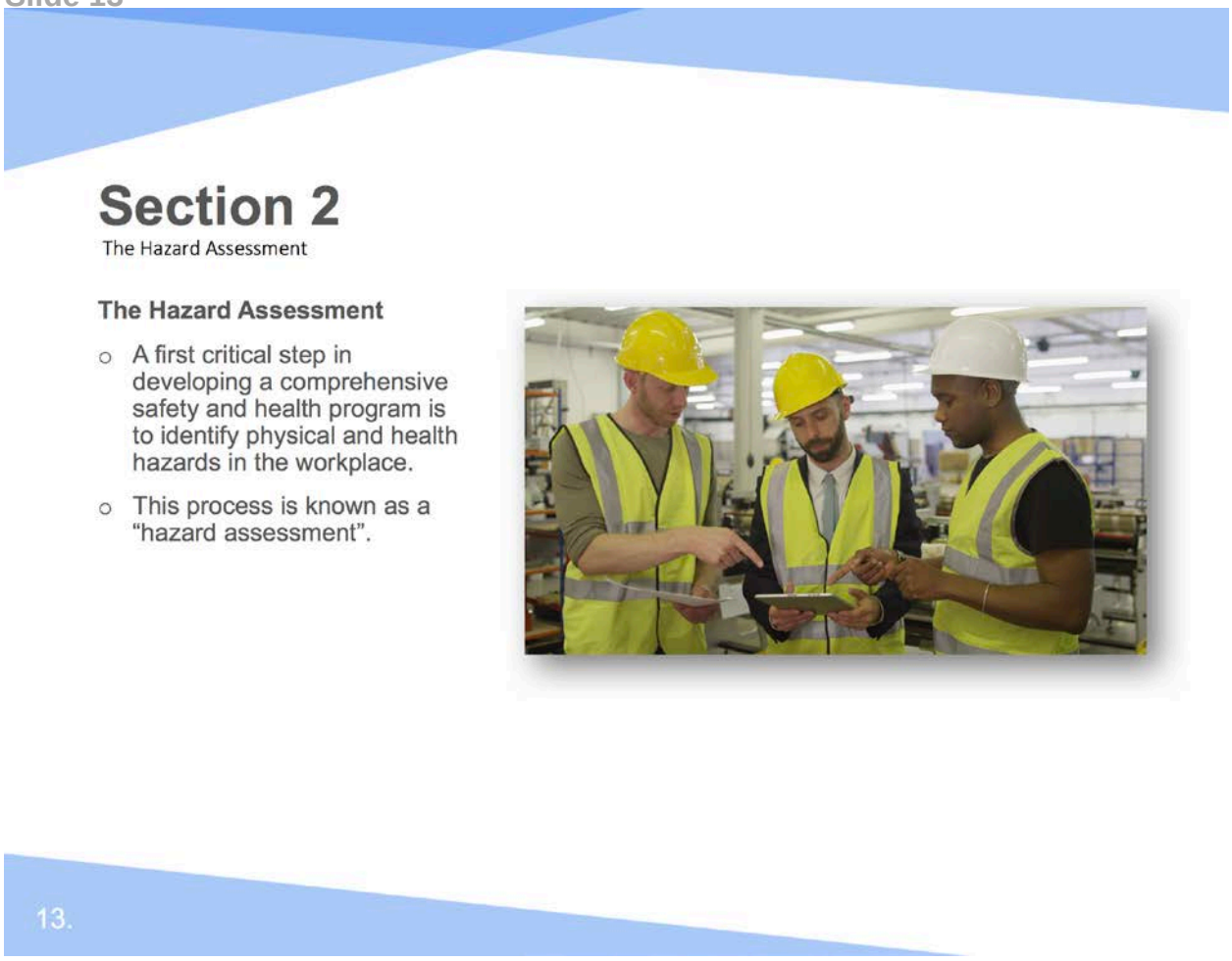


Facilitation Guidance:

Employee's Responsibility:

- Properly wear PPE,
- Attend training sessions on PPE,
- Care for, clean and maintain PPE, and
- Inform a supervisor of the need to repair or replace PPE.

Slide 13



Facilitation Guidance:

The Hazard Assessment – OSHA Standard 1910 Subpart I App B

A first critical step in developing a comprehensive safety and health program is to identify physical and health hazards in the workplace. This process is known as a "hazard assessment".

Slide 14

Section 2

The Hazard Assessment

The Hazard Assessment

- The hazard assessment should begin with a walk though survey of the facility to develop a list of potential hazards in the following basic hazard categories:
  - **Impact**
  - **Penetration**
  - **Compression (roll-over)**
  - **Chemical**
  - **Heat/Cold**
  - **Harmful Dust**
  - **Light (optical) radiation**
  - **Biologic.**

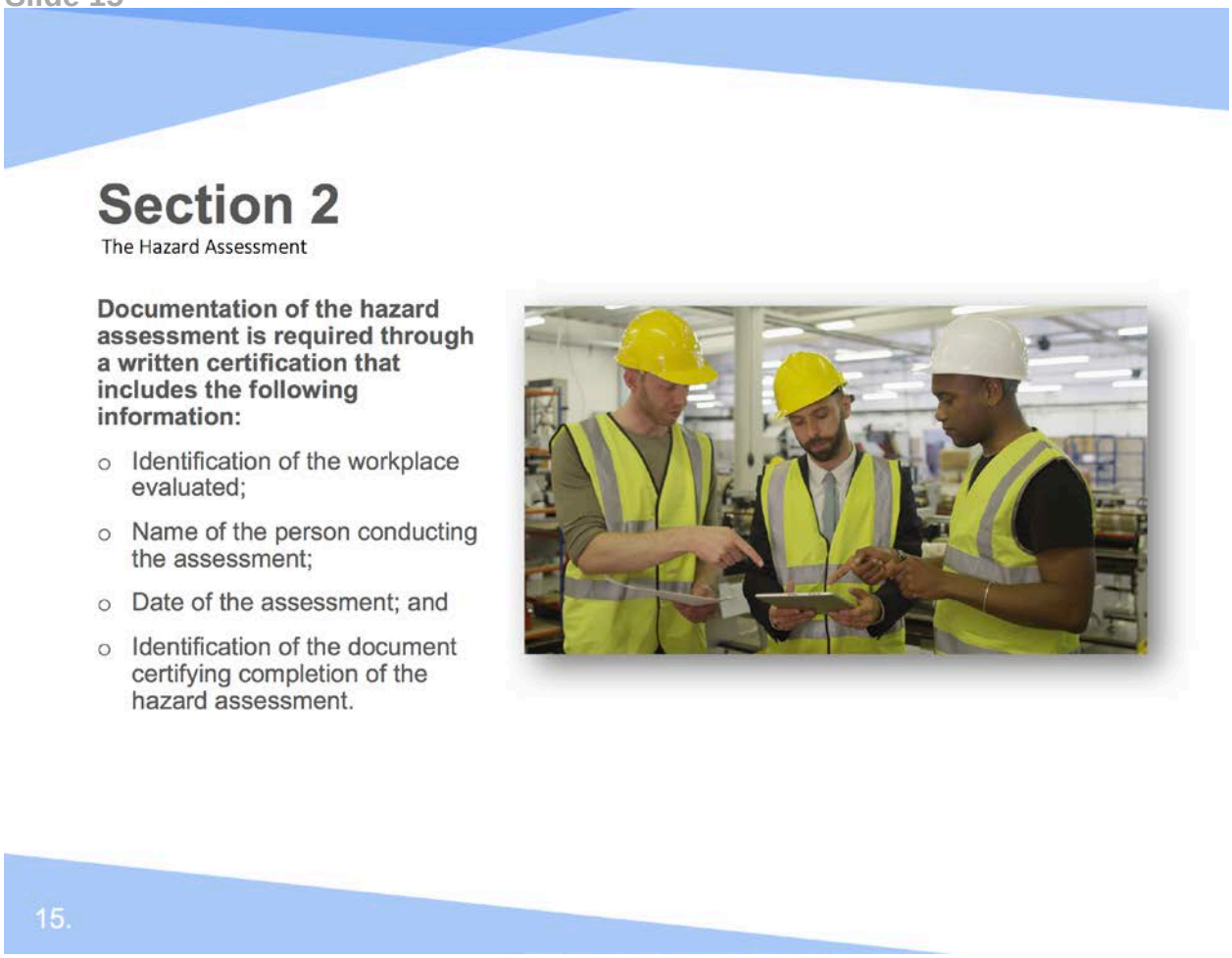
14.

Facilitation Guidance:

The hazard assessment should begin with a walk though survey of the facility to develop a list of potential hazards in the following basic hazard categories: Impact, Penetration, Compression (roll-over), Chemical, Heat/Cold, Harmful Dust, Light (optical) radiation, and Biologic.

The workplace should be periodically reassessed for any changes in conditions, equipment or operating procedures that could affect occupational hazards.

Slide 15

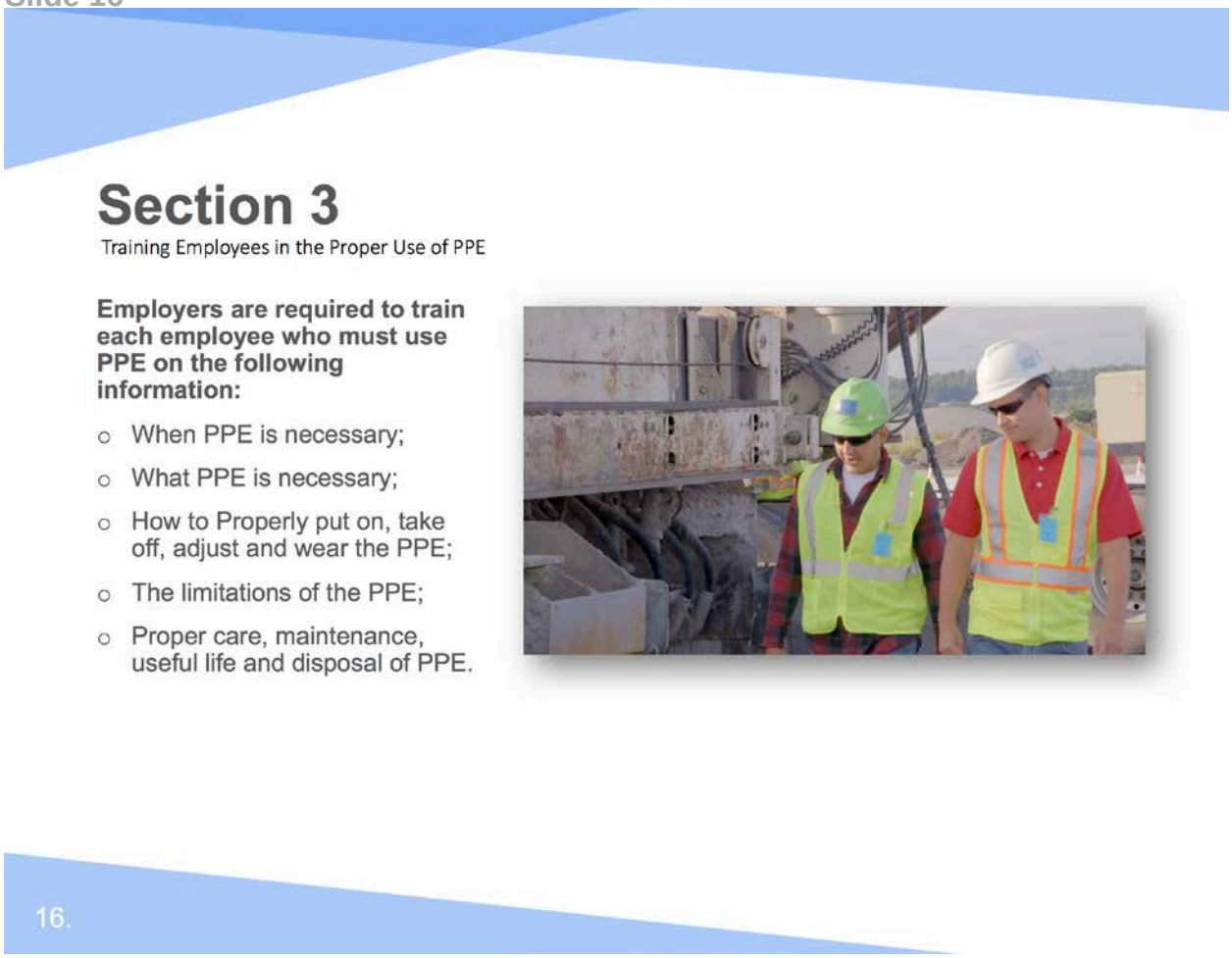


Facilitation Guidance:

Documentation of the hazard assessment is required through a written certification that includes the following information:

- Identification of the workplace evaluated;
- Name of the person conducting the assessment;
- Date of the assessment; and
- Identification of the document certifying completion of the hazard assessment.

Slide 16



Facilitation Guidance:

Selecting PPE – OSHA Standard 1910.132(d)(1)(i)

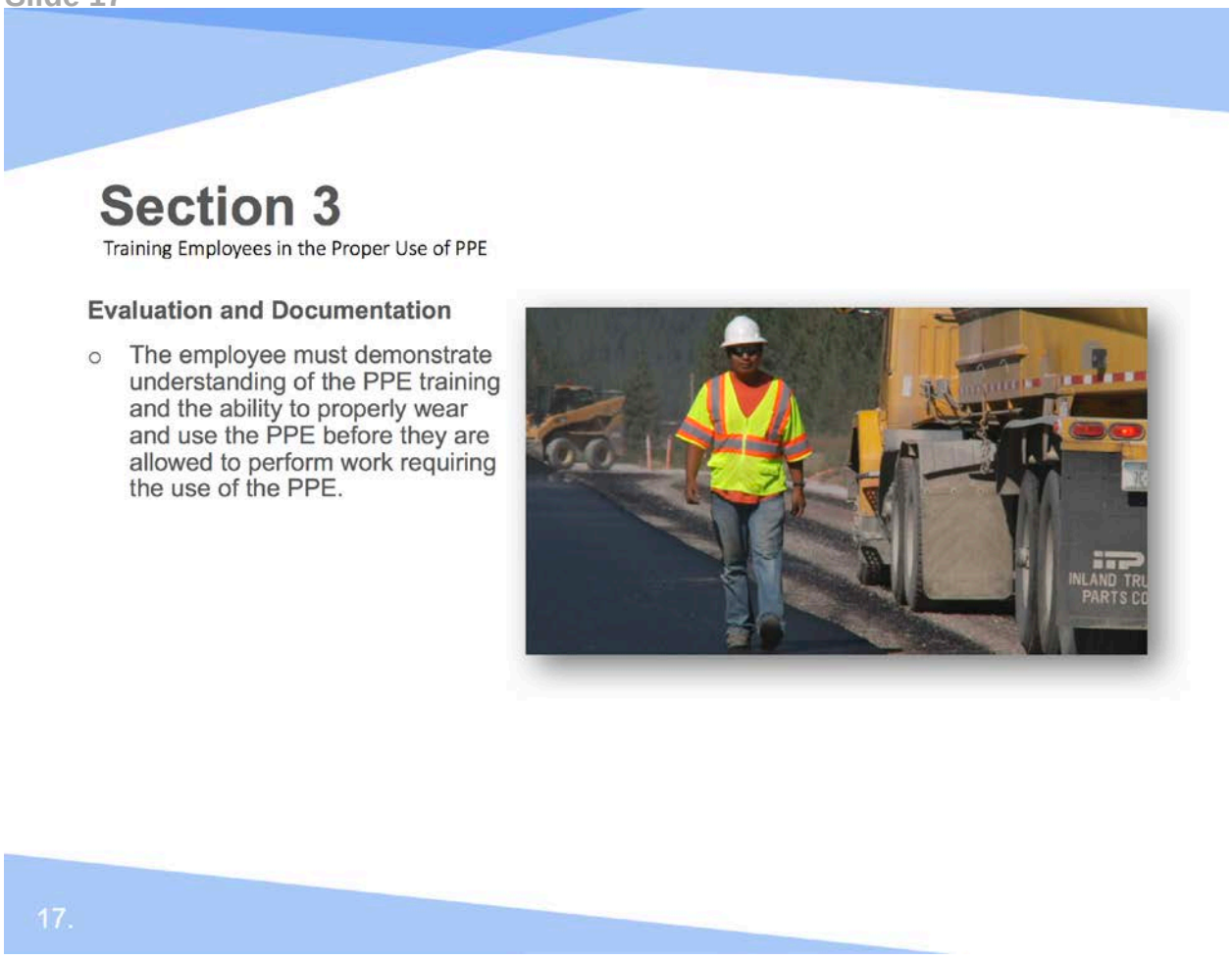
- Employers should take the fit and comfort of PPE into consideration when selecting appropriate items for their workplace.
- PPE that fits well and is comfortable to wear will encourage employee use of PPE.
- OSHA requires that many categories of PPE meet or be equivalent to standards developed by American National Standards Institute (ANSI).

Training Employees in the Proper Use of PPE – OSHA Standard 1910.132(f)(1)

Employers are required to train each employee who must use PPE on the following information:

- When PPE is necessary;
- What PPE is necessary;
- How to Properly put on, take off, adjust and wear the PPE;
- The limitations of the PPE;
- Proper care, maintenance, useful life and disposal of PPE.

Slide 17

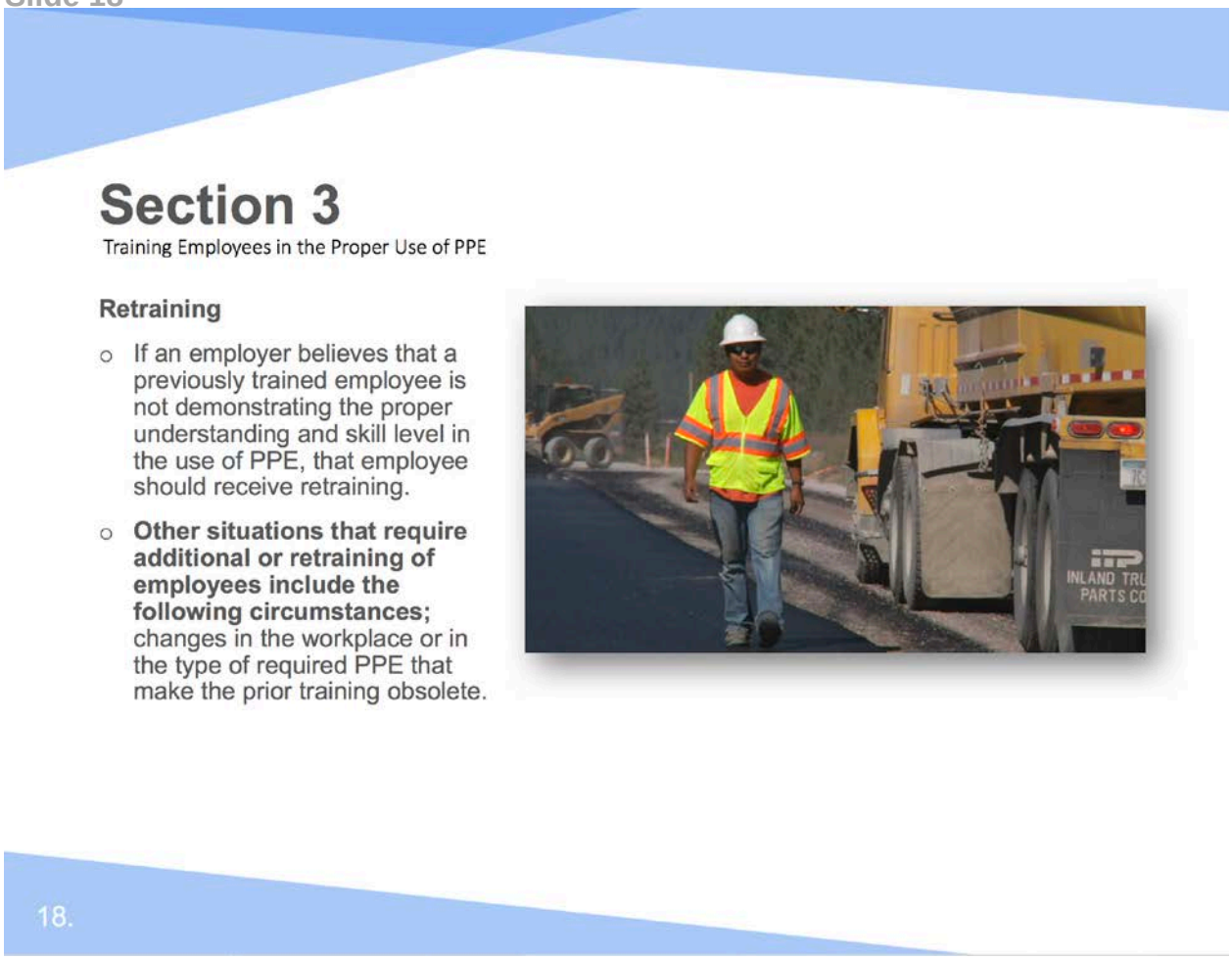


Facilitation Guidance:

Evaluation and Documentation

The employee must demonstrate understanding of the PPE training and the ability to properly wear and use the PPE before they are allowed to perform work requiring the use of the PPE.

Slide 18



Facilitation Guidance:

Retraining

If an employer believes that a previously trained employee is not demonstrating the proper understanding and skill level in the use of PPE, that employee should receive retraining.

Other situations that require additional or retraining of employees include the following circumstances; changes in the workplace or in the type of required PPE that make the prior training obsolete.

Slide 19

Facilitation Guidance:

Eye and Face Protection – OSHA Standard 1910.133

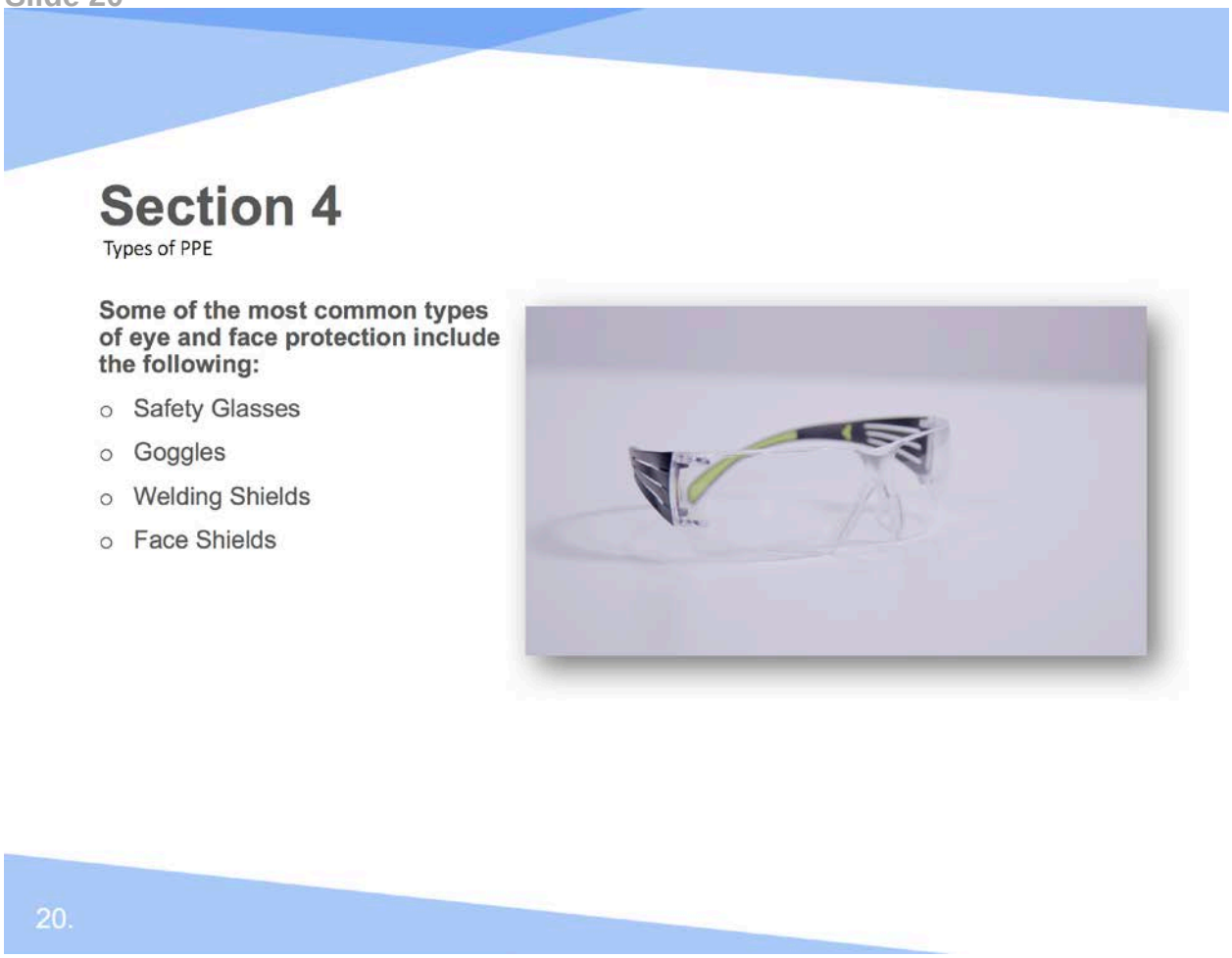
OSHA requires employers to ensure that employees have appropriate eye or face protection if they are exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, potentially infected material or potentially harmful light radiation.

When selecting the most suitable eye and face protection for employees - employers should take into consideration the following elements:

- Ability to protect against specific workplace hazards
- Should fit properly and be reasonably comfortable to wear
- Should provide unrestricted vision and movement
- Should be durable and cleanable
- Should allow unrestricted functioning of any other required PPE

The eye and face protection selected for employees' use must clearly identify the manufacturer.

Slide 20



Facilitation Guidance:

Some of the most common types of eye and face protection include the following:

Safety Glasses: These protective eyeglasses have safety frames constructed of metal or plastic and impact-resistant lenses. Side shields are available on some models.

Goggles: These are tight- fitting eye protection that completely cover the eyes, eye sockets, and the facial area immediately surrounding the eyes and provide protection from impact, dust and splashes. Some goggles will fit over corrective lenses.

Welding Shields: Welding Shields protect eyes from burns caused by infrared or intense radiant light; they also protect both the eyes and face from flying sparks, metal spatter and slag chips produced during welding, brazing, soldering and cutting operations.

Face Shields

- Transparent sheets of ANSI approved plastic extend from the eyebrows to below the chin and across the width of the head
- May be polarized for glare protection

- Protect against dusts, splashes and sprays of hazardous liquids but do not protect against impact hazards
- May be used with goggles or safety glasses for additional protection against impact hazards

Each type of protective eyewear is designed to protect against specific hazards. Employers can identify the specific workplace hazards that threaten employees' eyes and faces by completing a hazard assessment.

Slide 21

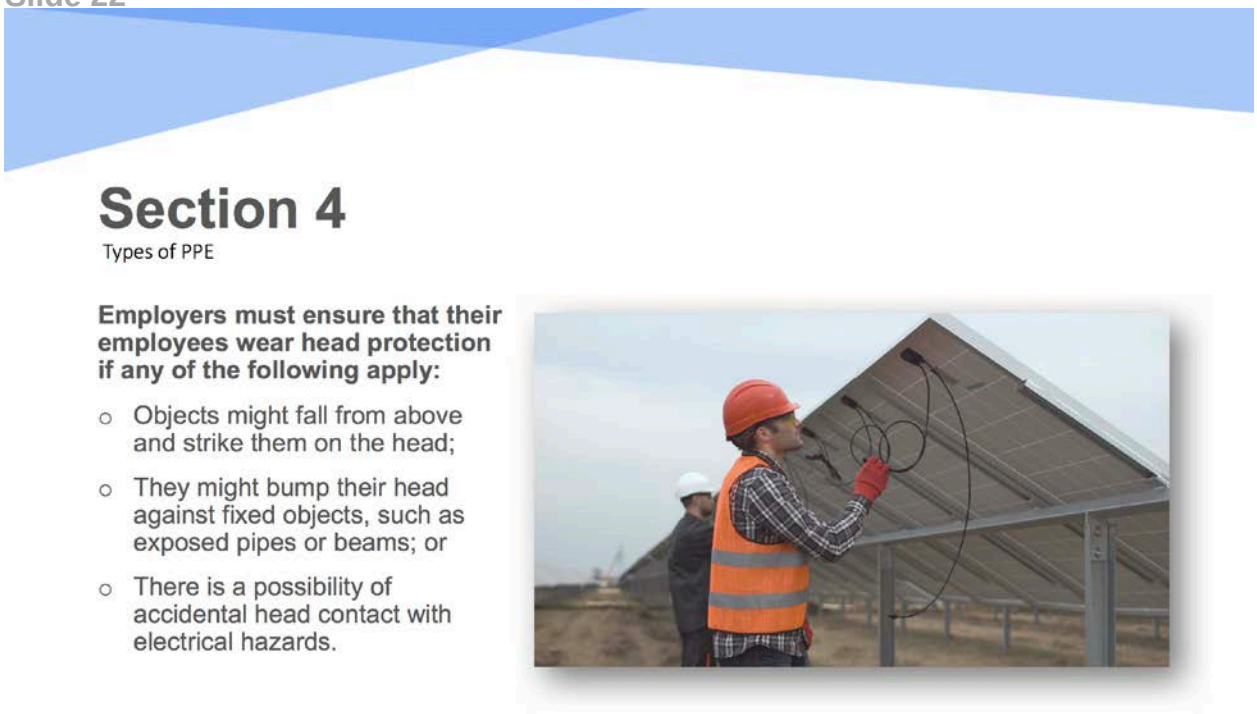
Facilitation Guidance:

Head Protection – OSHA Standard 1910.135

Protection from Head Injuries

Hard hats can protect workers from head impact, penetration injuries, and electrical injuries such as those caused by falling or flying objects, fixed objects, or contact with electrical conductors.

Slide 22



Facilitation Guidance:

Employers must ensure that their employees wear head protection if any of the following apply:

- Objects might fall from above and strike them on the head;
- They might bump their head against fixed objects, such as exposed pipes or beams; or
- There is a possibility of accidental head contact with electrical hazards.

Slide 23

Section 4

Types of PPE

Protective helmets or hard hats should do the following:

- Resist penetration by objects
- Absorb the shock of a blow
- Be water-resistant and slow burning
- Have a clear instruction explaining proper adjustment and replacement of the suspension and headband
- Hard outer shell and a shock-absorbing lining that incorporates a headband and straps that suspend the shell from 1 to 1 ¼ inches away from the head
- Provide shock absorption during an impact and ventilation during normal wear.

23.

Facilitation Guidance:

<u>Protective helmets or hard hats should do the following:</u>

- Resist penetration by objects
- Absorb the shock of a blow
- Be water-resistant and slow burning
- Have a clear instruction explaining proper adjustment and replacement of the suspension and headband
- Hard outer shell and a shock-absorbing lining that incorporates a headband and straps that suspend the shell from 1 to 1 ¼ inches away from the head
- Provide shock absorption during an impact and ventilation during normal wear.

Slide 24

Section 4

Types of PPE

Types of Hard Hats

- **Class G (General):** Protects against falling objects and electrical shock up to 2,200 volts
- **Class E (Electrical):** Protects against falling objects and electrical shocks up to 20,000 volts.
- **Class C (Conductive):** Protects against falling objects. Class C hard hats are not designed for use around live electrical wire or corrosives.

24.

Facilitation Guidance:

Types of Hard Hats

Class G (General): Protects against falling objects and electrical shock up to 2,200 volts

Class E (Electrical): Protects against falling objects and electrical shocks up to 20,000 volts.

Class C (Conductive): Protects against falling objects. Class C hard hats are not designed for use around live electrical wire or corrosives.

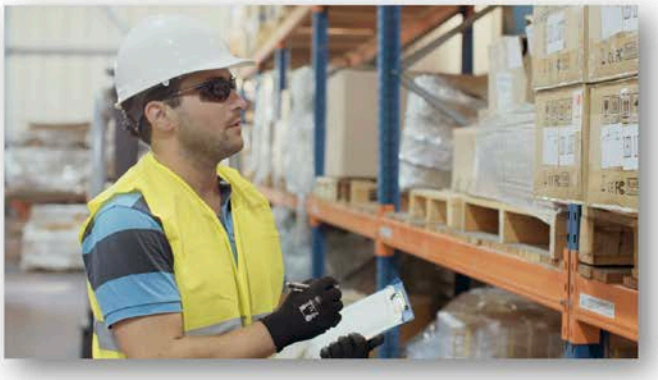
Slide 25

Section 4

Types of PPE

Types of Hard Hats

- Another class of protective headgear is called a “bump hat”, designed for use in areas with low head clearance.
- They are recommended for areas where protection is needed from head bumps and lacerations.
- These are not designed to protect against falling or flying objects and are not ANSI approved.



25.

Facilitation Guidance:

Another class of protective headgear is called a “bump hat”, designed for use in areas with low head clearance.

They are recommended for areas where protection is needed from head bumps and lacerations. These are not designed to protect against falling or flying objects and are not ANSI approved.

Slide 26

Section 4

Types of PPE

Types of Hard Hats

- It is essential to check the types of hard hat employees are using to ensure that the equipment provides appropriate protection.
- Each hard hat should bear a label inside the shell that lists the manufacturer, the ANSI designation and the class of the hat.

26.

Facilitation Guidance:

It is essential to check the types of hard hat employees are using to ensure that the equipment provides appropriate protection.

Each hard hat should bear a label inside the shell that lists the manufacturer, the ANSI designation and the class of the hat.

Slide 27

Facilitation Guidance:

Size and care considerations:

Head protection that is either too large or too small is inappropriate for use, even if it meets all other requirements.

Most protective headgear comes in a variety of sizes with adjustable headbands to ensure a proper fit.

Slide 28

Facilitation Guidance:

Some allow for the use of various accessories to help employees deal with changing environmental conditions such as:

- Slots for earmuffs
- Safety glasses
- Face shields
- Mounted lights

A daily inspection of the hard hat shell, suspension system and other accessories for holes, cracks, tears or other damage that might compromise the protective value of the hat is essential.

Slide 29

Section 4

Types of PPE

Head Protection

- **Never drill holes, paint or apply labels** to protective headgear as this may reduce the integrity of the protection.
- Do not store protective headgear in direct sunlight and extreme heat can damage them.
- Stickers are not typically allowed on hats as they prohibit a thorough inspection for cracks and defects.

29.

Facilitation Guidance:

Never drill holes, paint or apply labels to protective headgear as this may reduce the integrity of the protection.

Do not store protective headgear in direct sunlight and extreme heat can damage them.

Stickers are not typically allowed on hats as they prohibit a thorough inspection for cracks and defects.

Slide 30

Section 4

Types of PPE

Hard hats with any of the following defects should be removed from service and replaced:

- **Perforation, cracking, or deformity** of the brim or shell;
- Indication of exposure of the brim or shell to **heat, chemicals, or ultraviolet light and other radiation.**
- Always replace a hard hat if it sustains an impact, even if damage is not noticeable.

30.

Facilitation Guidance:

Hard hats with any of the following defects should be removed from service and replaced:

- Perforation, cracking, or deformity of the brim or shell;
- Indication of exposure of the brim or shell to heat, chemicals, or ultraviolet light and other radiation.
- Always replace a hard hat if it sustains an impact, even if damage is not noticeable.

Slide 31

Section 4

Types of PPE

Foot and Leg Protection

- Workers at risk of possible foot or leg injuries from **falling, rolling objects, crushing or penetrating materials** should wear protective footwear.

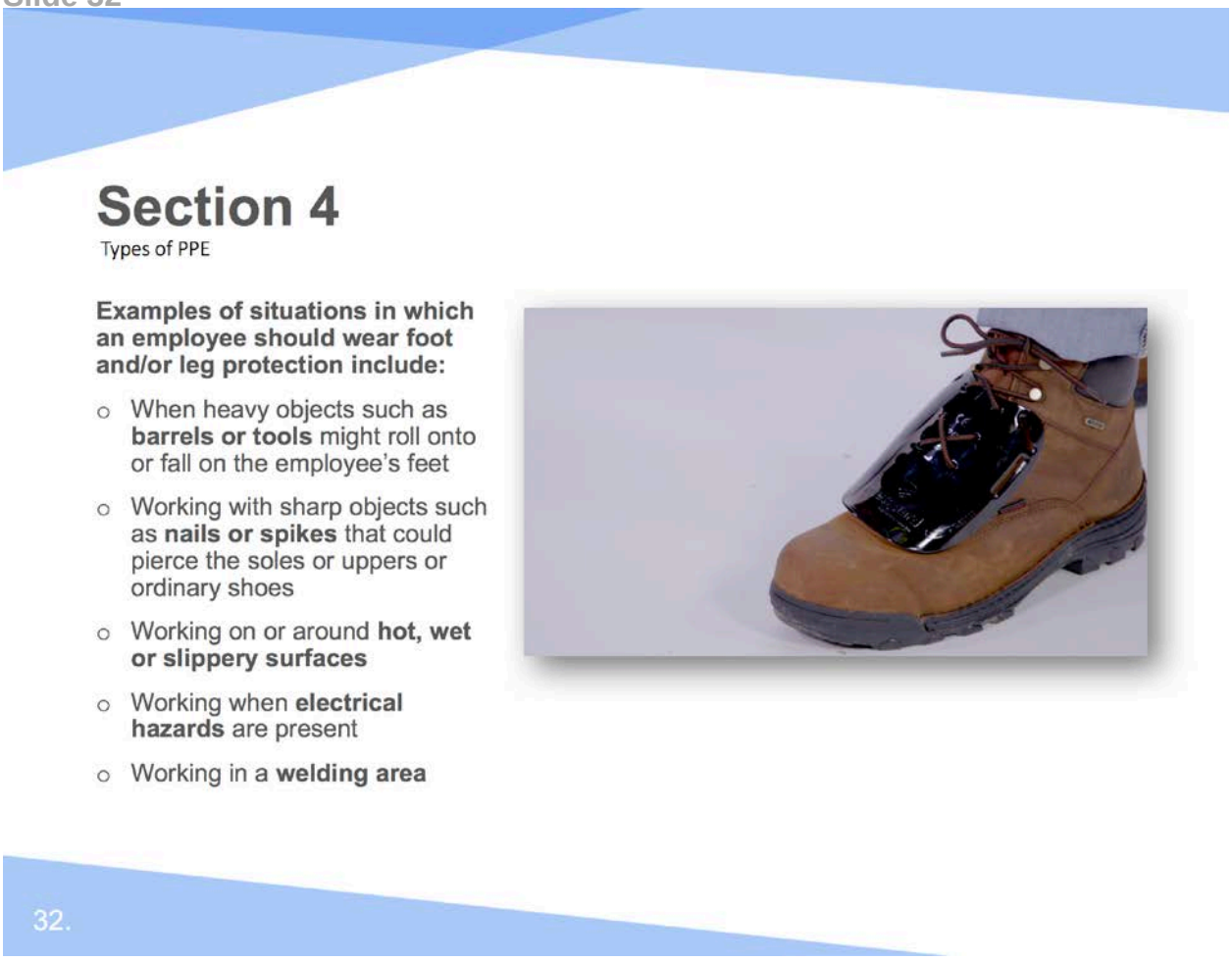
31.

Facilitation Guidance:

Foot and Leg Protection – OSHA Standard 1910.136

Workers at risk of possible foot or leg injuries from falling, rolling objects, crushing or penetrating materials should wear protective footwear.

Slide 32



Facilitation Guidance:

Examples of situations in which an employee should wear foot and/or leg protection include:

- When heavy objects such as barrels or tools might roll onto or fall on the employee's feet
- Working with sharp objects such as nails or spikes that could pierce the soles or uppers or ordinary shoes
- Working on or around hot, wet or slippery surfaces
- Working when electrical hazards are present
- Working in a welding area

Slide 33

Facilitation Guidance:

Foot and Leg Protection Choices Include the following:

Leggings: Protects the lower legs and feet from heat hazards such as molten metal or welding sparks. Safety snaps allow leggings to be removed quickly.

Metatarsal Guards: Protects the instep area from impact and compression. Made of aluminum, steel, fiber or plastic, these guards may be strapped to the outside of shoes.

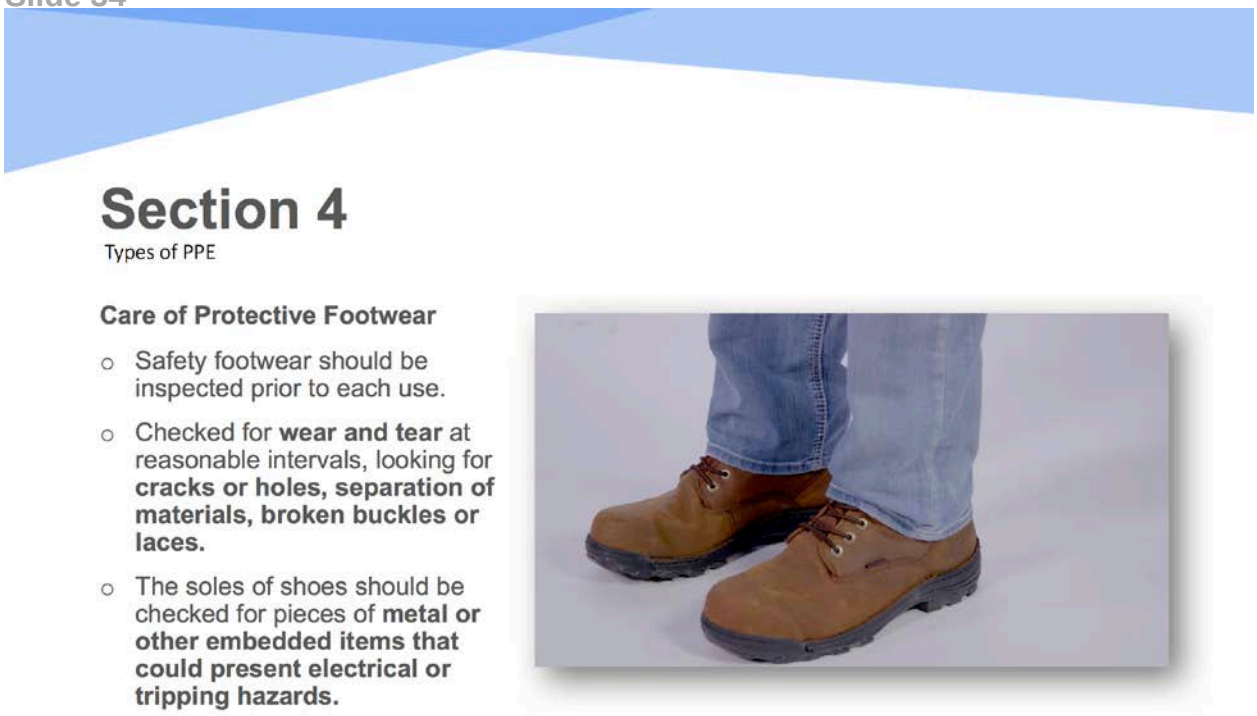
Toe Guards: Fits over the toes of regular shoes to protect the toes from impact and compression hazards. They may be made of steel, aluminum or plastic.

Combination foot and shin guards: protect the lower legs and feet and may be used in combination with toe guards when greater protection is needed.

Safety Boots: Have impact-resistant toes and heat-resistant soles that protect the feet against hot work surfaces. In heavy spark area, use fire resistant boot protectors or leather spats strapped around your pants legs and boots tops to prevent injury and burns

Safety shoes may also be designed to be electrically conductive to prevent the buildup of static electricity in areas with the potential for explosive atmospheres or nonconductive to protect employees from workplace electrical hazards.

Slide 34

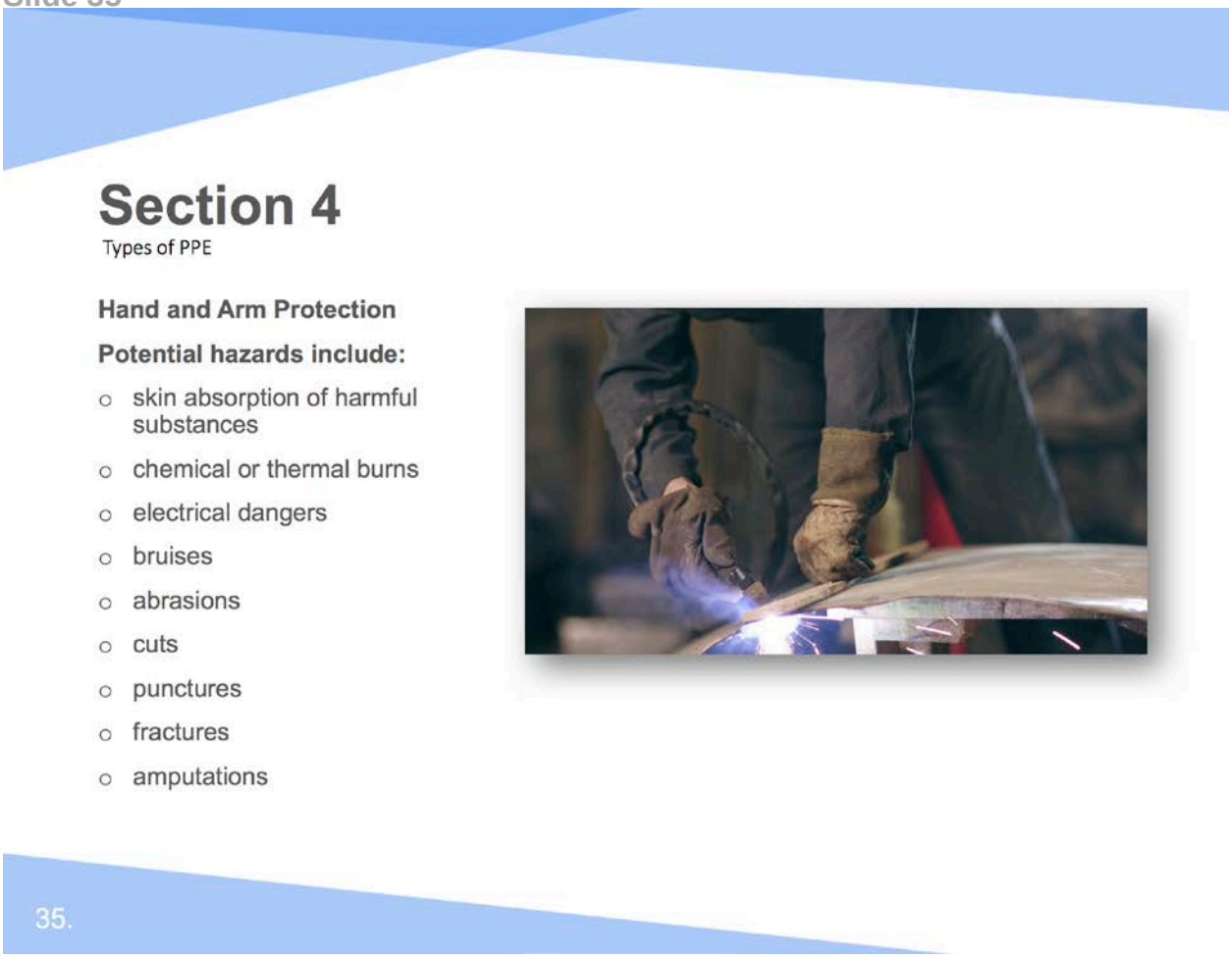


Facilitation Guidance:

Care of Protective Footwear

- Safety footwear should be inspected prior to each use.
- Checked for wear and tear at reasonable intervals, looking for cracks or holes, separation of materials, broken buckles or laces.
- The soles of shoes should be checked for pieces of metal or other embedded items that could present electrical or tripping hazards.

Slide 35



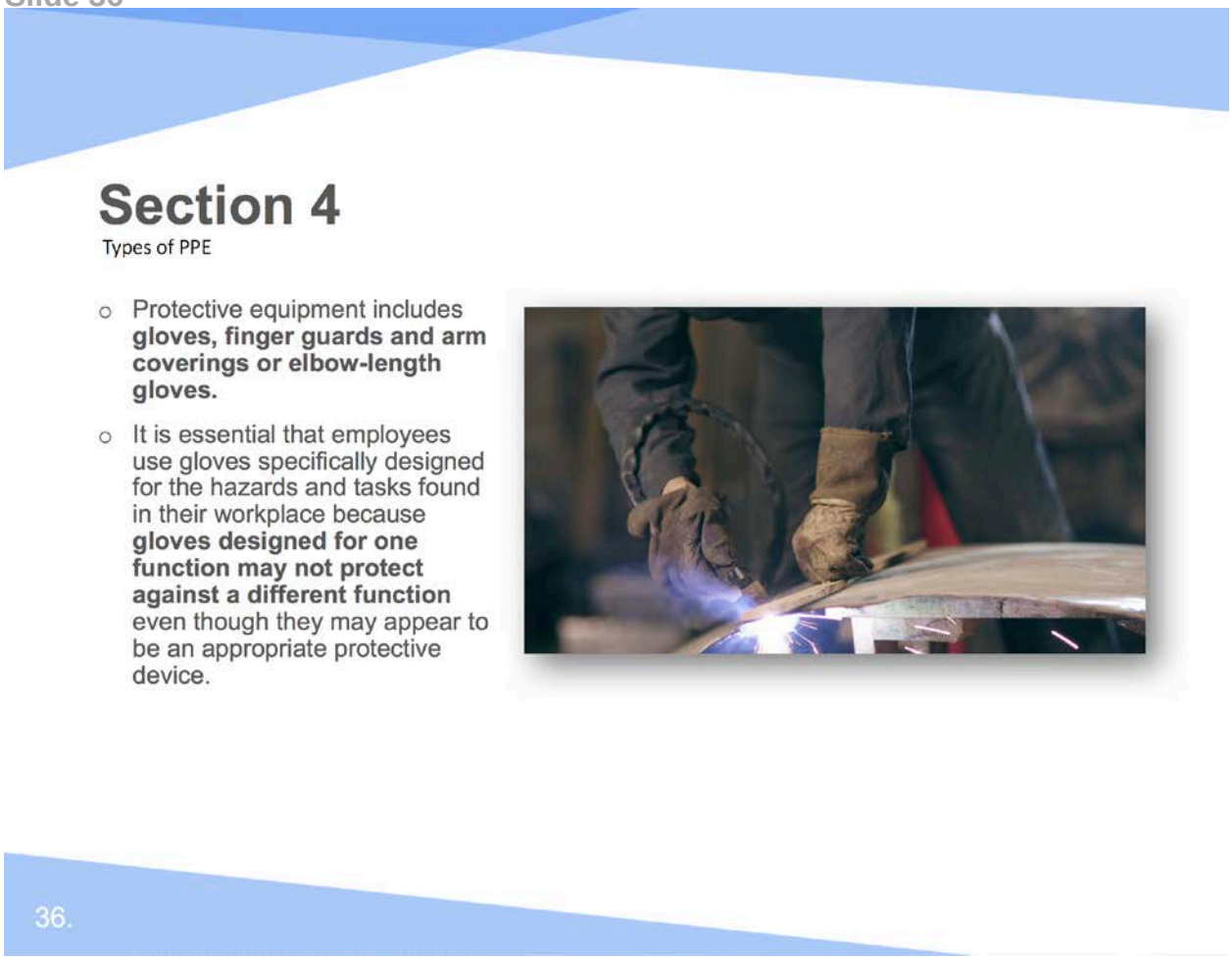
Facilitation Guidance:

Hand and Arm Protection-OSHA Standard 1910.138

Potential hazards include:

- skin absorption of harmful substances
- chemical or thermal burns
- electrical dangers
- bruises
- abrasions
- cuts
- punctures
- fractures
- amputations

Slide 36

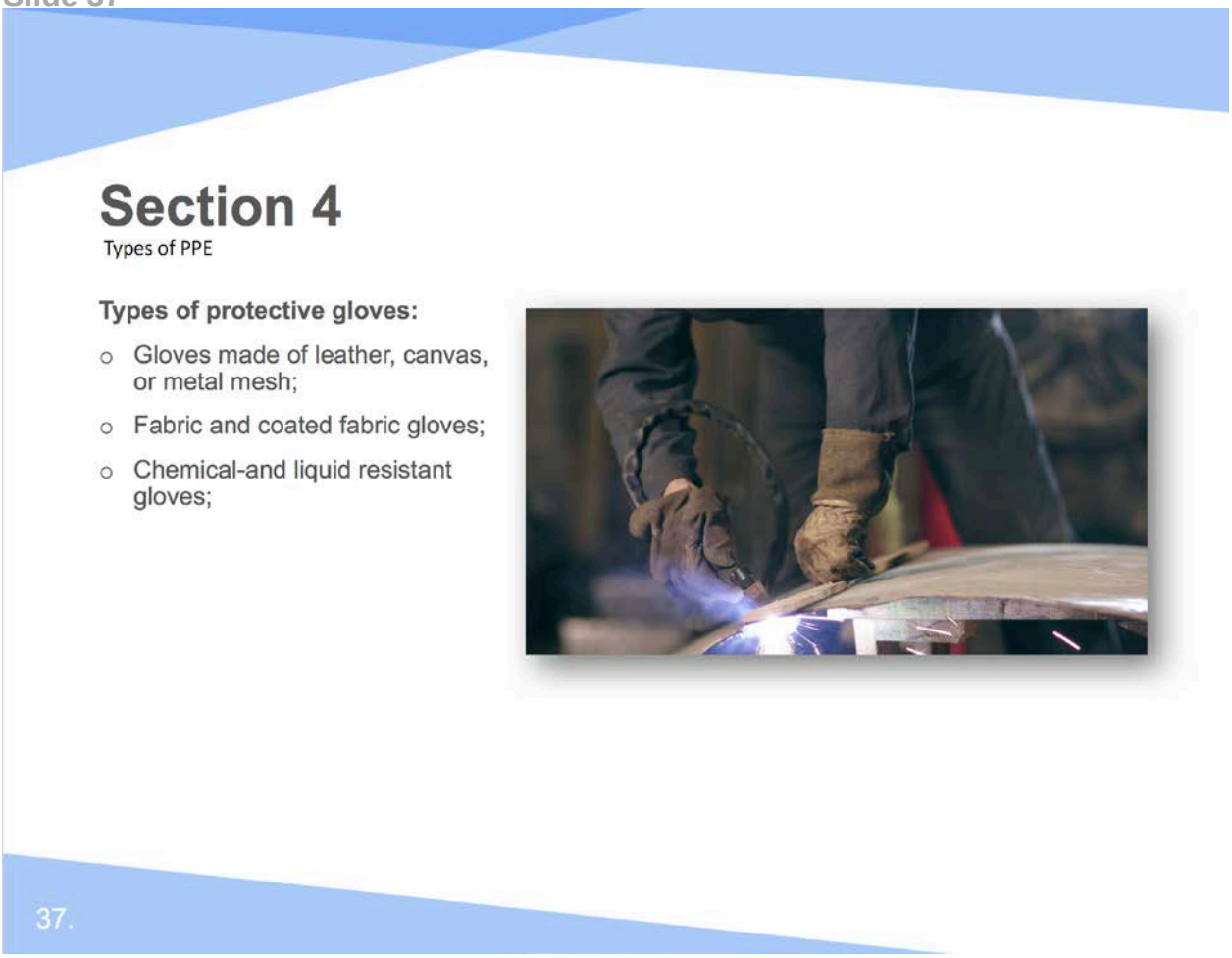


Facilitation Guidance:

Protective equipment includes gloves, finger guards and arm coverings or elbow-length gloves.

It is essential that employees use gloves specifically designed for the hazards and tasks found in their workplace because gloves designed for one function may not protect against a different function even though they may appear to be an appropriate protective device.

Slide 37



Facilitation Guidance:

Types of protective gloves:

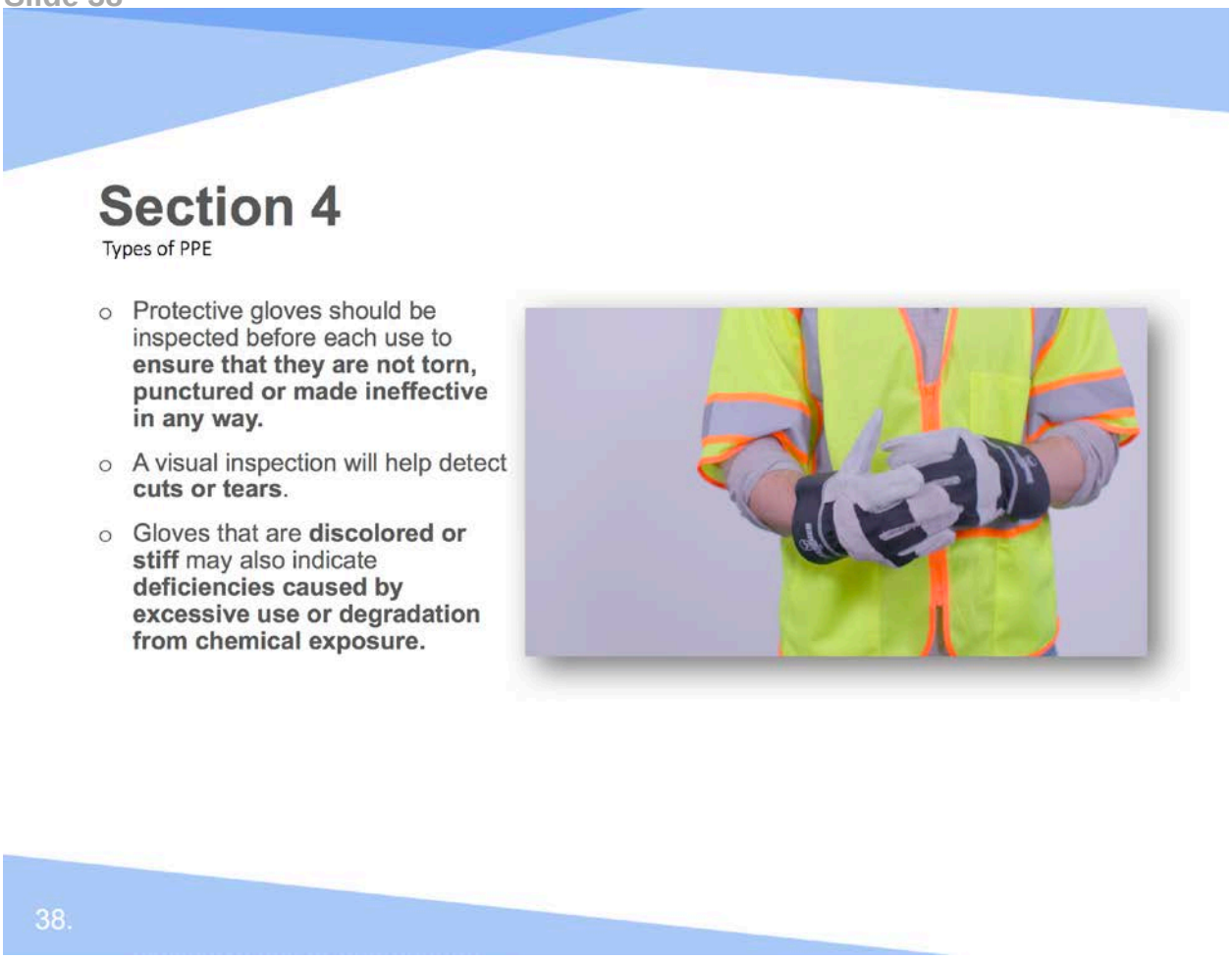
- Gloves made of leather, canvas, or metal mesh;
- Fabric and coated fabric gloves;
- Chemical-and liquid resistant gloves;

Leather, canvas or metal mesh gloves: Sturdy gloves made from metal mesh, leather or canvas provide protection against cuts and burns. Leather or canvas gloves also protect against sustained heat.

Fabric Gloves: Protect against dirt, slivers, chafing and abrasions. They do not provide sufficient protection for use with rough, sharp or heavy materials.

Chemical – and Liquid- Resistant Gloves: Chemical-resistant gloves are made with different kinds of rubber. As a general rule, the thicker the glove material, the greater the chemical resistance. Check Safety Data Sheets to determine type of gloves to have available.

Slide 38



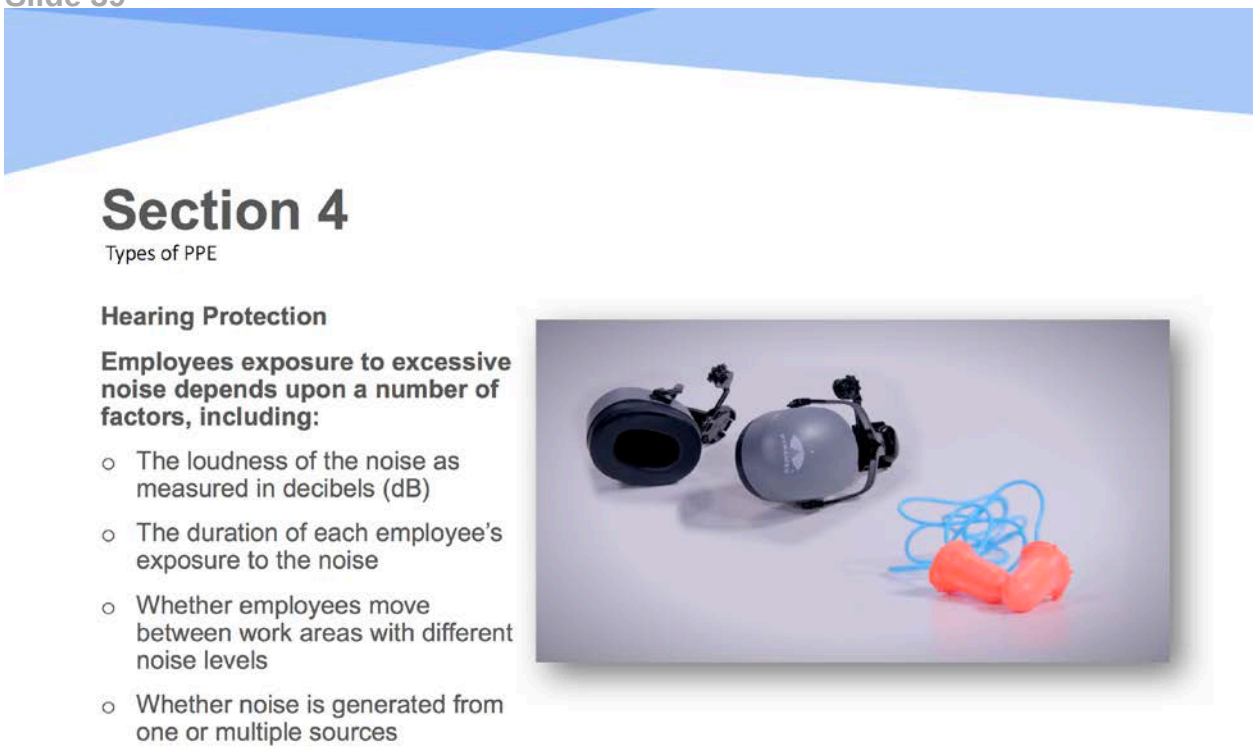
Facilitation Guidance:

Protective gloves should be inspected before each use to ensure that they are not torn, punctured or made ineffective in any way.

A visual inspection will help detect cuts or tears.

Gloves that are discolored or stiff may also indicate deficiencies caused by excessive use or degradation from chemical exposure.

Slide 39



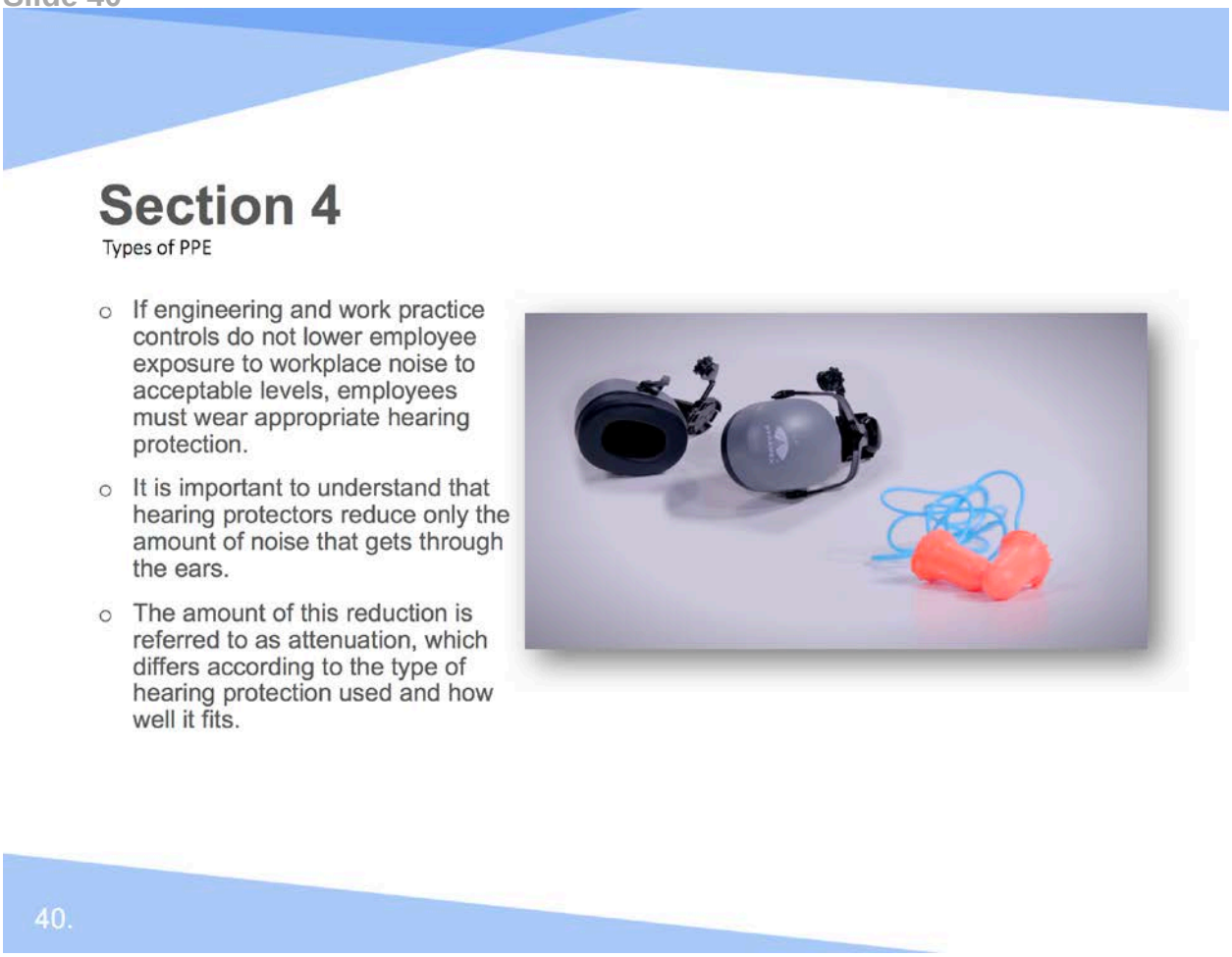
Facilitation Guidance:

Hearing Protection – OSHA Standard 1910.95 – Occupational Noise Exposure

Determining the need to provide hearing protection for employees can be challenging. Employees exposure to excessive noise depends upon a number of factors, including:

- The loudness of the noise as measured in decibels (dB)
- The duration of each employee's exposure to the noise
- Whether employees move between work areas with different noise levels
- Whether noise is generated from one or multiple sources.

Slide 40



Facilitation Guidance:

If engineering and work practice controls do not lower employee exposure to workplace noise to acceptable levels, employees must wear appropriate hearing protection.

It is important to understand that hearing protectors reduce only the amount of noise that gets through the ears.

The amount of this reduction is referred to as attenuation, which differs according to the type of hearing protection used and how well it fits.

Slide 41

Section 4

Types of PPE

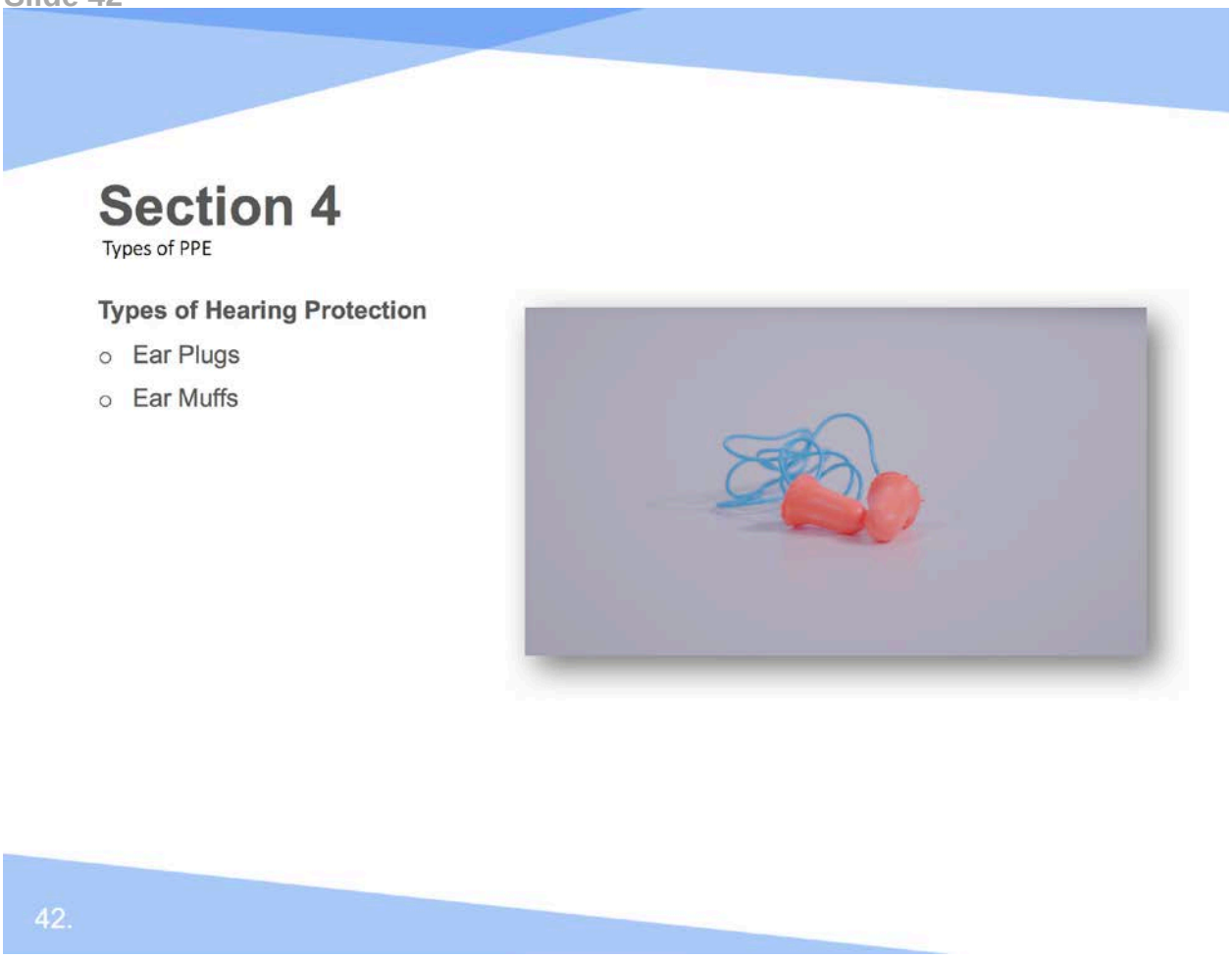
- If the employees are **exposed** to occupational noise **at or above 85 dB** averaged **over an eight-hour period**, the employer is **required to institute a Hearing Conservation Program** that includes regular **testing of employees' hearing** by qualified professionals.

41.

Facilitation Guidance:

If the employees are **exposed** to occupational noise **at or above 85 dB** averaged **over an eight-hour period**, the employer is **required to institute a Hearing Conservation Program** that includes regular **testing of employees' hearing** by qualified professionals.

Slide 42



Facilitation Guidance:

Types of Hearing Protection

Ear Plugs: Offer the most hearing protection.

Insert a disposable ear plug into the ear by rolling it into a small diameter oval and inserting it into the ear canal. The ear should be pulled up and back as the plug is inserted. Then, hold the plug in the ear for several seconds to allow it to expand and fit securely.

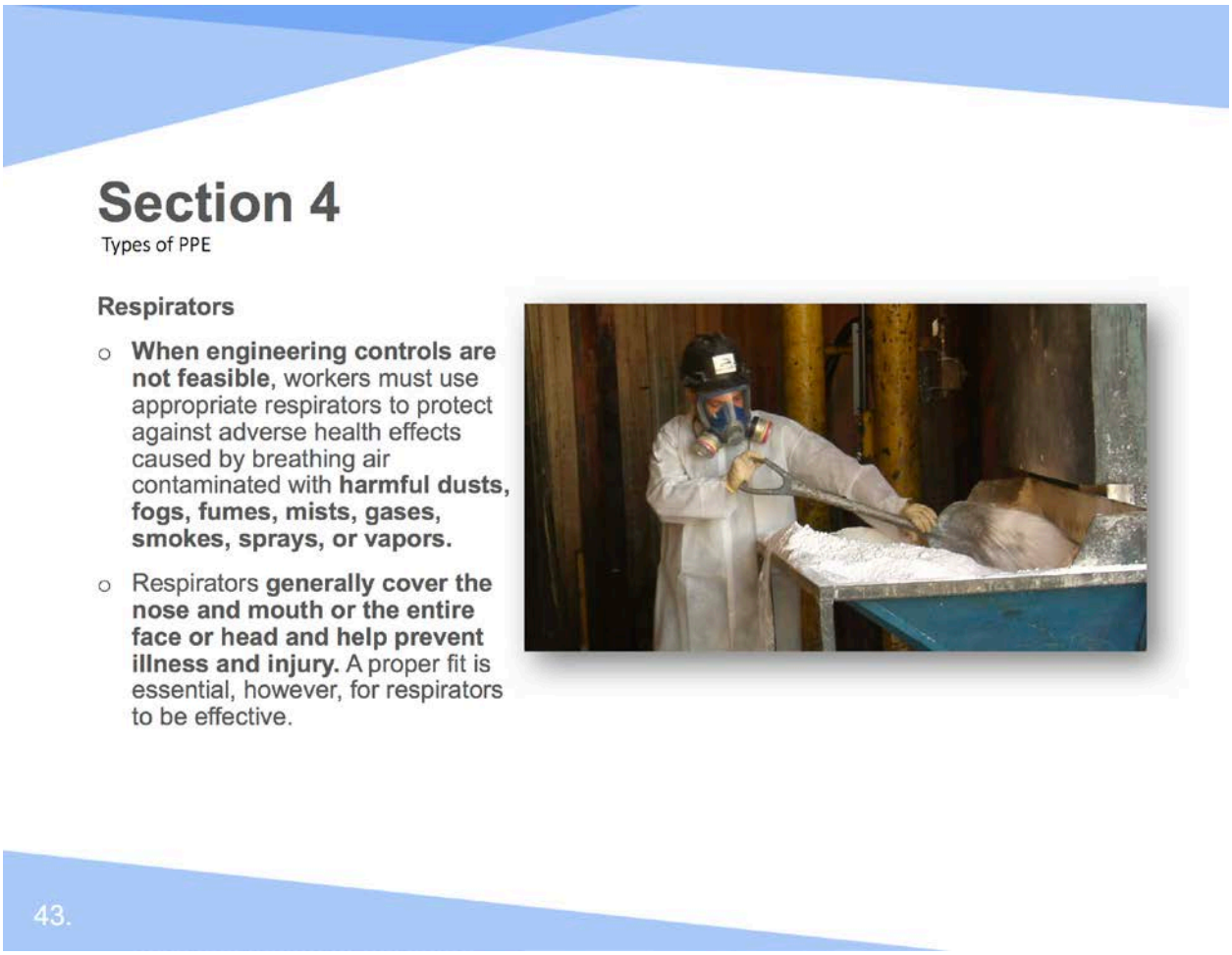
Ear Muffs: Ear muffs are only as effective as the seal around the entire ear.

Facial hair and eyeglasses can decrease the protection ear muffs can provide because they get in the way of the seal. If ear muffs are cracked, cut or missing gaskets, they are not as effective in protecting the worker's hearing.

These two types of hearing protection will save a worker's hearing when they are exposed to loud noises day after day. However, employees should warn their employees that hearing protection may block out important safety warning sounds like alarms or other coworkers yelling for assistance.

For a more detailed discussion of the requirements for a comprehensive hearing conservation program, refer to the OSHA standard at 29 CFR 1910.95, Occupational Noise Exposure, section (c).

Slide 43



Facilitation Guidance:

Respirators

When engineering controls are not feasible, workers must use appropriate respirators to protect against adverse health effects caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors.

Respirators generally cover the nose and mouth or the entire face or head and help prevent illness and injury. A proper fit is essential, however, for respirators to be effective. Required respirators must be NIOSH approved and medical evaluation and training must be provided before use.

For additional information concerning OSHA's PPE requirements related to respiratory protection refer to 29 CFR 1910.134.

Slide 44

Facilitation Guidance:

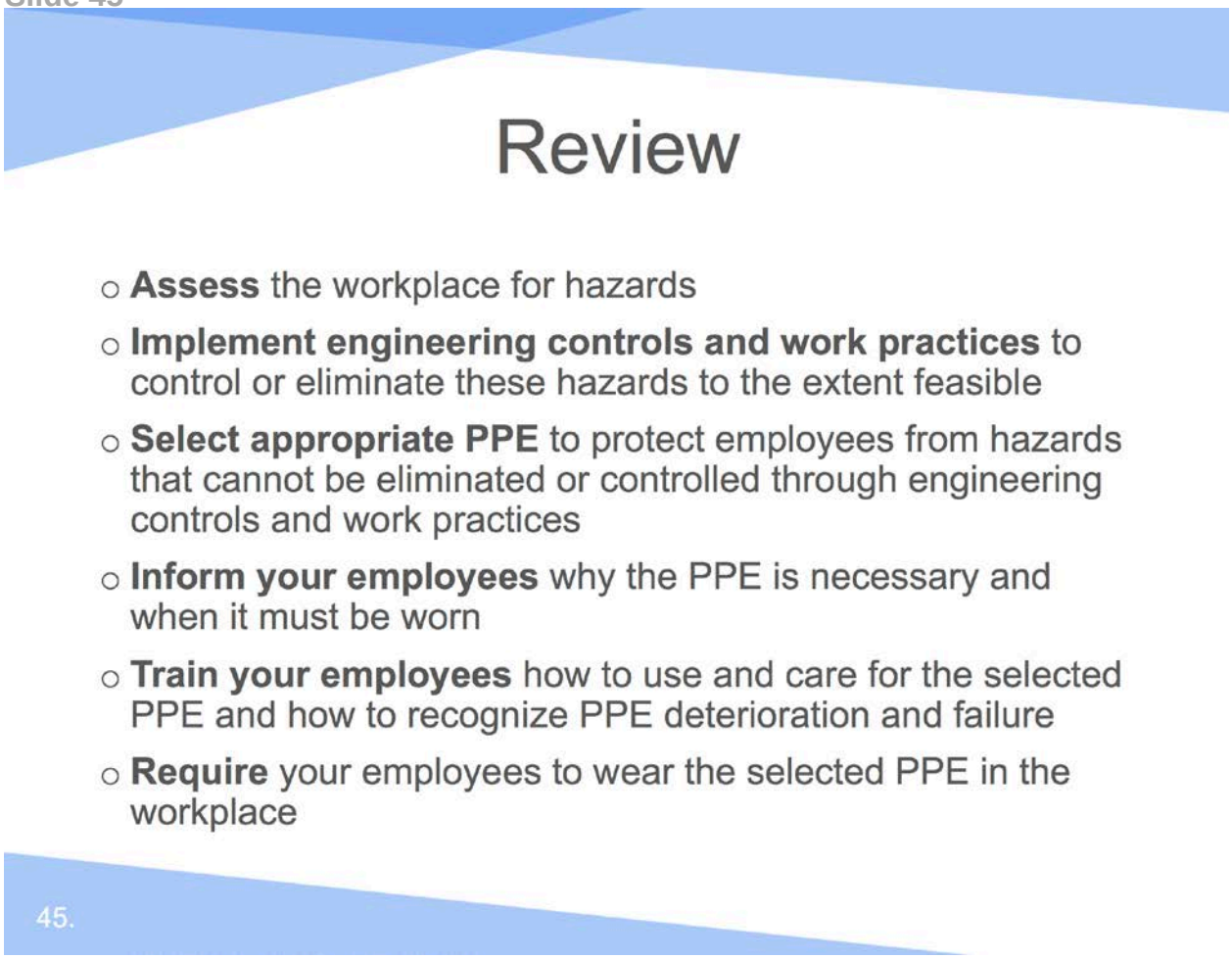
Protective Clothing

In some cases, workers must shield most or all of their bodies against hazards in the workplace, such as exposure to heat and radiation as well as hot metals, scalding liquids, body fluids, hazardous materials or waste, and other hazards.

In addition to fire retardant wool and fire – retardant cotton, materials used in whole-body personal protective equipment include rubber, leather, synthetics, and plastic.

Course Review

Slide 45



Facilitation Guidance:

Review

As part of this PPE program, you must do the following:

- Assess the workplace for hazards
- Implement engineering controls and work practices to control or eliminate these hazards to the extent feasible
- Select appropriate PPE to protect employees from hazards that cannot be eliminated or controlled through engineering controls and work practices
- Inform your employees why the PPE is necessary and when it must be worn
- Train your employees how to use and care for the selected PPE and how to recognize PPE deterioration and failure

Require your employees to wear the selected PPE in the workplace

Supplemental Resources