Health Hazards

● Special Emphasis Program

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Health Hazards SEP

- NCDOL has established a Health Hazards Special Emphasis Program (SEP) for:
  - Lead
  - Asbestos
  - Hexavalent chromium (CrVI)
  - Isocyanates
  - Silica

- Including exposures, health effects and abatement methods for each
Health Hazards SEP

- Overexposures to these chemicals can lead to serious health effects

- OSH Division has increased the number of inspections to focus on industries that use these chemicals and substances
Health Hazards SEP

Asbestos

- 29 CFR 1910.1001
- 29 CFR 1926.1101
Asbestos

- Name given to a group of naturally occurring fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength
- Used in building materials for resistance against heat and corrosion
- Asbestos includes:
  - Chrysotile
  - Crocidolite
  - Anthophyllite
  - Amosite
  - Tremolite
  - Actinolite
Airborne fibers range from 5 µm or greater, with a length-to-diameter ratio of at least 3 to 1

ACM: “Asbestos-containing material,” any material containing >1% asbestos

PACM: “Presumed asbestos-containing material” – thermal system insulation and surfacing material found in buildings constructed no later than 1980
Asbestos Health Effects

- **Asbestosis**: A serious, progressive, long-term non-cancer disease of the lungs

- **Lung Cancer**: Causes the largest number of deaths related to asbestos exposure
  - Most common symptoms of lung cancer are coughing and a change in breathing

- **Mesothelioma**: A rare form of cancer found in the thin lining (membrane) of the lung, chest, abdomen, and heart
  - Most cases are linked to asbestos exposures
Exposure Limits

- Permissible exposure limit
  - 0.1 fiber per cubic centimeter (f/cc) of air as an 8 hour TWA

- Excursion limit
  - Not more than 1 f/cc averaged over 30 minutes

- Monitoring
  - Initially for workers who are or may be exposed at or above the PEL and/or above the excursion limit
  - Periodic if above PEL or excursion limit
Responsibility

- Building/facility owner

- Removal/abatement of asbestos is covered by 29 CFR 1926 (Construction)

- Must adhere to:
  - Multi-employer worksite
    » Hazards abated by contractor who created
    » Inform others of measures to control exposures
    » Adjacent employer will check containment
    » General contractor (GC) requires compliance
  
  - Competent person
Medical Surveillance

- Required when above PEL/excursion limit
  - Pre-placement examinations
    » Medical/work history
    » Complete physical exam with emphasis on respiratory system, cardiovascular system and digestive tract
    » Completion of questionnaire – Appendix D
    » Chest X-Ray (Roentgenogram)
    » Pulmonary function test (PFT)
    » Any additional tests required by the Physician or other Licensed Healthcare Professional (PLHCP)
  - Periodic exam (annually)
  - Upon termination of employment (1910)
Respirator Selection

- When is respiratory protection required?
  - Above PEL
  - Based on **Class** of work performed

- Provided in accordance with 29 CFR 1910.134 (b) - (d) (except (d)(1)(iii)), and (f) - (m)
  - Proper selection per 29 CFR 1910 or 29 CFR 1926
  - High efficiency particulate air (HEPA) filters for all air purifying respirators (APR)
  - No filtering face pieces (dust masks)
Abatement

- Elimination
- Substitution
- Engineering controls
  - Mechanical ventilation
- Administrative controls
  - Procedures
  - Housekeeping
  - Hygiene facilities
- PPE
  - Respiratory protection
  - Protective work clothing

This presentation was created by the N.C. Department of Labor for safety and health training.
Thank You For Attending!

Final Questions?