Departments of Public Works
PEOSH Overview

Public Employees
Occupational Safety and Health

Eric Weren
Research Scientist II
Inspections FFY 08 - 13

- 134 DPWs inspected
- 124 cited (~93%)
- 465 violations* (3.8/DPW)

*Includes both serious and non-serious
Standards Cited 08-15

- 24% Hazard Communication
- 19% Respiratory Protection
- 15% Personal Protective Equip
- 9% Medical Services
- 8% Noise
- 7% Asbestos (13% vs 4%)
Standards Cited 08-15

- 7% HazWOpER
- 7% Recordkeeping
- 3% IAQ
- <1% Sanitation
- <1% Bloodborne Pathogens
#1: Hazard Communication

NJAC 12:100.7

35 Citations FYY 2014-15

- 37% Training & documentation
- 26% Written Program
- 26% Label chemical & hazard warning
- 11% MSDS accessible in workplace
RTK

- Central File
  - Hazardous Substance List
  - Survey of products & Ingredients
  - MSDS & HSFS
- Universal Label
- Training (superceded)

NJ HazCom

- HazCom File
  - Hazard Determination
  - Inventory of hazardous products
  - SDSs & HSFS
- Labeling - OSHA
- Training
PEOSH HCS TRAINING

INITIAL TRAINING:
• Prior to assignment or reassignment
• Prior to introduction of new hazard

REFRESHER TRAINING:
• Every two years
• As needed to maintain knowledge

Trainer must be “Technically Qualified”

At no cost to employee & during work hours
The Globally Harmonized System of Classification and Labeling of Chemicals
Globally Harmonized System

- SDS - 16 section GHS version
- Label - GHS pictograms, signal words and standardized hazard warnings
- Minor classification changes to many health & physical hazards

http://www.osha.gov/dsg/hazcom/index2.html
GHS Requirements

Defined criteria to assign a hazard classification

- Physical Hazards - 16 categories
- Health Hazards - 10 categories
- Environmental Hazards

Classification guidance for mixtures of chemicals
GHS Physical Hazards

- Explosives
- Flammable Gases
- Flammable Aerosols
- Oxidizing Gases
- Gases Under Pressure
- Flammable Liquids
- Flammable Solids
- Self-Heating Substances
- Self- Reactive Substances
- Pyrophoric Liquids
- Pyrophoric Solids
- Substances which react with water and emit flammable gases
- Oxidizing Liquids
- Oxidizing Solids
- Organic Peroxides
- Corrosive to Metals
GHS Health Hazards

- Acute Toxicity
- Skin Corrosion/Irritation
- Serious Eye Damage/Eye Irritation
- Respiratory or Skin Sensitization
- Germ Cell Mutagenicity
- Carcinogenicity
- Reproductive Toxicology
  - Single Exposure
  - Repeated Exposure
- Aspiration Toxicity
GHS Environmental Hazards

Hazardous to Aquatic Environments

- Acute aquatic toxicity
- Chronic aquatic toxicity
  - Bioaccumulation potential
  - Rapid degradability
Identity

1. Product and Company Identification
2. Hazard Identification
3. Composition / Information On Ingredients
GHS Safety Data Sheet

Emergency Information

4. First Aid Measures

5. Fire Fighting Measures

6. Accidental Release Measures
GHS Safety Data Sheet

Safe Use & Physical Properties

7. Handling and Storage
8. Exposure Control / Personal Protection
9. Physical and Chemical Properties
10. Stability and Reactivity
GHS Safety Data Sheet

Information for Professionals

11. Toxicological Information
12. Ecological Information
13. Disposal Considerations
14. Transport Information
15. Regulatory Information
16. Other Information
OSHA vs GHS Labels

- HCS - performance-oriented
- GHS – specific requirements for use of:
  - pictograms,
  - signal words (Danger, Warning)
  - standardized hazard statements
- GHS also has suggested precautionary statements (in process)
GHS Pictograms & Hazard Classes

- Explosives
  - Self-reactives
  - Organic peroxides

- Flammables
  - Self-reactives
  - Pyrophorics
  - Self-heating
  - Emits flammable gas

- Oxidizers
  - Organic peroxides

- Gases under pressure

- Acute toxicity
  - Skin irritation
  - Eye irritation
  - Skin sensitizers

- Carcinogens
  - Respiratory sensitizers
  - Reproductive toxicity
  - Target organ toxicity
  - Germ cell mutagens

- Eye corrosion
  - Skin corrosion
  - Corrosive to metal

- Aquatic toxicity
## GHS Hazard Communication

### GHS Label Elements for Flammable Liquids

<table>
<thead>
<tr>
<th></th>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symbol</strong></td>
<td><img src="flammable.png" alt="Flammable Symbol" /></td>
<td><img src="flammable.png" alt="Flammable Symbol" /></td>
<td><img src="flammable.png" alt="Flammable Symbol" /></td>
<td>No symbol</td>
</tr>
<tr>
<td><strong>Signal Word</strong></td>
<td>Danger</td>
<td>Danger</td>
<td>Warning</td>
<td>Warning</td>
</tr>
<tr>
<td><strong>Hazard Statement</strong></td>
<td>Extremely flammable liquid and vapor</td>
<td>Highly flammable liquid and vapor</td>
<td>Flammable liquid and vapor</td>
<td>Combustible liquid</td>
</tr>
</tbody>
</table>
My Product

Warning!
Cause Skin And Eye Irritation
Suspected of causing cancer by inhalation
Contains: XYZ

Do not breathe vapors or mist. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

FIRST AID
EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
SKIN: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops and persists.

Company name, Address, Phone number
**HazCom Administrators**

- Become familiar with new classifications
- Modify training program
- Train on incoming GHS labels and SDS
- Collect new SDSs
- Adjust internal workplace labeling
OSHA’s HazCom

The following are not affected:

- written Hazard Communication Program,
- inventories of hazardous products
- training
- PELs
PEOSH - RTK

• PEOSH may adopt OSHA HazCom

• May modify NJAC 12-100-7.8 to keep:
  – Technically Qualified trainer
  – Refresher every 2 years
Guidance to the GHS

OSHA’s web page.

A guide to the GHS

https://www.osha.gov/dsg/hazcom/ghd053107.html

Compares GHS and HCS in detail

http://www.osha.gov/dsg/hazcom/ghoshacomparison.html

FAQs

Timing

Training: Dec. 1 2013
SDS & GHS Label: June 1, 2015*
Workplace Labeling: June 1, 2016
Additional training: June 1, 2016

* All shipments must have GHS Label
Questions & Discussion
#2 Respiratory Protection

26 Citations FYY 2014-15

- 31 % Written Program
- 31 % Effective Training (12%)
- 12 % Medical Evaluation
- 15% Fit Testing
- 12 % Maintenance & Care
- ?? % Voluntary use (was 37%)
Written Respiratory Protection Program

Whenever:

- Respirators are necessary for H&S
- Required by the employer.
- Parts may be required even for voluntary use.
**Program Elements**

*29 CFR 1910.134(c)(1)*

- Hazard Evaluation
  - Medical evaluation
- Training
  - Worksite hazards
  - Respiratory protection
- Respirator(s) selection
  - Fit testing
  - Proper use
  - Clean, maintain, repair & store

*Evaluate program annually*
Respiratory Protection
Program Administrator

- Arrange for medical clearance
- Coordinate fit-testing
- Coordinate respirator training
- Monitor respirator use, maintenance, storage and disposal
- Maintain records
Respirators: N-95 & Half Face
Qualitative Fit Test (QLFT)

- Pass/fail fit test
- The individual must respond to test agent.

Not suitable for respirators providing a protection factor greater than 100
Facepiece Seal Protection

- NO Facial hair
- Other conditions
  - Corrective glasses
  - Other PPE
  - Smoking
Voluntary Respirator Use

29 CFR 1910.134(c)(2)

Employer may allow respirator use if:

- Respiratory protection is **NOT** required
- Use will not create a hazard
- Employer provides information contained in Appendix D.
#3: Personal Protective Equipment

1910.132

27 Citations FYY 2014-15

70% written certification of hazard assessment

- identifies the workplace evaluated;
- person certifying the evaluation
- date(s) of the hazard assessment;

15% Training

15% Selection & use of PPE
Personal Protective Equipment

Seven Standards concerning PPE

– 1910.132 General
– 1910.133 Eye/Face
– 1910.34 Respiratory Protection
– 1910.135 Head
– 1910.136 Foot
– 1910.137 Electrical
– 1910.138 Hand
Questions & Answers
#4 ASBESTOS

24 Citations (8 Gen. Ind. 16 Const.)

- Was #9 FYY 08-13
- 67% Variety of citations associated with removal
- 8% Communication of hazard
- 24% Housekeeping
ASBESTOS

- Common in many building materials
- Partial bans in 1980s
- Some uses reinstated 1990
- Not required to remove ACM
- Prepare an Asbestos Management Plan
ACM not harmful unless releasing fibers.

Breathing ACM fibers is the main hazard.

Fibers get in the deep lungs, or digestive tract.
Asbestos is most hazardous when it is friable.

Sprayed on ACM insulation is friable.

**Intact** ACM floor tile is **not** friable.
Management Plan

- ACM Inventory
- Include location & condition (fri or non)
- Update as needed
- Re-inspect every 3 yr.
- Signs @ all mechanical rooms Id material, location & safe work practices
- Signs at all regulated areas (renovation)
Management Plan

Identify person who is responsible for:

- Risk communication, training & abatement
- Coordination, approval, scheduling & inspection of ACM removal activities
- Administration of the AMP and coordination of all asbestos activities
- Oversight of asbestos abatement contractors
Asbestos Standards

• Emergency repairs involving disturbance or removal may be Class 3
  • Trained/licensed person to perform
  • “Competent person” to oversee
  • May require monitoring, etc.
Housekeeping

Do not sand or dry buff.

Use wet stripping methods.

Use low abrasion pads at speeds below 300 rpm.

Burnish or dry buff only if finish remains.
DANGER
ASBESTOS CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
Asbestos Spills

Staff should report damaged ACM to Management Plan Administrator immediately.

Do not attempt to clean up spills Unless trained and certified!
#5 Medical Services

29CFR1910.151

22 Citations FYY 2014-15

100% Eyewash/shower if using corrosives
#6 Occupational Noise Exposure
29CFR1910.95

11 Citations FYY 2014-15

64% Hearing Conservation Program (exposure > Action Level - 85 DbA) including Audiometric testing (was 95%)

36% Controls if exceed PEL (90 DbA)
Occupational Noise Exposure

29 CFR 1910.95

PEL (8 hour) TWA - 90 dBA
Action Level - 85 dBA

- Install feasible engineering controls
- Adopt appropriate administrative controls
- Provide employees with hearing protection

Establish Hearing Conservation Program
## Sound Level Examples

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Chipper</td>
<td>100 - 110</td>
</tr>
<tr>
<td>Lawn Mower</td>
<td>95 - 110</td>
</tr>
<tr>
<td>Snowmobile</td>
<td>95 - 105</td>
</tr>
<tr>
<td>Chain Saw</td>
<td>95 - 105</td>
</tr>
<tr>
<td>Sidewalk Snow Plow</td>
<td>90 - 100</td>
</tr>
<tr>
<td>Sand and Salt truck</td>
<td>90 - 100</td>
</tr>
<tr>
<td>Exposure Limit</td>
<td>85 - 90</td>
</tr>
<tr>
<td>Vacuum Cleaner</td>
<td>80 - 85</td>
</tr>
<tr>
<td>Conversation</td>
<td>60 - 65</td>
</tr>
<tr>
<td>Whisper</td>
<td>30 - 40</td>
</tr>
</tbody>
</table>
Noise Levels for Common Tools

<table>
<thead>
<tr>
<th>Task/Tool</th>
<th>Noise Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortising</td>
<td>115</td>
</tr>
<tr>
<td>Orbital Sander</td>
<td>110</td>
</tr>
<tr>
<td>Table Saw</td>
<td>105</td>
</tr>
<tr>
<td>Planer</td>
<td>100</td>
</tr>
<tr>
<td>Belt Sander</td>
<td>95</td>
</tr>
<tr>
<td>Router</td>
<td>90</td>
</tr>
<tr>
<td>Metal Shear</td>
<td>85</td>
</tr>
<tr>
<td>Hand Drill</td>
<td>80</td>
</tr>
<tr>
<td>Circular Saw</td>
<td>75</td>
</tr>
<tr>
<td>Tile Saw</td>
<td></td>
</tr>
<tr>
<td>Impact Wrench</td>
<td></td>
</tr>
<tr>
<td>Miter Saw</td>
<td></td>
</tr>
<tr>
<td>Chop Saw</td>
<td></td>
</tr>
<tr>
<td>Chain Saw</td>
<td></td>
</tr>
<tr>
<td>Hammer Drill</td>
<td></td>
</tr>
</tbody>
</table>

Noise levels are measured in decibels (dB).
Affects of Noise

10 – 15% of workers exposed to 90 dBA for an 8 hour TWA WILL develop occupationally induced hearing loss.
The Average 25 Year Old Carpenter Has 50 Year Old Ears!
Hearing Conservation Program

Seven Basic Elements

• Noise exposure monitoring
• Audiometric evaluation
• Education and motivation
• Engineering and Administrative Controls
• Personal Protective Equipment
• Record keeping
• Evaluation of program
Administrative Controls

- Employee rotation
- Rest periods
- Division of work duties
Engineering Controls

- Sound absorbing materials
- Vibration isolation – dampen
- Surface dampening – coatings
- Barriers to re-direct sound
- Partial or total enclosure – isolation
- Mufflers at intake or exhaust
Personal Protective Equipment
(Ear Muffs and Plugs)

• Method of last resort to protect employee

• Expect less than Half the rated NRR

• Lack of training, improper fit
Audiometric Evaluation

- Crucial to success of HCP
- Indicates whether noise induced hearing loss is being prevented
- Baseline and annual testing
Noise Exposure Monitoring

- Characterize the hazard accurately
- Identify the affected employees
- Results must be reported in an understandable format

Two methods:
- Area – SLM
- Personal - Dosimeter
Training

Educate employees and employers about the nature of hearing loss

• Subtle & progressive
• Irreversible
• May cause safety hazards
• Increases feeling of isolation
• Psychologically distressing if severe
Hearing Protection

Inserting Foam Earplugs

Foam type earplugs must be inserted properly into the ear.

Roll earplug into small cylinder first, then insert in ear.
Hearing Protection

Inserting Foam Earplugs

Earplug incorrectly inserted

Earplug correctly inserted
Barriers to using hearing protection

THE FOUR C’s

• Comfort
• Convenience
• Cost (personal & $)
• Communications / Can’t hear warning signals
#7 HazWOpER

29CFR1910.120

12 Citations FYY 2014-15

100% Training & Annual retraining or demonstration of all required competencies

(Previously 9% Emergency Response Plan)
HazWOpER
29CFR1910.120

- Level of training depends on response
- Need to have copy & understand local EOP
- May need to know EOP of TSD or site
Hazwoper - Awareness

- Likely to discover a hazmat release
- Notify the proper authorities.
- Understand hazmat & risks
- Recognize the presence of hazmat
- Identify hazmat
- Limited role in ERP
Hazwoper - Operations

- Part of initial response
- Protect persons, property & environment
- Respond defensively to contain the release
- Keep a safe distance
- Mitigate spreading & Prevent exposures
- 8 hours of training
Hazwoper - Technician

- Respond to releases or potential releases
- Approach the point of release
- Plug, patch or stop the release
- 24 hours of training w/additional competencies
Hazwoper - Specialist

- Support hazardous materials technicians
- Duties parallel those of technician
- More directed or specific knowledge of the hazards
annual refresher training of sufficient content and duration to maintain their competencies, or shall demonstrate competency at least yearly.
#8 Recordkeeping

29 CFR 1904

15 Citations FYY 2014-15

67% Maintain the PEOSH 300 Accident Logs

33% Post the PEOSH 300A Summary
  – February 1 - April 30
  – PEOSH CSHO will request copies
OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Employee's Name</th>
<th>Job Title</th>
<th>Date of Injury or Onset of Illness</th>
<th>Where the Event Occurred</th>
<th>Describe Injury or Illness, Parts of Body Affected, and Object/Substance That Directly Injured or Made Person Ill</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Injury</th>
<th>Skin Disorder</th>
<th>Respiratory Condition</th>
<th>Poisoning</th>
<th>Hearing Loss</th>
<th>All Other Illnesses</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Death</th>
<th>Days Away from Work</th>
<th>Job Transfer or Restriction</th>
<th>Remaining Away</th>
<th>Away From Work (Days)</th>
<th>On Job Transfer or Restriction (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Page 1 of 1
OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below making sure you've added the entries from every page of the Log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.36 in OSHA's Recordkeeping rule for further details or the access provisions for these forms.

### Number of Cases

<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of deaths</td>
<td>0</td>
</tr>
<tr>
<td>Total number of cases with days away from work</td>
<td>0</td>
</tr>
<tr>
<td>Total number of cases with job transfer or restriction</td>
<td>0</td>
</tr>
<tr>
<td>Total number of other recordable cases</td>
<td>0</td>
</tr>
</tbody>
</table>

### Number of Days

<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of days away from work</td>
<td>0</td>
</tr>
<tr>
<td>Total number of days of job transfer or restriction</td>
<td>0</td>
</tr>
</tbody>
</table>

### Injury and Illness Types

<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Injury</td>
<td>0</td>
</tr>
<tr>
<td>(2) Skin Disorder</td>
<td>0</td>
</tr>
<tr>
<td>(3) Respiratory Condition</td>
<td>0</td>
</tr>
<tr>
<td>(4) Poisoning</td>
<td>0</td>
</tr>
<tr>
<td>(5) Hearing Loss</td>
<td>0</td>
</tr>
<tr>
<td>(6) All Other Illnesses</td>
<td>0</td>
</tr>
</tbody>
</table>

*Post this Summary page from February 1 to April 30 of the year following the year covered by the form.*
#9 Indoor Air Quality Std

N.J.A.C. 12:100-13

2 Citations (down from 15 in 2008-13)

- 50% control of microbial contamination
- 50% Documentation of PM Plan
PEOSH IAQ Standard

- Adopted in 1998 First IAQ Standard in U.S.
- Revised May 21, 2007 by PEOSH Advisory Board, IAQ Subcommittee

1. Designated Person
2. Written IAQ Program
3. 48 hrs to remove damp materials
Compliance Program

Employer shall identify and train a Designated Person: person given responsibility [and authority] by the employer to take measures to assure compliance” (4 citations)

- Prepare written plan
- Review and update written plan annually
PEOSH IAQ Standard
N.J.A.C. 12:100-13.3

- Establish a preventative maintenance schedule
- Ensure inoperable components are replaced or repaired promptly
- Ensure no microbial growth
- Implement general or local exhaust ventilation
PEOSH IAQ Standard
N.J.A.C. 12:100-13.3

- Check the HVAC system when:
  - Carbon Dioxide (CO2) levels > 1,000 ppm
  - Temperature is < 68°F - 79°F
- Prevent contamination of fresh air supply
- Check natural ventilation portals are maintained
- Promptly investigate all employee IAQ complaints
PEOSH IAQ Standard
N.J.A.C. 12:100-13.4

Controls of Specific Contaminant Sources

– If General Ventilation inadequate, implement other control measures

– Microbial Contaminants
  
  • Promptly repair water intrusion
  
  • Remediate damp/wet material by drying or removal within 48hrs of discovery
  
  • Remove visible microbial contamination
Renovation and Remodeling

- Evaluate chemical hazards prior to selection or use.
- Isolate construction areas (scheduling, physical barriers, pressure differentials)
- Utilize local exhaust ventilation
- Notify employees 24 hours prior to any construction
- Construction areas must be cleaned and aired out prior to re-occupancy
PEOSH IAQ Standard
N.J.A.C. 12:100-13.6

Recordkeeping

- Written IAQ Program
- Documentation of Designated Person Training
- Written Preventive Maintenance Program
- Maintenance Log (Date, What, Who)
IAQ Employee Complaints

- Follow Up on Employees Complaints
  - Go to the location(s) of the complaint
  - Conduct interviews
  - Review building operations and maintenance
  - Complete PEOSH IAQ Inspection Checklist
  - Involve employees through L/MH&SC*
  - Communicate outcome and corrective action
  - Report all complaints to one person

*Labor-Management Health & Safety Committee
#10 Sanitation

5 Citations (0 previously)

Facility housekeeping

Number of Toilets & Washing Facilities
Bloodborne Pathogens
1910.1030

0 Citations (down from 5 2008-13)
Bloodborne Pathogens

Written Exposure Control Plan
Work Practice Controls
Post-exposure Evaluation & Follow-up
Training & Information
Records
Questions & Answers