



Industrial Hygiene Equipment Overview

if you want it, we got it...

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Occupational Safety
& Health Division

Cherie Berry, Commissioner of Labor

For Public Officials' Use Only



Objectives

1926 Subpart I

- In this course, we will discuss the following:
 - Why is it important?
 - IH equipment
 - Calibrations and accuracy
 - Effectively managing your time
 - Group work

Why is it important?

- Familiarize yourself with all of our equipment
- Ability to evaluate and quantify
- Save time and increase effectiveness
- Knowledge is power

Indoor Air Quality- Jill Warren

- Boroscope
 - Fungal growth
- 4-gas meter
 - LEL
 - H₂S
 - CO
 - O₂
- Qtrak
 - CO
 - CO₂
 - T and H



Active air sampling – John Jaskolka

- Pumps
 - High flow
 - Low flow
- Calibrators
- Cyclones
 - Dorr-oliver
 - Aluminum
- Media



SGS

GALSON

Active air sampling – John Jaskolka



What is this????

Noise – Paul Sullivan

- Dosimeters
 - violation
- Octave band analyzers
 - abatements
- Sound level meters
 - screening



Heat stress— Grant Quiller

- WBGT
 - handheld



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IH Equipment

- Draeger CMS
 - Acids
 - Formaldehyde
- Dusttrak
 - Total & respirable dust
 - Mass concentration?
- MIE PDR
 - Total & respirable dust



IH Equipment

- ToxiRAE – Single Gas
 - CO
 - CO2
 - CL
 - NH3
- ToxiRAE PID
 - VOC
 - 10.6 lamp



IH Equipment

- Jerome J405
 - Mercury vapor
- Extech
 - EMF
- TIFF 5650
 - Halogen detector



Other Equipment

- Tachometer
- Force gauge
- pH monitor
- Light meter
- Calipers
- Screens
- Slip meter
- Measuring wheel
- Intrinsically safe camera

Calibration and accuracy

- Annual calibrations
 - Dustrak
 - Qtrak
 - WBGT
 - Dosimeters
 - Calibrators
- Maintain these records

Calibration and accuracy

- Calibration gas
 - Single gas
 - VOC
 - 4-gas
- Active air sampling
 - Within 5%

Calibration and accuracy

- Why is this important??!!

Effectively managing your time

- Required to quantify all air contaminant complaints
- Permissible Exposure Limits
 - 8-hour time-weighted averages
 - Short-term exposure limits
 - Ceilings
- Make the best use of your time
 - What does the OSHA Technical manual say

Effectively managing your time

- Can you conduct full shift sampling on every inspection?

Group work #1

- Referral 203448295 Smithfield Packaging
 - Due to equipment failure in the ventilation system of the production equipment, there was a nitrogen leak that displaced oxygen in the processing area. Five employees were taken to the hospital and treated and released.

Group work #2

- Complaint 209612654 Sealand
 - Employees are operating concrete saws without wearing respiratory protection and are exposed to the dust. The work is being performed in the evenings.

Group work

- Complaint #209677327 Chicago Tube and Iron
 - Employees are experiencing symptoms, including headaches and nausea, due to being exposed to smoky fumes, from MASTERDRAW® lubricant, coming from the induction oven, and filling the air.

Group work

- Complaint #209654250 Tarheel Marble Company, Inc.
 - Employees are experiencing coughing and sneeze while inside the facility. Employees are inhaling dust from the polishing of marble and gas fumes from a machine used to warm parts. Employees are not provided proper mask while inside the facility.

Summary

- In this course, we discussed:
 - Why is it important?
 - IH equipment
 - Calibrations and accuracy
 - Effectively managing your time

Thank You For Attending!

Final Questions?

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