

1986 VCM/LEAD/NOISE/ASBESTOS/RESPIRATORY HEALTH TRAINING
-CLASS OUTLINE-

9/17/86

INSTRUCTORS: Safety Department Personnel

ATTENDEES: All Plant Personnel

LOCATION: Plant Auditorium

INTRODUCTION

MAIN SUBJECT: Employee Health Hazards and Their Control

EMPHASIS: VCM
Lead
Noise
Asbestos
Respirators

SCOPE: Where we stand
Where we go from here
Where you fit in

HAZARDS

VCM

- * Colorless, sweet-smelling gas
- * Has a low "flashpoint"
- * Can cause "AOL," a finger bone disease
- * A cancer-suspect agent. Over 100 cases of angiosarcoma
- * Breathing high concentrations can make you pass out
- * Touching liquid can cause frostbite
- * Inhaling smoke from fires can cause severe lung damage
- * May cause chromosome damage
- * VCM FACTS PAMPHET
 - Pass out
 - Contains a good deal of information we won't cover

LEAD

- * Fine, light powders used in Compound
- * Uncontrolled overexposure can cause lead poisoning
 - Damage to:
 - Nervous System
 - Reproductive System
 - Blood System
 - Kidneys
 - Can be fatal
- * Can enter body by inhaling or ingesting
- * Warning Signs:
 - Stomach pain
 - Loss of appetite
 - Nausea
 - Metallic taste
 - Constipation
 - Tremors
 - Irrational behavior
 - Insomnia
 - Convulsions
 - Headaches
- If you have any you think are related to work, see your supervisor and the Plant Nurse

NOISE

- * Hearing loss is a natural part of aging
- * It can not be repaired
- * It can be made worse by excessive exposure to noise
- * The higher the noise, the less time is required to do harm

ASBESTOS

- * Still used in certain parts of the plant (encapsulated, e.g.: in Plasticizer Building)
- * Very short fibers can lodge in the lung, causing long-term problems, including "**asbestosis**," the most common sickness
- * Other illnesses are possible, including cancers of the digestive system

EXPOSURE GOALS AND SAFE LIMITS

PLANT GOAL: KEEP EXPOSURES TO ALL ENVIRONMENTAL HAZARDS
 AS LOW AS POSSIBLE

SAFE LIMITS

- | | |
|----------|---|
| VCM | 1 ppm, 8-hr TWA
5 ppm, averaged over any 15-minute period |
| LEAD | 50 micrograms of lead per cubic meter of air, 8-hr TWA
- Lower for more hours in the work period |
| NOISE | 90 dBA, 8-hr TWA
87 dBA, 12-hr TWA |
| ASBESTOS | 0.2 Fibers per cubic centimeter (as of 6/20/86, replacing
older limit of 2 fibers) |

LEAK AND SPILL CONTROL

GENERAL

- * Keep all materials contained!
- * Use the correct container for each material
- * Keep the container closed
- * Keep the container properly labeled

VCM

- * No VCM leak is acceptable
- * Leak repair always has the top priority
- * Indicators include: icing, hissing noises, condensation, odor, and measurements with instruments

LEAD

- * Keep dusting to a minimum
- * Avoid unnecessary crushing of empty lead bags. Do near the ventilation hood, if possible
- * Use vacuum cleaing methods to clean with. **Use of compressed air with lead is illegal!**

ASBESTOS

- * Before handling asbestos
 - Rope off the area
 - Get Tyvek suit, rubber gloves, and a "high efficiency" Airhat
 - Bring plastic bags, open top drums, and plastic sheeting to the site
- * During the work
 - Keep dusting to a minimum
 - Keep material wet at all times
 - Catch falling pieces of material with plastic sheeting
 - Make as few cuts as possible
 - Do not drop material, if possible
 - Place all scraps in plastic bags as work proceeds
- * After the work
 - Put all collection bags and sheets in drums
 - Put Tyvek suits and gloves in drums
 - If outside, flush area with water
 - If inside, wet-wipe
 - Close drums and apply labels

PROTECTIVE CLOTHING AND EQUIPMENT

RESPIRATORS

FACIAL HAIR POLICY

- * For all personnel who can be assigned emergency duties
- * No facial hair permitted in area of respirator seal. It seriously decreases respirator effectiveness
- * Medical certification required for all personnel who may have to use respirators
- * No exceptions allowed for users

AIR-LINE RESPIRATORS

- * Breathing air supplied to mask via a hoseline
- * Good for any chemical, but used mostly with VCM (up to 1,000 ppm)
- * Used for a variety of routine jobs associated with VCM
 - Hooking/unhooking VCM railcars
 - Changing VCM filters
 - Opening, depressuring, or isolating any VCM equipment
 - Working in the VCM compressor shed
 - All work, including maintenance, where VCM is present above 1 ppm

SCOTT AIR-PAKS

- * Self-contained respirator
- * Good for any chemical, but used mostly with VCM
- * Used for emergencies
- * Must be used for protection against VCM
 - Above 1,000 ppm
 - In unknown concentrations

SLING-PAKS

- * Smaller version of the Scott, "2A" unit. Gives same degree of protection
- * Five in the plant, all in Vinyl
- * Used when finding leaks and during emergencies

BULLARD HOOD-TYPE RESPIRATOR

- * A special type of air-line respirator
- * Used for Dust Collector entry

3M AIRHAT (DUST, MIST, AND FUME)

- * A battery-operated, air-purifying respirator
- * Used when charging Compound blenders, working in the Color Weigh Room, or any other job involving lead
- * Keep assigned Airhat clean
- * Check airflows daily. Change filters if needed to keep good airflow
- * Turn in for thorough cleaning and repair each month
- * Report any problems immediately. Do not use a bad Airhat

3M AIRHAT (HIGH EFFICIENCY)

- * 2 Airhats are being modified to become "high efficiency"
- * For use when handling asbestos, per new OSHA standard

HEARING PROTECTION

- * High noise areas are posted
- * Can't depend on warning signs for warning in all cases
- * Recognize high noise danger situations
- * Wear ear plugs or muffs

Miscellaneous

- * Keep endangered parts of the body covered, especially when handling acids, caustics, and solvents
- * Head and eyes - Goggles, faceshields, glasses
- * Arm and hand - Gloves, long sleeves (no cut-off sleeves)
- * General body - Aprons, disposable clothing, rainsuits

VENTILATION

- * Keep all vent fans and hoods running - each serves an important purpose
- * Report inoperative or defective equipment
- * Follow department procedures in Compound
 - Check Magnahelic guages
 - Keep Building Ventilation System hoppers cleaned out
 - Check airflows with the department velometer

EMERGENCIES

- * Must be prepared to handle them
- * Know what you are expected to do **ahead of time**
- * Leave endangered areas when alerted unless your job is to stay and help handle the emergency
- * Pre-plan what you will do under different circumstances
- * Remember that **everyone** must be accounted for as quickly as possible during any emergency

MEDICAL TESTING

- * Done to see if any medically significant problems related to VCM, Lead, or other environmental agents exist
- * Repeat testing, including blood-lead tests, will be done, as needed
- * Take advantage of the program. **Participate.**
- * Advise your supervisor of any problems you have with the service
- * You will be given a copy of your exam results when the doctor has finished his work

DOSIMETRY

GENERAL

- * We measure routine exposures to VCM, lead, and total particulates (dusts). Other exposures, including those involving unusual jobs, are measured when the need arises.
- * Noise measurement is also done, but on a less frequent basis, and using outside help and special equipment

EQUIPMENT

REAL "MINIMONITOR" BADGES

- * Used to monitor VCM exposure
- * **Wear the badges when assigned**
 - Membrane facing out
 - Do not cover them with outer garments or protective clothing
 - Do not lay them about, on tables, desks, etc.

AIR PUMPS AND CASSETTE FILTERS

- * Used to measure exposures to lead and dusts
- * Wear at all times during work period
 - Wear filter on collar, pointed down
 - Report pump problems immediately

DOSIMETRY CARD

- * Fill out card and turn in at guard house at end of work period
- * Note respirator use
- * Note anything you did, or was near, which you think might have caused an overexposure

RESULTS

- * Examined carefully by supervision and management. No overexposure is considered acceptable to them.
- * You will be notified of any overexposure as soon as the results are available

VCM - Usually within 3 - 5 days
Lead and Dust - Usually within 2 1/2 - 3 1/2 weeks

PERSONAL HYGIENE

- * There is no good substitute for good, consistent personal hygiene
- * Avoid contact with materials unless necessary to do a job
- * Always wash hands, face, arms before eating, drinking, smoking, or applying cosmetics. This is especially so with lead, and is a good practice for all materials
- * Do not take food, drinks, cosmetics, or tobacco products into lead areas
- * Remove contaminated, protective clothing before entering clean areas, particularly when dealing with lead.