INDUSTRIAL HYGIENE

Issues Facing the Semiconductor Industry

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Industrial Hygiene Emerging Issues

- Chemical Approval
- Ergonomics
- E-Biz
- EHS Cross-Training
- Multiple Chemical Sensitivity
- Risk Assessments
- Indoor Air Quality
Chemical Approval

• EHS chemical review policy

• Challenge to review new R&D chemicals
  – Developing an effective and manageable review system to cover all EHS concerns
  – Lack of readily available toxicology data
  – Poor quality of MSDS’s
  – Proprietary info and trade secrets
  – Managing chemistry changes and program compliance

• Cross-site proliferation and local regulations.
Ergonomics

• Majority of injuries are ergo related and behavior based
  – Offices and Manufacturing
  – Changing behavior and culture can be challenging

• OSHA Standard
  – Lack of standard requires communication and persuasion skills to implement & sustain program and systems
  – Impact of OSHA Standard should it be ratified
Ergonomics Cont-

- Determining direct and indirect costs
- Quantify loss of productivity caused by ergonomic injury
- Ergo research is ongoing
- Current with ergonomic product enhancements
E-Biz

• Critical business need for implementation
• E-Biz skills not well developed for most EHS professionals
• EHS professionals challenged to grow E-Biz skills
• Projects can be resource intensive
• Often pushed to low priority in presence of current issues and responses
EHS Cross Training

• Improves your marketability
• Seek opportunities to partner with other EHS and related groups: Ergo, IH, Env, Safety, OH
• Try to maintain an “expert” level in an area
  – Formal expert opportunities such as:
    • LSO and RSO
    • Formal program ownership such as Asbestos Management, Lead Awareness, etc
• Old dogs CAN learn new tricks, and it’s healthy for them to do so!
Multiple Chemical Sensitivity

- Understanding the toxigenic & psychogenic impacts
  - Metabolic pathways for MCS are difficult to develop
  - Sensitive to individual susceptibility
    - Levels below TLV may cause adverse health effects
    - External factors can be contributing to MCS symptoms (i.e. diesel exhaust, tobacco smoke, paint, pesticides, etc)

- Current literature is inconsistent
  - Experts have mixed opinions

- Work closely with OH Professionals
  - Nurses and Occupational Physicians
Risk Assessments

• New and emerging technologies and processes needing risk assessment
  – Risk to employees (Toxicity)
  – Environment (Global Warmer, Ozone Depleter, etc.)
  – Community (Odors, Perception, etc.)
  – Compliance (new requirements)

• Document your process & outcomes

• Seek support outside EHS when needed

• Establish system requiring reassessment of processes, tasks, or programs.

• Critical in attaining ISO certifications
Indoor Air Quality

• IAQ is continually a Hot Topic
  – Office Areas
    • Old Buildings
    • New Building
  – Manufacturing Areas
    • Transient Odors

• Current Issues/Concerns
  – Process odors
  – Mold and microbial contamination
Indoor Air Quality

• Challenges for Industrial Hygienists
  - Communicating health risks
  - Managing tough customers
  - Magic wand mentality
  - Keep current with the research
  - Think outside the box!
  - Developing clear follow-up systems
  - Utilize resources
    • Leverage field experts such as HVAC specialists and microbiologists