ANSI Z-390 - Accepted Practices for Hydrogen Sulfide Safety Training Programs

Standard Update
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2016 OSHA Oil and Gas Conference

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ANSI Z-390 Hydrogen Sulfide Training Requirements

• Committee formed in January 1, 1993 by Frank Perry, CSP
• Little changed since initial adoption
• Last formal revision 2006
• Latest revision in comprehensive
  – User friendly
  – Less prescriptive
  – Tackles changing exposures
Committee Priorities

• *Protect the safety and health of workers*

• Minimize the burden on industry to the extent possible

• When in conflict, default to protecting workers
Why Revision?

- References to obsolete instructional technology and resources
- Presentation format not flexible
- Required presentation of material that wasn’t pertinent to most workers
- Structure of document needed improvement
- Unease with Visitor Training
- Unease with abbreviated refresher
- ACGIH Revision of TLV®-TWA to 1 PPM
Obsolete Technology / Resources

- 1994 – VHS, Overheads, etc.
- 2016 – Internet, Online Meetings, PPT
- Some referenced videos no longer available
Presentation Format Not Flexible

• 1994 – Paradigm classroom – lecture
• 2016 – Flexible open to partial remote instruction (not applicable to SCBA training)
Presentation of Non-Pertinent Info

• 1994 – extremely comprehensive H2S info presented to all students
• 2016 – students must be presented with info to assure their safety
• Potentially optional info:
  – Dispersion models
  – Transportation of H2S Cargos
  – Emerging Technology
Structure of Document

• Changed to single column format
• Eliminated redundant material
• Collected similar information
• Eliminated material that seemed to be more appropriate to a H2S safety standard
• Eliminated dated references
• Improved logical flow of the paragraph structure
Visitor Training

• Visitor training eliminated as a abbreviated course
• Visitors must receive the full worker training program
• You’re either exposed or you’re not.......and the beard as to go!

• This is the one area of the revision that is significantly stricter
Refresher Training

- Required Annually
- Full course must be presented, information and hands-on
- Recognizes that a refresher course could be somewhat shorter with experienced students
ACGIH TLV®-TWA

• Key driver in need to revise standard
• H2S ACGIH TLV®-TWA changed from 10 PPM to 1 PPM
• Generally, industry and safety professionals consider 1 PPM to be excessively low
• The Z390 Committee formally commented to ACGIH and expressed concern
ACGIH TLV®-TWA

- Initially committee consider adopting 1 PPM
- Decided to allow instructors/companies to determine safe “Occupational Exposure Levels” taught based on:
  - Company requirements and safety professionals
  - Regulations (OSHA, EPA, TX RRC #36, etc.)
  - Consensus Standards (API, ANSI, ACGIH, NIOSH, etc.)
Occupational Exposure Limit (OEL):

• A health-based workplace standard to protect workers from adverse exposure (e.g., PELs, TLVs®, RELs, WEELs, etc.) adopted by the employer or facility owner
• OELs are not trigger points
• They are guidelines designed for use by industrial hygienists in making decisions regarding safe levels of exposure
• EHS professionals should note that OELs are only one factors to be considered in evaluating specific workplace hazards
  – Reference (ACGIH)
References

- **OSHA** - General Duty Clause SEC. 5. Duties (a)(1)
- **API RP 49** - Recommended Practice for Drilling and Well Servicing Operations Involving Hydrogen Sulfide.
- **API 55** - Recommended practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide
- **BLM** - Onshore Oil and Gas Order No. 6, Hydrogen Sulfide Operations
- **Railroad Commission of Texas Statewide Rule 36** - Hydrogen Sulfide Safety
Questions?

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