



Course Syllabus

Course Length: 4 hours	Prerequisites: None	Hands-on Training: None
Refresher Training Required: Yes Frequency: Annually		References: <ul style="list-style-type: none"> ● ACGIH ● ANSI Z390.2 – 2017 ● API RP 49 ● API RP 55 ● MMS 250.490 ● Texas Railroad Commission

Description

Exposure to workplace hazards can cause harm to workers and in certain situations can even lead to death. Many workplace hazards are foreseeable and can be easily identified. But what do you do when you have the potential to be exposed to a deadly hazard you cannot see? This is the danger for workers who are at risk of being exposed to hydrogen sulfide (H₂S).

H₂S Clear is designed to provide instruction on the clear and present dangers of H₂S. The course will help students in the energy sector to identify the physical and chemical properties, sources, hazards, and exposure factors of H₂S. It will also introduce students to the measures that can be used to control and reduce exposure. Students will learn about the different H₂S detection and monitoring systems, as well as the proper selection, use, and maintenance of personal and respiratory protective equipment. The course ends with a discussion on

emergency response procedures, corrective actions, and shutdown measures which may be necessary in the event of a H₂S emergency.

Certifications

Upon successful completion of the course, students receive their PEC ID card. The back of the card reflects all PEC training the student has completed. Employers may also verify student training by visiting PECCard.com online.

Course Evaluation

Students will receive exams to verify competency in the instruction provided in H₂S Clear.

Objectives

Upon course completion, students will be able to:

1. Describe the regulations and standards that are applicable to hydrogen sulfide.
2. Compare and contrast the responsibilities of companies and workers.
3. Identify the sources of hydrogen sulfide.
4. Describe the physical and chemical properties of hydrogen sulfide.
5. Explain factors of hydrogen sulfide exposure.
6. Discuss the health effects of hydrogen sulfide.
7. Explain how engineering controls are used to control hydrogen sulfide.
8. Describe the sources, hazards, and control measures associated with sulfur dioxide.
9. Identify administrative controls used to reduce exposure to hydrogen sulfide:
 - a. Warning signs and alarms
 - b. Stop work authority
 - c. Job safety analyses
 - d. Work permits
 - e. Observation of wind conditions
 - f. The buddy system
10. Describe how the American Petroleum Institute's Recommended Practices are used to prevent exposure to hydrogen sulfide.
11. Compare and contrast the different hydrogen sulfide detection and monitoring methods.

12. Describe how to correctly use a gas monitor to detect the presence of hydrogen sulfide.
13. List the information required in a company's Respiratory Protection Program.
14. Describe the required respiratory protection and site-specific training required before beginning work at a jobsite.
15. Explain how medical evaluations are used to make sure workers can use respirators safely.
16. Explain the importance of being fit tested before using a respirator in the field.
17. Compare types of respirators used for protection against hydrogen sulfide exposure.
18. Describe the criteria that companies use to select respirators for workers.
19. Explain how to use respiratory protection to meet the regulatory requirements of 29 CFR 1910.134.
20. Name the essential parts of a hydrogen sulfide emergency plan.
21. List the steps for a typical hydrogen sulfide rescue procedure and discuss the importance of training for providing first aid.
22. Explain the purpose of post-exposure medical evaluations.
23. Recognize the importance of being trained on emerging technology.

Course Overview

Module 1

- Industry Overview
- Introduction to Hydrogen Sulfide
- Effects of Hydrogen Sulfide
- Controlling the Hazards
- Reducing Hazards

Module 2

- Protecting Workers: Detection and Monitoring
- Protecting Workers: Respiratory Protection
- Emergency Response
- Emerging Technology
- Protect Yourself