

Revised by: R. Mallard
Reviewed by: C. Bertram
Reviewed by: K. Bandy
C & G Ed approval: October 11, 2010
Board approval: November 11, 2010

Industrial Education Safety (IES) 1103 Plus Safety Training (.25 Unit)
[formerly Petroleum Technology 94H]

Prerequisite: None

Total Hours: 4 hours lecture; 4 hours lab (8 hours total)

Catalog Description: This lecture and activity course is designed to provide a fundamental understanding of permit-required confined space entry and non-entry rescue in accordance with the California Occupational Safety and Health Act, (Cal-OSHA), Title 8, California Code of Regulations, Sections 3203, 3314, 5157, 5158, 6535 and 6536, and Federal OSHA 1910.146. Additionally, training in the principles of fire extinguisher operation, awareness of the hazards of Naturally Occurring Radioactive Materials (N.O.R.M.) commonly found in the oilfields, Cardiopulmonary Resuscitation (CPR). This course is offered on a Pass/No Pass basis with the option to receive a letter grade.

Type of Class/Course: Degree Credit

Textbook: WESTEC EMP America. *Confined Space Plus Medic First Aid*. WESTEC EMP America. Unpublished.

Additional Required Materials: None

Course Objectives:

By the end of the course, a successful student will be able to

1. explain, apply and demonstrate the required use of energy control, permits, personal protective equipment, and non-entry rescue techniques, supervisory tasks, and Self Contained Breathing Apparatus (SCBA) usage necessary to performing permit-required entry of equipment operated in the field by the petroleum industry in California; and, compliance with Federal OSHA on Federal property,
2. describe and demonstrate the use of fire extinguishing equipment,
3. demonstrate an awareness of and recognize the most common locations for the presence of N.O.R.M., and
4. perform Care Initiator tasks for rendering first aid to a victim of injury or illness.

Course Scope and Content:

- Unit I Duties of a Confined Space Entrant, Attendant, and Supervisor
- A. Entrant responsibilities
 1. communication of hazardous conditions prior to and during work being performed in a permit/non-permit-required confined space.
 - B. Attendant responsibilities
 1. control of activities,

2. monitoring for hazardous conditions
 3. non-entry rescue procedures prior to and during work being performed in a permit/non-permit-required confined space.
- C. Supervisor responsibilities
1. oversight, evaluation of, and procedural preparation for entry into a permit/non-permit-required confined space, and close out of the job upon completion.

Unit II Principles of Confined Space Non-Entry Rescue

- A. Three levels of rescue
 1. self
 2. non-entry
 3. entry
- B. Space and task analysis to determine whether non-entry or entry is indicated.
- C. Equipment requirements for non-entry rescue.
- D. Use of life-line and tripod

Unit III Completing and Analyzing a Confined Space Permit

- A. When permits are required
- B. Setting time limits
- C. Pre-entry atmospheric testing
- D. Determining the need for continuous atmospheric monitoring
- E. Entrant rights to observe atmospheric tests
- F. Authorization signatures
- G. Closing a permit

Unit IV Donning and Doffing an SCBA

- A. Pre-use inspection
- B. Don the full-face mask
- C. Seal check
- D. Don the air pack
- E. Air flow controls
- F. Emergency air signals and alarm
- G. Removing the SCBA
- H. Post-use inspection and repacking

Unit V Principles of Fire Extinguishers

- A. Types and classes
- B. Inspection requirements
- C. Activation
 1. Pull a Pin-Aim-Squeeze-Sweep from Side to Side (P.A.S.S.)
- D. Dry fire

Unit VI N.O.R.M.

- A. Define
- B. Sources
- C. Hazards
- D. Activities that disturb N.O.R.M. build-up
- E. Precautions and personal protective equipment

- F. Personal clean-up following work in the presence of N.O.R.M.

Unit VII Medic First Aid Retraining.

- A. Function of the Care Initiator
- B. Explain actions represented by the acronym--Stop-Environment-Traffic-Unknown Hazards-Protect Yourself (S.E.T.U.P.)
- C. Review respiratory assistance techniques
- D. Review cardiac compression technique

Unit VIII Field Exercises

- A. Practice use of SCBA
- B. Dry fire extinguishers
- C. Hands-on use of atmospheric testing equipment

Lab Content:

1. Hands-on field exercises with equipment
 - a. Fire Extinguishers
 - b. Atmospheric testing equipment
2. Hands on practical exercises of CPR techniques
3. Practical hands-on exercise using personal protective barriers while administering first aid

Learning Activities Required Outside of Class: None

Methods of Instruction:

1. Lecture
2. In-field group practical exercises

Methods of Evaluation:

1. Written examination
2. Skill observation check-off by the instructor