

COURSE OUTLINE

HAZARDOUS WASTE OPERATIONS & EMERGENCY RESPONSE (HAZWOPER)

To fulfill classroom requirements of OSHA 29 CFR 1910.120(e), (p), & (q)

40 HOUR COURSE OUTLINE

OVERVIEW

This course provides the 40-hour training requirement mandated by OSHA 29 CFR 1910.120. This course will cover health and safety procedures, chemical protective clothing, decontamination, and general techniques for managing hazardous materials. This class is highly interactive and requires students to fully participate to receive a course certification. All training materials are provided for the course. Students will participate in group discussions, a tabletop exercise and a hands-on practical followed by an examination on the final day.

Qualitative respirator fit-testing is available for an additional fee. Students who elect to receive fit-testing must produce a copy of their medical certification and must be clean shaven **before** fit-testing can be conducted; please refer to OSHA's Respiratory Protection Standard, 1910.134 for more information. To schedule the fit-test, please contact Customer Service at 800-711-2706, (select option 1) or register at: <https://www.csregs.com>

DAY ONE OPENING

1. Administrative
2. Course introduction

REGULATORY DISCUSSION

1. Environmental Protection Agency
 - A. Resource Conservation and Recovery Act (RCRA) 1976
 - B. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 1980
 - C. Superfund Amendments and Reauthorization Act (SARA) 1986
3. Occupational Safety and Health Administration (OSHA)
 - A. Employer & employee rights and responsibilities
 - B. Hazwoper, 29 CFR, 1910.120 / 1926.65

GENERAL SAFETY HAZARDS

1. Types of hazards
2. Personal Safety Issues
3. General Safety Issues
4. Fall Protection
5. Excavation Safety
6. Hand and Power Tools
7. Lock out/Tag out
8. Heavy Equipment

PLANNING AND ORGANIZATION

1. Site Characterization
2. Health and Safety Plans



COURSE OUTLINE

HAZARD COMMUNICATION FOR HAZWOPER

1. NFPA 704
2. DOT System
3. HMIS III
4. Safety Data Sheets
5. Other Identification Systems

CHEMICAL HAZARD ID SYSTEMS

1. Properties of chemicals
 - A. Toxic
 - B. Reactive
 - C. Ignitable/Combustible
 - D. Corrosive

DAY TWO

TOXICOLOGY

1. Acute vs. Chronic
2. Immediate vs. Delayed Effects
3. Reversible vs. Irreversible
4. Routes of entry
 - A. Inhalation
 - B. Absorption
 - C. Ingestion
 - D. Injection
 - E. Contact
5. Chemical interaction effects
6. Target organ responses
7. Dose/Response relationship
8. Exposure Limits

IONIZING RADIATION

1. Fission
2. Particles
 - A. Alpha
 - B. Beta
 - C. Gamma
 - D. Neutrons
3. Radiation Meters
4. Exposure Doses

RESPIRATORY PROTECTION

1. Respiratory Protection Program
 - A. Selection
 - B. Training
 - C. Sanitizing
 - D. Inspection
 - E. Maintenance

HEAT STRESS

1. Factors
2. Heat Illnesses
 - A. Heat Rash
 - B. Heat Cramps
 - C. Heat Syncope
 - D. Heat Exhaustion
 - E. Heat Stroke
3. Related Stressors
4. Pre/Post Entry Assessments
5. Prevention

MEDICAL SURVEILLANCE

1. Surveillance
 - A. Pre-Assignment Examinations
 - B. Periodic Examinations
 - C. Termination Examinations
2. Treatment
 - A. Emergency
 - B. Non-emergency
3. Record Keeping

DAY THREE

METERS AND MONITORING

1. Reasons for monitoring
2. Sampling Techniques
3. Meter Characteristics
4. Combustible Gas Indicators
5. Photo Ionization Detectors
6. Flame Ionization Detectors
7. Vapor Analyzers
8. Toxic Meters
9. Multi-gas Analyzers
10. Colorimetric Detectors
11. Sound Level Meters
12. Heat Stress Monitors
13. Instrument Safety
14. Meter Limitations



COURSE OUTLINE

FIRE PROTECTION REQUIREMENTS

1. Classes of Fire
 - A. Class A
 - B. Class B
 - C. Class C
 - D. Class D
 - E. Class K
2. Fire Extinguishers
3. Open Yard Storage
4. Fire Brigades
5. Foams

CONFINED SPACES

1. Overview
2. Statistics
3. Training
4. Non-permit Required Confined Spaces
5. Permit Required Confined Spaces
6. Entrants
7. Attendants
8. Supervisors
9. Confined Space Rescue

HANDLING DRUMS AND CONTAINERS

1. Container Hazards
2. Inspecting Containers
3. Classification of Containers
4. Handling Containers
5. Staging
6. Bulking
7. Shipping

SAMPLING AND PACKAGING

1. Sampling Locations
2. Sample Planning
3. Sample Types
4. Sampling Strategies
 - A. Biased
 - B. Unbiased
5. Field Logs
6. Chain of Custody

DECONTAMINATION

1. Decontamination Planning
2. Decontamination Methods
 - a. Physical Removal
 - b. Chemical Deactivation
 - c. Decontamination Solutions

3. Decontamination Effectiveness
4. Decontamination Procedures
5. Emergency Decontamination

SITE EMERGENCIES

1. Personal Emergencies
2. Work Site Emergencies
3. Public Emergencies
4. Causes of Emergencies
5. Emergency Response Plans
 - A. Identification of Personnel
 - i. Incident Commander
 - ii. Health and Safety Officer
 - iii. Response Teams
 - a. Entry
 - b. Rescue
6. Site Maps
7. Site Control
8. Accountability
9. Emergency Evacuation
10. Coordination with Government Agencies
 - A. National Contingency Plan
11. Emergency Site Safety

DAY FOUR

INTRODUCTION-ADMINISTRATIVE

ANNUAL REGULATORY UPDATES

1. OSHA
2. EPA

SITE CHARACTERIZATION

Group activity for a scenario site, students will:

1. Identify Site Hazards
2. Identify Monitoring/Evaluating Requirements
3. Identify Controls for those Hazards

SITE PLANNING

Group activity for a scenario site, students will:

1. Determine the Organizational Structure
2. Identify Site and Emergency Response Plans
3. Discuss After Action Procedures & Critique



COURSE OUTLINE

EXERCISE SCENARIO

This is a group activity for an emergency at the scenario site.

*PRACTICAL

Students don and doff totally encapsulating suits/SCBA for a specified activity.

FINAL EXAMINATION

