

**HAZARDOUS WASTE OPERATIONS & EMERGENCY RESPONSE (HAZWOPER)  
COURSE**

Training Agenda

**PURPOSE:**

To establish a systematic CEU Accreditation Program ensuring a consistent, accurate, and continuous HAZWOPER training program. This program will assist in maintaining professional license and certification requirements as it pertains to their assigned job duties.

**PRESENTER:** Joe Halle, Safety Manager, Plans, Readiness and Analysis Group

**PRESENTATION DATES/TIMES:** TBD

**PRESENTATION DURATION:** 40 hours

**PRESENTATION TOPICS:** HAZWOPER Course

**DAY 1 (7am to 4:30pm)**

7am to 7:30am (30 min)

HAZWOPER:

- Course registration
- Daily sign-in log rules
- Student materials assigned

7:30am to 8:30am (1 hour)

HAZWOPER:

- Course Introduction
- Pre-test and pre-test review

8:30am to 11:30am (3 hours)

HAZWOPER:

- Regulatory History:
  - 1970 --- EPA (40 CFR)
  - 1976 --- RCRA (40 CFR) and DOT (49 CFR)
  - 1980 --- CERCLA (40 CFR)
  - 1986 --- SARA (40 CFR)
  - 1990 --- HAZWOPER (29 CFR)
- Historic Events
- Program Regulations:
  - OSHA --- 29 CFR
  - EPA --- 40 CFR
  - DOT --- 49 CFR
- Overview:
  - Scope, Application, and S&H Program
  - Site Characterization & Analysis

- HASP and Site Control
- Training Requirements
- Medical Surveillance
- Engineering Controls, Workplaces, PPE, and Exposure Monitoring
- Decontamination
- Emergency Response
- Sanitation
- New Technology Programs

11:30am to 12:30pm (1 hour)

Lunch

12:30pm to 1:30pm (1 hour)

Industrial Hygiene Overview

1:30pm to 4:30pm (3 hours)

NIOSH Pocket Guide:

- User Guide Resource interacting with chemical and biological
- Emergency response capabilities
- Hard copy, website, and smart apps
- Demonstration of Guide

**DAY 2 (7:30am to 4:30am)**

7:30am to 9:30am (2 hours)

Toxicology (*Science of Poisons*):

- Dose = Response
- Acute vs. Chronic
- Exposure Limits:
  - OSHA --- PEL
  - ACGIH --- TLV
  - NIOSH --- REL
  - Other --- OELs
- Toxic:
  - Effects
  - Classifications

9:30am to 11:30am (2 hours)

Particulates:

- Forms and Exposure Factors
- Types and Size
- Reaction to Exposure:
  - Silica
  - Asbestos
  - Lead
  - Dust
  - Welding Fume

11:30am to 12:30pm (1 hour)

Lunch

12:30pm to 1:30pm (1 hour)

Physical Stressor --- Temperature Extremes:

- Heat Stresses
- Cold Stresses
- Controls and Treatment

1:30pm to 2:30pm (1 hour)

Physical Stressor --- Noise and Vibration:

- Noise vs. Sound
- The Human Ear and Types of Hearing Loss
- Noise Exposure Limits and Controls
- Hearing Conservation
- Vibration
- Biological Effects and Human Response Factors

2:30pm to 3:30pm (1 hour)

Physical Stressor --- Radiation:

- Ionizing Radiation
- Non-Ionizing Radiation

3:30pm to 4:30pm (1 hour)

Physical Stressor --- Ergonomics:

- Types of Injuries and Health Hazards
- Body Mechanics and Injury Prevention

### DAY 3 (7:30am to 4:30pm)

7:30am to 8:30am (1 hour)

Physical Stressor --- Respiratory Hazards:

- Conditions
- Toxic Airborne Contaminates and Degree of Hazards

8:30am to 9:30am (1 hour)

Physical Stressors --- Biohazards:

- Infectious Biological Agents
- Classification and Controls

9:30am to 11:30am (2 hours)

Hazardous Materials Recognition Systems:

- NFPA Fire Diamond and HMIS
- DOT HAZMAT Labeling
- ERG
  - Website
  - Computer Ops
  - Smart Phone Apps
  - Demo

11:30am to 12:30pm (1 hour)

Lunch

12:30pm to 2:30pm (2 hours)

HAZCOM (*Corner Stone to Chemical Safety*):

- Written Program
- Chemical Inventory
- SDS (*Formerly MSDS*)
- Chemical Container Labeling
- Occupational Chemical Exposures:
  - Physical hazards
  - Health Hazards
- Restricted Activities
- Non-Routine tasks
- Training
- Chemical Storage and Waste Disposal
- Spill Response

2:30pm to 4:30pm (2 hour)

Bloodborne Pathogens:

- Bloodborne Pathogens and Other Potential Infectious Materials
- Risk of Exposure and Control Plan
- Universal Precautions, Engineering Controls, Work Practices, and PPE
- Restricted Activities
- Housekeeping
- Hepatitis B Vaccination
- Post-Exposure Evaluation and Follow-up
- Training Requirements
- Labeling

**DAY 4 (7:30am to 4:30pm)**

7:30am to 8:30am (1 hour)

Compressed Gas Cylinders

- Hazards
- Types and Sizes
- Storage
- Transport
- Handling

8:30am to 11:30am (3 hours)

Personal Protective Equipment (PPE):

- Written Program
  - Policy and Procedures
  - Hazard Identification
  - Medical Monitoring
  - Environmental Surveillance
  - PPE Tasking:
    - Hazard ID
    - Selection
    - Usage
    - Maintenance
    - Decon
- Training:
  - Proper Use
  - Capabilities

- Limitation
- Inspection
- Emergency Procedures
- Buddy System
- Respiratory Protection:
  - Air Purifying Respirator
  - Air Supplying Respirator:
    - SCBA
    - SAR
  - Protection Factors
  - Warning Properties
  - Selection, Fit-Testing, and Training:
    - Quantitative
    - Qualitative
  - Field Seal Checks

11:30am to 12:30pm (1 hour)

Lunch

12:30 to 2:30pm (2 hours)

Personal Protective Equipment (PPE):

- Protective Clothing:
  - Permeation
  - Break Through
  - Degradation
  - Penetration
- Proper Selection:
  - Levels of Protection
    - A, B, C, and D
  - Protective Gloves
  - Protective Boots
  - Coveralls
  - Hearing and Ear Protection
  - Head, Eye, and Face Protection
- Equipment Inspection
- PPE Difficulties:
  - Communication
  - Temperature Extremes
  - Maintenance
  - False Sense of Security
  - Decontamination
- Rate & Degree of Exposure Factors:
  - Time
  - Distance
  - Shielding

2:30pm to 4:30pm (2 hours)

Monitoring:

- Purpose
  - Identify:
    - Type

- Quantity
  - Areas of Contamination
- Monitoring Types:
  - Instantaneous/Real Time
  - Integrated/Continuous
  - Personal
  - Area
  - Active
  - Passive
  - Surface
  - Wipe
  - Bulk
  - Grab
  - Biological
- Air Monitoring Instruments
  - Direct Readers
  - Integrated Lab Analysis
  - Site/Environmental Monitoring
- IDLH
- General Onsite Monitoring
- Perimeter Monitoring
- Periodic Monitoring
- HWS Exposure Variables

**DAY 5 (7:30am to 4:30pm)**

7:30am to 11:30am (4 hours)

**Confined Space**

- Scope and Application
- Definitions:
  - Confined Space
  - Permitted Confined Space
  - Non-Permitted Confined Space
  - Entry
  - Hazardous Atmospheres
  - IDLH
- Confined Space Examples
- General Requirements (to include development of written plan)
- Permit-Required Confined Spaces
- Permit System
- Entry Permit
- Training
- Duties of Authorized Entrants
- Duties of Attendants
- Duties of Entry Supervisors
- Rescue and Emergency Services
- Signage
- General hazards
  - Electrical
  - Mechanical
  - Engulfment

- Entrapment
- Physical Hazards
  - Thermal effects
  - Noise
  - Vibration
  - Structural
  - Corrosives
- Employee Participation
- Contractors

11:30am to 12:30pm (1 hour)

Lunch

12:30pm to 1:30pm (1 hour)

Spill Control

- Control Methods
  - Containment
  - Confinement
- Contaminate Techniques
- Equipment and Supplies
- PPE
- Training

1:30pm to 3:30pm (2 hours)

- Hazardous Waste Site Considerations
- Planning:
  - Organization Structure
  - Work Plan
  - Safety Program
    - Medical Program
  - Response
- Site Characterization:
  - Offsite Characterization
  - Onsite Characterization
  - Ongoing Monitoring
- Site Control:
  - Site Map
  - Site Preparation
  - Work Zones
  - Buddy System
  - Decontamination Procedures
  - Site Security
  - Communication Networks
  - Safe Work Practices
- Hazardous Substances Information
- Heavy Equipment Hazards
- Decontamination Procedures
- Site Emergencies
- Contingency Plans
- Emergency:
  - Personnel

- Communication
- Site Mapping
- Decontamination
- Medical
- Response Procedures
- Training
- Safe Distance and Refuges
- Evacuation Routes and Procedures
- Investigation
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3:30pm to 4:30pm  
Review, Exam, and Critique