



ENVIRONMENTAL EDUCATION ASSOCIATES  
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# Environmental Education Associates

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## 40-Hour Hazardous Waste Site Operations Health and Safety Training Course

### AGENDA

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#### DAY/TIME

#### TOPIC

#### Day One

8:00 - 8:45	Registration / Introduction / Course Overview
8:45 - 9:45	Introduction to Hazardous Materials and Environmental and Safety Regulations
9:45 – 11:35	Incident Response <ul style="list-style-type: none"><li>• Hazard Recognition</li><li>• Hazard Evaluation</li><li>• Hazard Control</li><li>• Information and Safety</li></ul>
11:35 - 12:00	Hazardous Materials Response Levels Video
12:00 – 1:00	Lunch
1:00 - 2:45	Hazard Recognition – Chemical Hazards <ul style="list-style-type: none"><li>• Toxic Hazards</li><li>• Fire and Explosion Hazards</li><li>• Corrosive Hazards</li><li>• Reactivity</li><li>• Properties of Chemical Hazards</li></ul>
2:45 – 3:15	Hazard Recognition – Safety Hazards <ul style="list-style-type: none"><li>• Kinetic/Mechanical</li><li>• Electrical</li><li>• Acoustic</li></ul>
3:15 - 3:30	Hazard Recognition - Biological Hazards
3:30 – 3:45	Hazard Recognition - Radiation Hazards
3:45 – 4:30	Hazard Recognition – Hazardous Materials Identification Systems <ul style="list-style-type: none"><li>• Hazard Communication (29 CFR 1910.1200)</li><li>• Hazard Labels</li><li>• DOT Guidebook</li></ul>
4:30 – 5:00	Review of Day 1

## Day Two

8:00 – 8:45	Hazard Recognition – Medical Emergencies <ul style="list-style-type: none"><li>• Heat Stress</li><li>• Cold Stress</li><li>• Medical Surveillance</li><li>• Medical Emergencies and First Aid</li></ul>
8:45 – 10:30	Hazard Recognition – Confined Spaces <ul style="list-style-type: none"><li>• Permit Required Confined Space Entry (29 CFR 1910.146)</li></ul>
10:30 – 11:30	Monitoring Instruments <ul style="list-style-type: none"><li>• Characteristics of Air Monitoring Instruments</li><li>• Ease of Operation</li><li>• Reliable &amp; Useful Results</li><li>• Inherent Safety</li></ul>
11:30 – 12:00	Hazardous Atmospheres <ul style="list-style-type: none"><li>• Class</li><li>• Group</li><li>• Divisions</li></ul>
12:00 – 1:00	Lunch
1:00 – 1:15	Instrument Controls <ul style="list-style-type: none"><li>• Explosion Proof</li><li>• Intrinsically Safe</li><li>• Purged</li></ul>
1:15 – 1:45	Certification and Calibration of Instruments and Relative Response
1:45 – 4:00	Types of Instruments, Principles of Operation, Uses, and Limitations <ul style="list-style-type: none"><li>• Oxygen Indicators</li><li>• Combustible Atmosphere Indicators</li><li>• Toxic Atmosphere Monitors<ul style="list-style-type: none"><li>○ Colorimetric Tubes</li><li>○ Chemical Specific Monitors</li><li>○ Photoionization Detectors</li><li>○ Flame Ionization Detectors</li><li>○ Catalytic Combustion Detectors</li><li>○ Aerosol Monitors</li></ul></li></ul>
4:00 – 4:30	Sampling Methodology and Analytical Methods
4:30 – 5:00	Review of Day 2

## Day Three

8:00 – 10:00	Toxicology and Exposure Guidelines - Routes of Exposure <ul style="list-style-type: none"><li>• Inhalation</li><li>• Ingestion</li><li>• Contact / Absorption</li><li>• Injection</li></ul>
10:00 – 10:30	Dose-Response Relationship <ul style="list-style-type: none"><li>• Dose Response Terms</li><li>• Factors Influencing Toxicity<ul style="list-style-type: none"><li>○ Duration, Frequency and Routes of Exposure</li><li>○ Inter and Intra Species Variations</li><li>○ Environmental Factors</li></ul></li></ul>
10:30 – 11:00	Sources of Toxicity Information
11:00 – 12:00	Health Effects <ul style="list-style-type: none"><li>• Respiratory System</li><li>• Skin and Eyes</li><li>• Central Nervous System</li><li>• Liver and Kidneys</li><li>• Blood and Blood Components</li><li>• Bone Marrow</li><li>• Reproductive System</li></ul>
12:00 – 1:00	Lunch
1:00 – 1:30	Types of Toxic Effects <ul style="list-style-type: none"><li>• Teratogenic</li><li>• Mutagenic</li><li>• Carcinogenic</li></ul>
1:30 – 2:00	Exposure Guidelines <ul style="list-style-type: none"><li>• NIOSH</li><li>• ACGIH</li><li>• OSHA</li></ul>
2:00 – 2:30	Types of Exposure Guidelines <ul style="list-style-type: none"><li>• Time-Weighted Average (TWA)</li><li>• Short-Term Exposure Limit (STEL)</li><li>• Ceiling Limit (CL)</li></ul>
2:30 – 3:00	Application of Exposure Guidelines <ul style="list-style-type: none"><li>• Engineering Controls</li><li>• Work Practices</li><li>• Personal Protective Equipment</li></ul>
3:00 – 4:30	Introduction to Respiratory Protection <ul style="list-style-type: none"><li>• Respiratory Hazards<ul style="list-style-type: none"><li>○ Oxygen Deficiency</li><li>○ Aerosols</li><li>○ Gaseous Contaminants</li></ul></li></ul>

4:30 – 5:00 Review of Day 3

## **Day Four**

8:00 – 9:00 Respiratory Use, Selection, and Approval

9:00 – 10:00 Air Purifying Respirators

- Types
- Cartridges and Canisters
- Determining Protection Factors

10:00 – 10:45 Atmosphere-Supplied Respirators

- Types
- Modes of Operation
- Types of SCBAs
- NFPA Standards

10:45 – 11:00 Chemical Protective Clothing

- Performance Requirements

11:00 – 11:30 Chemical Resistance

- Penetration
- Degradation
- Permeation

11:30 – 12:00 Classification of Chemical Protective Clothing

- Style
- Protective Material
- Single Use

12:00 – 1:00 Lunch

1:00 – 4:30 Hands-on Workshop - Donning and Doffing

- Respirators
  - Selection and Inspection
  - Cleaning
  - Fit Tests/Fit Checks
- Protective Clothing
  - Boots/Gloves
  - Level A / B Suits

4:30 – 5:00 Review of Day Four

## Day Five

8:00 – 9:00	Site Entry and Reconnaissance <ul style="list-style-type: none"><li>• Preliminary Assessment</li><li>• Initial Characterization</li><li>• Data Gathering</li><li>• On-Site Survey</li><li>• Comprehensive Characterization</li></ul>
9:00 – 9:30	Initial Planning <ul style="list-style-type: none"><li>• Planning Out The Work Zone</li><li>• Worker Protection</li><li>• Decontamination Methods and Considerations</li><li>• Disposal of Contaminated Materials</li><li>• Medical Emergency Decontamination</li><li>• Supervisor Safety Responsibilities / Competent Person</li></ul>
9:30 – 10:00	Site Organization and Management <ul style="list-style-type: none"><li>• Hazardous Materials Contingency Plan</li><li>• Organization</li><li>• Personnel</li><li>• Implementing Response Operations</li><li>• Personnel and Site Reconnaissance</li></ul>
10:00 -12:00	Simulated HAZMAT Response Exercise <ul style="list-style-type: none"><li>• Spill Control, Confinement and Containment</li><li>• PPE Levels (A, B, C)</li><li>• Site Control/ICS</li><li>• Decontamination</li><li>• Post Incident Review and Documentation</li></ul>
2:00 – 1:00	Lunch
1:00 – 3:00	Course Review
3:00 – 5:00	Exam and Course Evaluation