



Confined Space Shipyard Competent Person – 8-Hour Course Outline

Prerequisites: This course shall have no formal pre-requisite.

Course Length: 8 hours – Course length shall vary depending on the number of delegates. Total course time includes breaks and meals.

Class Size: The maximum number of delegates that may be trained and tested per instructor shall be thirty-five (35) in the classroom session and twenty (20) in the practical session. A second instructor shall be added for the practical session once the participation exceeds twenty (20) and exercises will be divided into groups.

Course Objective

-) Provide delegates assigned to confined space duties the necessary skills to safely perform their jobs.
-) Identify the characteristics of a confined space.
-) Describe the basic hazard categories associated with confined space.
-) Determine the elements of a confined space program.
-) Identify and describe the primary roles of authorized entrants, attendants, supervisor, and designated rescue team/services.
-) Rescue team requirements
-) Personal Protective Equipment
-) Ability to properly use rescue equipment.
-) Ability to use retrieval systems.
-) Ability to perform a rescue.
-) Delegates should be able to demonstrate the necessary skills during practical examination and demonstrate knowledge during written examination.

Course Design

-) Power Point© / Lecture / Audio Video / Visual Aids
-) Demonstrations
-) Practical Exercises

Successful Course Completion

-) Requires a minimum score of 75% or better.
-) Grades shall be calculated by dividing the number of questions answered correctly by the total number of exam questions.
-) Delegates will have no more than thirty (30) minutes to complete the exam.
-) Successful completion of practical session is mandatory.



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512 Viaulet Road
Youngsville, Louisiana 70592
Main: 337-451-4685
Fax: 337-451-5847
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Course Content Summary:

-) Classroom
-) Practicals

Breaks: 10 minutes (approximately every hour)

Lunch – 1 Hour

Course Outline

About Confined Spaces

-) OSHA/NIOSH Statistics
-) Definitions
-) Confined and Enclosed Spaces
-) What is a Permit Required Confined Space?
-) Common Examples of a Confined Space

Training Requirements

Responsibilities of Personnel

-) Certified Marine Chemist
-) Certified Industrial Hygienist
-) Coast Guard Authorized Person
-) Shipyard Competent Person
-) Competent Persons
 - o Entrant
 - o Attendant
 - o Rescue
 - o Entry Supervisor
-) Roles and Responsibilities of Personnel

Confined Space Entry

-) Entry Requirements
-) Entry Employer Requirements
-) Entry Permit Requirements/Completion
-) What Constitutes Entry?
-) Hazard Evaluation
-) Pre-Job Safety Planning
-) Entry Permit Close Out
 - o Routine
 - o Emergency



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-) Warning Signs and Labels
 - o "Not Safe for Workers"
 - o "Safe for Hot Work"
 - o "Safe for Workers"
 - o "Not Safe for Hot Work"
 - o "Enter with Restrictions"
-) Confined Space Hazards
 - o Atmospheric
 - o Physical

Atmospheric Hazards

-) Oxygen Levels
 - o Asphyxiation
-) Effects of Oxygen Deficiency
-) Breathing Air Composition
-) What Causes Oxygen Deficiency Atmosphere?
-) What Causes Oxygen Enriched Atmosphere?
-) Other Hazards
-) Toxic Contaminants
-) How much is Hazardous?
 - o Permissible Exposure Limit (PEL)
 - o Threshold Limit Value (TLV)
 - Time Weighted Average (TWA)
 - Short Term Exposure Limit (STEL)
 - Exposure Ceiling
-) Common Hazardous Gases Found in Confined Spaces
-) Acute/Chronic Symptoms
-) Flammability
 - o Explosions
 - o Explosion Mixture
 - o Flash Point
 - o Upper Explosive Limit (UEL)
 - o Lower Explosive Limit (LEL)
-) LEL Requirements (OSHA)
-) UEL/LEL Examples
-) Causes of Flammable Atmospheres
-) Fire Ignition
-) Safety Data Sheets (SDS)
 - o Components of SDS



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- Sections of SDS

Atmospheric Hazard Protection

-) Control Measures
 - Engineering Controls
 - Administrative Controls
 - Personal Protective Equipment (PPE)
-) Types of Respirators
 - Air Purifying Respirator (APR)
 - Supplied Air Respirator (SAR)
 - Self-Contained Breathing Apparatus (SCBA)
 - Atmospheric Supplied
 - Cascade Systems
 - Escape Packs
-) Respirator Fit Testing
 - Quantitative
 - Qualitative
-) Respirator Usage
-) Respirator Inspection
-) Respirator Maintenance
-) Respirator Donning/Doffing
-) Respirator Storage
-) Atmosphere Testing
 - Testing the Atmosphere
 - Maintenance of Safe Conditions
-) Air Monitors
 - Different Types
 - Function
 - Advantages/Disadvantages of Each Type
 - User Responsibility
-) Air Sampling in a Confined Space
 - Stratification

Inert Atmosphere

Hot Work Operations

-) Hot Work Requiring Testing
-) Potential Hazards
-) Requirements and Example Solutions



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Fire Prevention Requirements

-) Potential Hazards
-) Requirements and Example Solutions

Fall Hazards

-) Potential Hazards
-) Requirements and Example Solutions
-) Fall Protection for Scaffold Work

Physical Hazards

-) Common Physical Hazards
 - o Engulfment
 - o Entrapment/Entanglement
 - o Potential Energy
 - o Electrical
 - o Pressure
 - o Momentum/Gravity
 - o Residual/Stored
-) Protective Measures for Each Hazard

Worker Introduced Hazards

-) Common Examples
-) External Hazards

Confined Space Safety

-) Isolating the Space
-) Clearing the Space
-) Ventilation
 -) Types of Ventilation
 - o Natural
 - o Mechanical Supply
 - o Mechanical Exhausting
 -) Ventilation Factors
 -) Supply Ventilation Directions
 -) Exhaust Ventilation Directions
 -) Proper Ventilation Techniques

About Rescue



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-) Employer Responsibilities
-) Rescue Personnel Requirements
-) Outside Rescue Team Requirements
- Personal Protective Equipment (PPE)
 -) Hazard Recognition
 - o Safety Data Sheet (SDS)
 - o North American Emergency Response Guidebook (NAERG)
 - o Entry Hazard Assessment
 -) Common Types of PPE
 - o Eye and Face Protection
 - o Respiratory Protection
 - o Chemical Clothing
 - o Head Protection
 - o Hand Protection
 - o Hearing Protection
 - o Foot Protection

Confined Space Rescue

-) Types of Rescues
 - o Self-Rescue
 - o External Rescue
-) Rescue Pole/Remote Hooks
-) Retrieval Systems
-) Self-Retracting Lanyards
-) Personnel Hoists
-) Evacuation Harnesses
-) Retrieval Line Attachment Points
-) Wristlets Retrieval System
-) Stretcher/Immobilization Equipment
 - o SKED's

Practical Session

Practical training shall utilize a confined space simulator and other safety equipment.

Practical shall verify that the delegate is able to complete the following:

-) Select and wear appropriate PPE during practical training
-) Conduct proper pre-use inspection of PPE and equipment
-) Communicate effectively amongst Entrant, Attendant, & Rescue Team
-) Monitor and control air quality effectively
-) Perform work in a confined space environment safely



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-) Secure life lines properly
-) Use Tri-Pod/Winch and other rescue equipment correctly
-) Perform a rescue safely
-) Store equipment and PPE properly

Training Center Provided Material

-) PPE
-) Confined Space Equipment

Delegate Requirements

-) Must possess good physical health as the practical training is physically demanding.

Reference Material / Documents

OSHA 29 CFR 1915 Subpart B