

Contractor Safety Management for Oil and Gas Drilling and Production Operations

API RECOMMENDED PRACTICE 76
SECOND EDITION, NOVEMBER 2007

REAFFIRMED, JANUARY 2013



AMERICAN PETROLEUM INSTITUTE

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Upstream Segment

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Foreword

This publication is under the jurisdiction of the American Petroleum Institute Upstream Department's Executive Committee on Drilling and Production Operations. It was developed with assistance from API Petroleum Industry Data Exchange (PIDX) Committee, International Association of Drilling Contractors (IADC), the Association of Energy Service Companies (AESC), and with input from the International Association of Oil and Gas Producers (OGP). API expresses its appreciation to these organizations for their contributions to the development of this publication.

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Suggested revisions are invited and should be submitted to the Director of the Upstream Department, American Petroleum Institute, 1220 L Street, N.W., Washington, D.C. 20005.

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Contractor Safety Management for Oil and Gas Drilling and Production Operations

1 Introduction

1.1 Scope

This publication is intended to assist Operators, Contractors, and Subcontractors (Third Parties) in the implementation of a Contractor safety program and improve the overall safety performance while preserving the independent contractor relationship. It is intended for the Upstream segment of the petroleum industry; however, since the Operator requirements and the contracted work are diverse, this publication may not be applicable to all operations at each company or to all contract work performed in those operations.

Many oil and gas exploration and production companies contract for equipment and personnel services for a wide range of activities, including drilling, production, well servicing, equipment repair, maintenance, and construction. Certain activities of Contractors have the potential to place either Contractor and/or Operator personnel and/or equipment at risk. It is important that operations are carried out in a safe manner.

Operators and Contractors need to provide safe work places and to protect the safety of their workforces and the general public. When they work together to improve safety, both benefit.

1.1.1 Operator and Contractor Commitment to Improved Contractor Safety Performance

Both Operator and Contractor Management commitments are essential in minimizing accidents/incidents and preventing injuries and illnesses. Management commitment begins with the Operator and Contractor providing the resources necessary for implementing and maintaining an effective safety program.

The Operator's and Contractor's commitments and continued support is common to all successful safety programs in order to minimize incidents and prevent injuries and illnesses. Effective safety programs require the Operator and Contractor to:

- focus resources on safety; and
- review how Contractor safety is being addressed.

Operators may encourage Contractor management commitment by sharing information regarding effective safety performance benefits. To emphasize their commitment, many Operators incorporate the need for Contractor safety in senior management policy statements on safety, health and the environment.

1.1.2 Policy Statement

Management commitment may be expressed in a policy that establishes the importance of Operator and Contractor safety. Management's involvement helps ensure the effectiveness of a safety program. An example policy statement is detailed in Annex E.

1.2 Benefits of an Operator and Contractor Safety Program

Operators and Contractors benefit when they work together to enhance the management of related safety programs. These benefits can include:

- safety expectations and capabilities are clearly understood before the work begins;
- improved safety performance;
- better working relationship between Operator and Contractor;
- improved safety training for both Operators and Contractors; and
- improved productivity, reliability and efficiency.

1.3 Third Parties and Subcontractors

Frequently, Third Parties and Subcontractors are utilized to perform specialized portions of work assignments. A Third Party and/or Subcontractor should be subject to applicable elements of the Operator's and/or Contractor's safety program. The Operator and/or Contractor should make provisions for inspection of relevant Third Party/Subcontractor equipment.

2 Industry Standards and Practices

The most recent edition of the following publications are either referenced in this recommended practice or may be of use in the development of an Operator/Contractor Safety Program:

API Bull E1, *Generic Hazardous Chemical Category List and Inventory for the Oil and Gas Exploration and Production Industry*

API RP 2D, *Operation and Maintenance of Offshore Cranes*

API Spec 4F, *Specification for Drilling and Well Servicing Structures*

API RP 4G, *Recommended Practice for Use and Procedures for Inspection, Maintenance, and Repair of Drilling and Well Servicing Structures*

API RP 8B, *Recommended Practice for Procedures for Inspections, Maintenance, Repair, and Remanufacture of Hoisting Equipment*

API Spec 9A, *Specification for Wire Rope*

API RP 9B, *Recommended Practice on Application Care, and Use of Wire Rope for Oil Field Service*

API RP 11ER, *Recommended Practice for Guarding of Pumping Units*

API RP 11G, *Recommended Practice for Installation and Lubrication of Pumping Units*

API RP 14J, *Recommended Practice for Design and Hazards Analysis for Offshore Production Facilities*

API RP 49, *Recommended Practice for Drilling and Well Servicing Operations Involving Hydrogen Sulfide*

API RP 53, *Recommended Practice for Blowout Prevention Equipment Systems for Drilling Operations*

API RP 54, *Recommended Practice for Occupational Safety for Oil and Gas Well Drilling and Servicing Operations*

API RP 67, *Recommended Practice for Oilfield Explosives Safety*

API RP 70, *Security for Offshore Oil and Natural Gas Production Operations*

API RP 74, *Recommended Practice for Occupational Safety for Onshore Oil and Gas Production Operations*

API RP 75, *Recommended Practice for Development of a Safety and Environmental Management Program for Offshore Operations and Facilities*

API Bull 75L, *Guidance Document for the Development of a Safety and Environmental Management System for Onshore Oil and Natural Gas Operation and Associated Activities*

API RP 500, *Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Division 1 and Division 2*

API RP 505, *Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Zone 0, Zone 1, and Zone 2*

API *Introduction to Oil and Gas Production*

AESC¹ *Recommended Safe Procedures and Guidelines for Oil & Gas Well Servicing*

AESC *Hazardous Communication Compliance Guide for the Well Service Industry*

AESC *DOT Drug Testing Compliance Guide*

AESC *Rig Safety Inspection Forms*

AESC *5 Minute on the Job Safety Talks*

AESC *Accident Investigation Kit*

ANSI Z41², *Personal Protection—Protective Footwear*

ANSI Z49.1, *Safety in Welding and Cutting and Allied Processes* (AWS Z49.1)

ANSI Z87.1, *Practice for Occupational and Educational Eye and Face Protection*

ANSI Z88.2, *Respiratory Protection*

ANSI Z89.1, *Requirements for Industrial Head Protection*

ANSI Z359.1, *Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components*

IADC³ *Drilling Manual*

IADC *Drilling Technology for the Man on the Rig*

IADC *Drilling Technology Series*

IADC *Health, Safety and Environment Reference Guide*

IADC *Guía de Referencia Para Prevención de Accidentes*

IADC *Weekly Safety Meeting Report*

IADC *52 Safety Topics*

¹Association of Energy Service Companies, 10200 Richmond Avenue, Houston, Texas 77042, <http://www.aesc.net>

²American National Standards Institute, 25 West 43rd Street, 4th floor, New York, New York 10036, www.ansi.org.

³International Association of Drilling Contractors, 10370 Richmond Ave, Suite 760, Houston, Texas 77042, www.iadc.org

IADC Five Minute Rig Safety Meeting Topics

IADC Guide to Safe Stairways, Walkways, and Railings

IADC How to Keep Drugs off Your Rig

IADC H₂S Safety Handbook

IADC Planning for Drilling in H₂S Zones

IADC Rotary Rig Safety Inspections Checklist

IADC Rules-of-Thumb for the Man on the Rig

IADC Safety Regulations for the Oil and Gas Industry

IADC The Rotary Rig and its Components Poster

IADC Home Study Courses: Rotary Drilling Series

IADC Rig Pass: Accrediting the Basics

IADC Guide to Blowout Prevention

IADC Introduction to Well Control

IADC Well Control for the Man on the Rig

IADC The Pit Watcher

IADC H₂S Safety in Drilling and Production

IADC Makin' Hole: How Oilwells are Drilled

IADC Roughneck Training

IADC Tripping Practices

IADC Safe Rigging Practices

IADC Basic Rigging Concepts

IADC Drums, Blocks, Sheaves, and Wire Rope Terminations

IADC Rigging Gear and Inspection Criteria

IADC Safe Rigging Practices and Procedures

IADC Putting Slings to Work

IADC WellCAP Accreditation Program

IADC Guidance for Packaging and Transportation of Cargo for U.S. Offshore Operations

IADC Security Principles for U.S. Offshore Operations

3 Definitions

All standard definitions are included in Annex A.

4 Operator-specific Safety Requirements

4.1 Operator Safety Requirements

After determining the type of work to be performed by a Contractor, the Operator should identify the safety requirements and communicate them to the Contractor. These safety requirements may be broad, or general in certain cases, or very specific in others, depending on the work assignment. Certain Contractors (such as those specializing in leak repair or working with radioactive sources) may have more experience and knowledge relevant to the hazards involved and should be consulted in order to establish mutually agreeable and relevant safety procedures.

4.2 Contractor Safety Programs and Procedures

Contractors should consider developing their own safety procedures or programs. In many cases, Contractors and Subcontractors are used because of their expertise, knowledge of anticipated hazards, and special safety requirements associated with the work. In these cases, a determination must be made as to which individual or company will have the primary responsibility for implementing additional safety requirements applicable to their specialty. These must be consistent with operational and regulatory requirements.

On jobs where multiple Contractors or Subcontractors are employed, there needs to be a coordinated effort to ensure a common understanding exists regarding safety procedures.

4.3 Training and Communications

4.3.1 Training Requirements

Contractors have the responsibility to provide appropriate information and training to ensure that their employees have adequate knowledge and skills to perform their jobs safely. The Contractor is generally responsible for providing safety and job-specific training for its employees unless otherwise stated in the contract or other agreement. Upon final review of the scope of work, Operator and Contractor may identify any site or job-specific training that is necessary to perform the work safely and agree on how this will be accomplished. Additionally, other considerations include, but may not be limited to:

- Short Service Employee programs (SSE)—See Annex C
- Sample Training Matrix—See Annex D

4.3.2 Verification of Training

It is important for the Contractor to maintain records of training and make them available to the Operator upon request. The Contractor should consider periodically reviewing training schedules and materials to verify that they are current. The Contractor should maintain training documentation in a manner that is easily retrievable. Additionally, Contractor personnel may need to carry certain training credentials as required by regulation or the Operator.

4.3.3 Communicating Requirements

Operators and Contractors are responsible for communicating the appropriate information regarding workplace hazards and safety requirements to their employees. The communication of this information may include many formats such as an orientation program, job safety analyses (JSAs), safety meetings, pre-job/pre-tour safety meetings, training, Material Safety Data Sheets, safe work permits, signs, posters, procedures, or other written materials.

4.3.4 Emergency Response, Drills/Exercises Requirements

It is generally the Contractor's responsibility to comply with the Operator's emergency response procedures and evacuation plans. Conversely, the Operator must comply with the Contractor's requirements when on the site of a Contractor's Mobile Offshore Drilling Unit (MODU) or other type of drilling or well servicing unit. Certain elements in the Operator's and/or Contractor's evacuation procedures may include designated assembly areas and/or evacuation routes, and the method of accounting for personnel during an incident.

Where applicable, all personnel should receive appropriate orientation and training in emergency procedures and participate in emergency drills and exercises. For emergency evacuations, muster locations should be identified for all personnel who will evacuate. Procedures should be in place to account for personnel, as applicable.

4.3.5 JSAs and Safety Meetings

Operators and Contractors may consider conducting Job Safety Analysis (JSAs), safety observations and regularly scheduled safety meetings to provide on-going training and communication of safety issues. Additionally, a safety awareness program may be beneficial. Subcontractors and other Third Parties should be required to attend all applicable safety meetings.

4.4 Personnel New to the Work Site

All personnel new to the work site should be made aware of the job and specific site safety requirements, including emergency training, as applicable.

5 Contractor Selection Process

5.1 General

A major step in achieving acceptable Contractor safety performance is selecting a qualified and responsible Contractor. Therefore, it is appropriate for Operators to request that Contractors submit specific safety and training information in their contract response proposals. For example, such information might include:

- a) a review of the Contractor's written safety and environmental policies and practices endorsed by the Contractor's top management.
- b) a statement of commitment by the Contractor to comply with all applicable health, safety and environmental regulations and provisions of this publication.
- c) injury and illness experience for the previous three years.
- d) an outline of the Contractor's initial employee safety orientation.
- e) descriptions of the Contractor's various safety programs, including: accident investigation procedures; how safety inspections are performed; safety meetings; substance abuse prevention (testing and/or search) programs.

- f) description of the training that each Contractor employee has received and the Contractor's programs for refresher training.
- g) Description of the Contractor's Short Service Employee (SSE) training program. Operator and Contractor should establish the SSE program as part of the overall contract Health Safety and Environment Management negotiation process.
- h) Completion of the Standardized Safety Questionnaire or a sub-set thereof (see 5.3 and Annex B).

5.2 Bid Package

An Operator should inform a Contractor of its safety expectations by clearly outlining its safety performance requirements in one or more ways. One method, although not universally utilized, is a bid package. Such a bid package may define the safety standards the Contractor is expected to meet. Bid packages may not be practical for certain projects. The Operator may request specific safety information from the Contractor by other means.

5.3 Safety Questionnaire

Operators and Contractors may utilize the Standardized Safety Questionnaire or a sub-set of it to determine whether a Contractor's safety qualifications are adequate for performing the involved scope of work. The primary purpose of a Safety Questionnaire is to obtain and evaluate information about a prospective Contractor. API's recommended Standardized Safety Questionnaire is provided in Annex B. Companies may elect to use a sub-set of this questionnaire, as appropriate for their operations.

The Safety Questionnaire prompts the Contractor to provide the majority of the necessary information for an Operator to complete an initial evaluation of the Contractor's safety performance and ability to comply with safety requirements. Major sections of the Safety Questionnaire and the purpose of each section may include:

- a) *General*: Provides basic information on the Contractor including location and contacts.
- b) *Organization*: Provides basic information such as services provided.
- c) *Safety Performance*: Provides information on the Contractor's safety performance, such as incident statistics.
- d) *Safety Programs and Procedures*: Identifies the Contractor's safety programs and policies and provides information on the Contractor's substance abuse testing program.
- e) *Training*: Identifies the type of training given to Contractor employees and supervisors regarding safety and operational issues, specific to the operations involved.
- f) *Safety Coordination*: Provides information on safety responsibility and support structure, and reporting relationships.

The Safety Questionnaire should be completed by Contractor personnel familiar with safety and training data.

5.4 Operator Review of Contractor Qualifications

The Operator should consider establishing a method of reviewing and determining whether a Contractor can meet the Operator's safety requirements and therefore be considered for work. An example process would be once the Safety Questionnaire has been completed by the Contractor, the Operator would review the document for completeness, and evaluate it against the Operator's requirements. In order to assist the Contractor, Operators would provide relevant feedback to the Contractor on areas that need enhancement or improvement.

6 Work Performance

6.1 Responsibilities

It is important for the Operator and Contractor to understand their individual responsibilities during the planning, performance, and completion stages of work. As part of the process, the Operator may notify the Contractor where safety requirements are not being met, but it is generally the responsibility of the Contractor, not the Operator, to communicate to Contractor employees the steps that should be taken to correct any deficiencies.

6.2 Safety Requirements

Before work is started, the Operator should identify and present to the Contractor relevant safety rules required by the Operator. All or part of this information may be used in the safety orientation and safety meetings by the Operator or the Contractor.

7 Management of Change

7.1 General

Managing change is critical to preventing incidents and controlling loss. The operator and contractor should have a management of change process that establishes procedures to identify and control hazards associated with change (see API RP 74 and API RP 75). The procedures should maintain the accuracy of safety information related to the change. On occasion, temporary repairs, connections, bypasses, or other modifications may be made out of operating necessity. Any of these changes can introduce new hazards or compromise the safeguards built into the original design. Care must be taken to understand the operational, and personnel safety and environmental implications of any changes. Although some changes may be minor with little likelihood of compromising safety or environmental protection, many changes may have the potential for disruption, injury, or business loss.

7.2 Change in Facilities

Change at drilling, well servicing and production sites arise whenever the operations or mechanical design is substantively altered. Change may also occur as a result of changes in produced fluids, well servicing fluids, drilling fluids, by-products or waste products, design inventories, instrumentation and control systems, or materials of construction. In many instances, these changes are deemed minor and do not require specific procedures. Typical instances in which change would likely occur include the following:

- a) construction of new production or process facilities.
- b) new facility projects that involve production or process tie-ins to existing facilities, equipment reconfiguration, or modification of existing facilities/equipment.
- c) modification of existing facilities that result in changes to facility or equipment design, structural support, layout, or configuration.
- d) projects to increase facility throughput or accommodate different produced fluids.
- e) significant changes in operating conditions, including pressures, temperatures, flow rates, or process conditions different from those in the original process or mechanical design.
- f) equipment changes, including the addition of new equipment or modifications of existing equipment. These can include changes in alarms, instrumentation, and control schemes.

g) modifications of the process or equipment that cause changes in the facility's pressure relief requirements. These can include increased process throughput, operation at higher temperatures or pressures, increased size of equipment, or the addition of equipment that might contribute to greater pressure relief requirements.

h) bypass connections around equipment that is normally in service.

i) operations outside the scope of current written operating procedures, including procedures for start-up, normal shutdown, and emergency shutdown.

j) changes made in the mechanical design or in operating procedures that result from the completion of a hazards analysis.

k) introduction of new or different chemicals (e.g. corrosion control agents, anti-foulants, anti-foam agents), drilling muds or workover/completion fluids.

l) change in facilities may include mechanical changes that would not necessarily appear on a instrument diagram, including drilling and construction equipment and temporary connections or replaced components that are "not in kind," such as:

- 1) replacement equipment or machinery that differs in specifications from the original equipment or previously approved modification.
- 2) temporary piping, connections, pipe repairs, or hoses.
- 3) an alternate supply of materials, catalysts, or reactants.
- 4) temporary electrical equipment or utility connections, other than for emergency situations.
- 5) substantial changes to drilling diverter system design.
- 6) substantial changes to blowout preventers (BOPs) configuration.
- 7) substantial changes to top drives or other drilling systems.

7.3 Change in Personnel

Change in personnel, including Contractor personnel, as appropriate, occurs whenever there is a change in the organization or in personnel that operate the facility. Routine personnel vacancies and replacements, rotation, and shift or tour changes are addressed in operating procedures, safe work practices, and training and should not require additional management of change action.

Organization changes, particularly those brought about by the acquisition or sale of a facility, may necessitate a thorough review of the safety and environmental management program. Upon acquisition or transfer of management control, a review should be conducted and acquired assets incorporated into the new organization's safety and environmental management program, as appropriate.

7.4 Change in Regulations or Industry Recommended Practices

Change in regulations or industry recommended practices can occur when legislators, regulators or industry groups create, adopt or modify rules governing activities or operations. Routine review of these laws, rules or practices is warranted and when changes occur, an assessment of the impact and plan for implementation may be necessary.

7.5 Managing the Change

The management program should establish and implement written procedures to manage change in facilities and personnel. These procedures should be flexible enough to accommodate both major and minor changes. Minor changes generally do not require any specific procedures. Written procedures should cover the following:

- a) the operations and mechanical design basis for the proposed change.
- b) an analysis of the safety health, and environmental considerations involved in the proposed change, including, as appropriate, a hazards analysis. The effects of the proposed change on separate but unrelated facilities (i.e. structures/platforms, pipelines, equipment, emergency isolation and control systems and equipment, mitigative systems and equipment, accommodations areas, emergency evacuation and equipment) and on area-wide emergency plans (i.e. evacuation or oil spill) should also be reviewed.
- c) any necessary revisions of the operating procedures, safe work practices, and training program.
- d) communication of the proposed change and the consequences of that change to appropriate personnel.
- e) any necessary revisions of the safety and environmental information.
- f) the duration of the change, if temporary.
- g) required authorizations to effect the change, if applicable.

8 Evaluating Contractor HSE Performance

8.1 General

The Operator and Contractor each have roles in monitoring and evaluating HSE performance.

8.2 Safety Performance Reporting

All occupational injuries, illnesses and property damage incidents associated with the on-site work should be reported to both the Contractor and Operator as soon as possible. Recording should be done in accordance with applicable requirements for occupational injuries and illnesses. The Contractor and Operator should identify the mechanism and persons to forward and receive reports as appropriate. This process should take into consideration efforts to ensure that reporting procedures adhere to relevant privacy requirements.

8.3 Operator Reviews

The Operator should consider periodically reviewing the Contractor's safety programs, policies and procedures, including Standardized Safety Questionnaire information, and request that they be updated when circumstances warrant a revision.

8.4 Contractor Inspections

Contractors should conduct periodic internal reviews, consistent with their procedures. The Operator may also perform an inspection or review of the Contractor's programs to verify compliance with applicable Operator safety requirements.

Annex A

Standard Industry Definitions

Term	Definition
Abrasive Blasting	A process of propelling an abrasive (sand, glass beads, slag) with compressed air, water or other carrier to clean a surface of paint, rust or other materials.
Accountability	The ultimate responsibility for an area of authority defined by the individual's Job Description, and will include authority delegated to a subordinate albeit temporary or permanent.
Additional Indicator	An indicator of performance that is generally locally defined and relates to local activities, impacts or stakeholder groups, or is generally not relevant to most activities in the oil and gas industry.
Aggregation	The process by which data from individual sources and/or operations are combined into a single number for a higher-level entity.
Air Emissions	Waste gases, vapors and small particles that are released into the air.
Audit	1. A systematic, independent evaluation to determine whether or not the health, safety and environmental management system and its operation comply with planned arrangements, and whether or not the system is implemented effectively, and is suitable to fulfill the company's health, safety and environmental policy and objectives. 2. The examination of the whole system to assess how it has been used over a period, and to make sure it has operated as intended.
Automated External Defibrillator (AED)	A device that automatically analyzes the heart rhythm and, if it detects a problem that may respond to an electrical shock, that permits a shock to be delivered to restore a normal heart rhythm. Abbreviated AED.
Average Number of Employees	Average number of employees that worked during a specified period.
Barrel of Oil Equivalent (BOE)	For liquids, one BOE equals one barrel of oil or condensate. For gases, one BOE equals approximately 5,800 standard cubic feet (MSCF) of gas. One BOE of gas or liquid equals about 6 million Btu.
Behavioral Job Safety Analysis (BJSA)	A documented process in which the workers and possibly their supervisor systematically review the planned work, identify the hazards associated with that work, and implement safeguards defined in observable behavioral terms to eliminate or mitigate those hazards prior to starting the work.
Behavior-based Safety	A variety of processes, programs, strategies, and tactics that apply behavioral psychological principles to change specific behaviors and improve the safety of the work environment.
BLM	United States Bureau of Land Management
Blood Alcohol Concentration (BAC)	The relative proportion of ethyl alcohol within the blood, based upon the number of grams of alcohol per 100 milliliters of blood, and often expressed as a percentage.
Bloodborne Pathogens	Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).
B-NICE	The five categories of terrorist incidents: Biological, Nuclear, Incendiary, Chemical and Explosive, as published by FEMA.
Calendar Days Away from Work	Number of days after the date of the incident that the employee was unable to work as a result of the injury or illness regardless of whether or not the employee was scheduled on those days. Weekend days, holidays, vacation days, or other days are included in the total number of days recorded.
CAPP	Canadian Association of Petroleum Producers
Cardiopulmonary Resuscitation (CPR)	A combination of artificial respiration (mouth-to-mouth) and artificial circulation (external cardiac compression) performed to restore heart function. May include use of Artificial External Defibrillators (AED).
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (U.S. Statute)
CFR	<i>Code of Federal Regulations</i> : A collection of the regulations that have been promulgated under United States law, as in DOT, EPA and OSHA regulations.
Citation	An official notification from a regulatory agency for a violation or non-compliance that may include a summons to appear (as before a court).

Term	Definition
Competence	The ability to perform a particular job in compliance with performance standards.
Computer Based Training (CBT)	Computer-based training (CBT) is any course of instruction whose primary means of delivery is a computer. A CBT course (sometimes called courseware) may be delivered via a software product installed on a single computer, through a corporate or educational intranet, or over the Internet as Web-based training. CBT can be used to teach almost any conceivable subject.
Confined Space	"Confined space" means a space that: 1. is large enough and so configured that an employee can bodily enter and perform assigned work; 2. has limited or restricted means for entry or exit (e.g. tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); and 3. is not designed for continuous employee occupancy. A confined space may require a permit for entry if it has one or more of the following characteristics: 1. contains or has a potential to contain a hazardous atmosphere; 2. contains a material that has the potential for engulfing an entrant; 3. has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or 4. contains any other recognized serious safety or health hazard.
Contingency Plan	A pre-established plan to mitigate an unusual situation which has the potential for harm, which incorporates the best use of local as well as remote facilities and resources.
Contractor	An individual, partnership, firm, or corporation that is hired to do a specific job or service (such as a Drilling or Well Servicing Contractor) or to provide contract employees personnel to an Operator or Contractor and is also the individual, partnership, firm, or corporation retained by the owner or Operator to perform other work or provide supplies or equipment.
COR	Certificate of Recognition (Canada)
Craft Skills	Skills that are generally accepted to be associated with a particular skilled craft. The assumed level of expertise may vary with the craft level such as apprentice, journeyman or master. These may also be referred to as "skills of the craft."
Crane	A machine for raising and lowering heavy weights, and, while holding them suspended, transporting them through a limited lateral distance. In one form it consists of a projecting arm or jib of timber or iron, a rotating post or base, and the necessary tackle, windlass, etc.
Critical Equipment	Equipment and other systems determined to be essential in detecting or preventing the occurrence of or mitigating the consequences of an uncontrolled release. Such equipment may include pressure vessels, machinery, piping, blowout preventers, wellheads and related valving, flares, alarms, interlocks, fire protection equipment and other monitoring, control and response systems.
Dangerous Goods	Any substance that, by reason of being explosive, flammable, toxic, corrosive, oxidizing, irritating, or otherwise harmful, has the potential to cause injury, illness, death, property damage and/or harm to the environment.
DART Cases	Days Away, Restricted, Transfer Cases
DART Incident Frequency	DART cases times 1,000,000 divided by exposure hours.
DART Incident Rate	DART cases times 200,000 divided by exposure hours.
Days Away from Work Cases	A work-related incident (injury or illness) in which an employee is unable to, or prescribed by a licensed health care provider not to, return to work the next calendar day, whether or not he employee is scheduled to work that day.
Days Away from Work Incident Frequency	Number of days away from work cases times 1,000,000 divided by exposure hours.
Days Away from Work Incident Rate	Number of days away from work cases times 200,000 divided by exposure hours.
Death	Work-related incident where the employee is fatally injured.
Defensive Driving Program	Program designed to instruct individuals in the proper methods and rules for driving safely which may involve a combination of classroom, simulator and on the road instruction.
Discharges	Releases of products, by-products or waste streams into water or land.

Term	Definition
Disciplinary program	Written program that outlines progressive course of action for addressing employees who have committed violations of company policies or work practices.
DOL	United States Department of Labor
DOT	United States Department of Transportation
Downstream	Operations involving the refining, processing, distribution, and marketing of products derived from oil and gas, including service stations.
Electrical Classification of Areas	For the purpose of this document, locations are classified according to API RP 500 or API RP 505.
Electrical Safety Training—Non-qualified	Training course designed to instruct individuals who are not responsible for electrical work in electrical hazard recognition and safe practices.
Electrical Safety Training—Qualified	Training course designed to instruct individuals who are responsible for electrical work in electrical hazard recognition and safe practices such as identifying energized lines, voltage of the lines, minimum approach distances, and PPE for working with electricity.
Emergency Locator Transmitter (ELT)	A transmitter of an aircraft or survival craft actuated manually or automatically that is used as an alerting and locating aid for survival purposes.
Emergency Response Plan	See <i>Contingency Plan</i>
Emissions	The release of gases, vapors, fumes, mist, and particulate matter into the atmosphere.
Employee and/or Worker	An individual with an employment relationship to a business. This relationship may be full time or temporary. This also covers individuals whose work is directly supervised by the employer, but whose employment relationship is with another employer and they are a temporary or contract worker.
Energy Isolation	See <i>Lock Out/Tag Out</i>
Environment	The surroundings and conditions in which a company or individual operates or which it may affect, including living systems (human and other) therein.
Environment Management System (EMS)	The company structure, responsibilities, practices, procedures, processes and resources for managing and mitigating environmental risks.
Environmental Impact Assessment (EIA)	1. Part of project management concerned with identifying through a formal written technical evaluation the likely impact (positive and negative) of a proposed development or activity on the natural and man-made environment. A process whereby the assessment is used in reaching a consensus on acceptable levels of change, defining the means by which agreed standards of operation and procedure will be achieved and establishing management procedures to ensure these objectives are achieved and maintained. 2. A formal, written, technical evaluation of potential effects on the environment (atmosphere, water, land, plants and animals) of a particular event or activity.
EPA	United States Environmental Protection Agency
Ergonomics	The science of studying people at work, and designing tasks, jobs, tools, equipment, facilities, and the work environment, so that people can be safe, healthy, effective, efficient, productive and comfortable.
Experience Modifier Rating (EMR)	A calculation of relative ranking based on United States Worker's Compensation benefits paid out by a company (over a rolling three year period) as compared to others in the same industry.
Exploration & Production (E&P)	See <i>Upstream</i>
Exposure	The measurement of time during which the subject is at risk from a hazard.
Exposure Hours	Hours worked by employees based on: actual hours from payroll, shift hours (i.e. 8 or 12 hours), or reasonable estimate for non-time sheet employees. Hours should be tied to occupational exposure from tasks and should not approach or equal 24 hours in one day.
Facility	Something created to serve a particular function (e.g. wells, structures, living quarters, drilling and workover packages, process equipment, utilities, pipelines, mobile offshore units, operational bases).
Fall Arrest	A personal fall arrest system means a system used to arrest an employee in a fall from a working level. It generally consists of an anchor point, connectors, a body belt or full body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. The entire system must be capable of withstanding the impact forces involved in stopping or arresting the fall.

Term	Definition
Fall Protection	A means to protect a worker from falling from a height.
Fall Restraint	System that consists of equipment used to keep an employee from reaching a fall point, such as the edge of a deck, rig floor or edge of an elevated work surface. The most commonly utilized fall restraint system is a standard guard rail. A tie-off system that restrains the employee from falling off an elevated working surface is another type of fall restraint.
Fatality	See <i>Death</i>
FDA	United States Food and Drug Administration
FEMA	United States Federal Emergency Management Agency
Fire Fighting—Incipient	Use of portable fire extinguishers to control or extinguish fire at its beginning stage.
First Aid Case (FAC)	Case involving first aid treatment of a work related minor injury or illness which can be administered by a first aider, equivalent or self, and does not require but can be administered by a licensed healthcare professional.
First Aid Treatment	The skilled application of accepted principles of treatment on the occurrence of an accident or in the case of sudden illness, using facilities and materials available at the time: to sustain life; to prevent deterioration in an existing condition; and, to promote recovery. The most important areas of first aid treatment are: restoration of breathing (resuscitation); control of bleeding; and, prevention of collapse. First aid treatment may include: 1. non-prescription medication at non-prescription strength; 2. tetanus immunization; 3. cleaning, flushing or soaking wound on surface of skin; 4. wound coverings such as gauze; 5. hot or cold therapy; 6. non-rigid support such as bandages; 7. temporary immobilization device for transporting victim; 8. drilling fingernail or toenail to relieve pressure; 9. eye patch; 10. removing foreign body from eye using swab or irrigation; 11. removing foreign bodies from body other than eye using tweezers or other simple means; 12. finger guards; 13. massages (but not physical therapy or chiropractic treatment); 14. drinking fluids for heat stress.
Fit for Duty	Individual is mentally and physically capable of performing duties as assigned.
Forklift	A forklift, forklift truck, lift truck is a powered industrial truck used to hoist and transport materials by means of steel forks inserted under the load.
FRC	Flame Retardant/Resistant Clothing
GOM	Gulf of Mexico
Ground Fault Protection	The process of protecting against a ground fault, such as the protection of equipment from damaging line-to-ground arcing fault currents. Typically includes a circuit protection device that prevents the flow of electrical current to earth if a short circuit is present. Required when pumping flammable fluids and in wet locations.
Grounding Conductor	A conductor used to connect equipment (or the grounded circuit of a wiring system) to a grounding electrode.
H ₂ S	Hydrogen Sulfide (H ₂ S) is a colorless gas that smells like rotten eggs (from the sulfur) in low concentrations. Often referred to as "sewer gas," hydrogen sulfide is highly poisonous. Usually, the poisoning caused by hydrogen sulfide is through inhalation and has a toxicity similar to cyanide. It is found in petroleum and natural gas and is sometimes present in ground water.
Hand tools	Tools which are portable and are operated whilst being held.
Hazard	1. An object, physical effect or condition with potential to harm people, property or the environment. 2. The potential to cause harm, including ill health or injury, damage to property, plant, products or the environment; production losses or increased liabilities. 3. A source of danger which if not adequately controlled or if suitable precautions are not taken could create an unsafe condition. 4. The potential for adverse consequences to arise from the occurrence of an identified event affecting the safety of people, the environment or economic resources.
Hazard Analysis	The application of one or more methodologies that aid in identifying and evaluating hazards. Includes risk assessment, job hazard analysis, and/or Job Safety Analysis. Sources that may be helpful in performing hazards analysis include API RP 14J and API RP 74.
Hazard Communication (HAZCOM)	The transmittal of information concerning the hazards of chemicals produced or imported and to which workers may be exposed at the worksite.
Hazardous Materials (HM)	See <i>Dangerous Goods</i>
Hazardous Substance	See <i>Dangerous Goods</i>

Term	Definition
Hazardous Waste	Waste that is regulated as hazardous, toxic, dangerous, listed, priority, special, or some other similar term as defined by an appropriate national, regional, state, provincial or local regulatory agency or authority.
HAZWOPER	Hazardous Waste Operations and Emergency Response Standard (U.S. statute, see 29 <i>CFR</i> 1910.1200(a))
Hearing Conservation	A hearing conservation program is where an employer monitors noise exposure levels to accurately identify noise levels above defined threshold levels that could adversely impact employees. The employer then institutes measures to protect employee hearing.
Heavy Equipment	Motorized equipment including but not limited to, such machines as excavators, mobile cranes, dozers or graders that are not generally designed to be legally driven on public roadways.
Heavy Metals	1. Heavy metals are chemical elements that have a specific gravity (a measure of density) at least five times that of water. The heavy metals most often implicated in human poisoning are lead, mercury, arsenic, and cadmium. Some heavy metals, such as zinc, copper, chromium, iron, and manganese, are required by the body in small amounts, but these same elements can be toxic in larger quantities. 2. Metallic element with high atomic weight, which may be toxic to plant and animal life depending on their oxidation and chemical state. Such metals may be residual in the environment and exhibit biological accumulation; e.g. arsenic; cadmium; chromium; mercury; lead.
Hoist	A hoist is a device used for lifting or lowering a load by means of a drum or barrel around which rope or chain wraps. May be manually operated, or electrically or pneumatically driven and may use chain, or fiber or wire rope as its lifting medium.
Hot Work	Activity that involves temperatures that could give rise to risks of fire and ignition of flammable substances and combustible materials, and includes work which involves the use of naked flames or generation of sparks, smoke or fumes. Hot work includes but is not limited to: 1. brazing and soldering; 2. bitumen boilers; 3. electric arc welding; 4. gas welding or cutting; 5. hot air welding; 6. disk cutting in confined spaces and areas where there is a high risk of fire or explosion.
Hours Worked	See <i>Exposure Hours</i>
Housekeeping	Maintaining the working environment in a tidy manner so that, in particular, access and movement is not hindered.
HSE Management System	The company structure, responsibilities, practices, procedures, processes and resources for implementing health, safety and environmental management.
HSE Plan	A description of the means of achieving health, safety and environmental objectives in a certain period of time.
HSE Policy Statement	Those documents which record the HSE policy of the organization.
HSE, HS&E	Health, Safety and Environmental; same as SHE and EH&S
HUET	Helicopter Underwater Egress Training
IADC	International Association of Drilling Contractors
IAEA	International Atomic Energy Agency
IFR	Instrument Flight Rules refers to the general weather conditions pilots can expect at the surface and applies to the weather situations at an airport during which a pilot must use instruments to assist take off and landing. IFR conditions for fixed wing aircraft means the minimum cloud ceiling is greater than 500 ft and less than 1,000 ft and/or visibility is greater than one mile and less than three miles.
Incident	An incident is an unplanned, undesired event that adversely affects the completion of a task and caused or could have caused injury, illness and/or damage (loss) to assets and/or the environment.
Industrial Hygiene (IH)	Industrial hygiene is the anticipation, recognition, evaluation and control of workplace environmental factors that may affect the health, comfort or productivity of the worker.