

Course Objectives:

Provide contractors working within the refining, petrochemical, and other heavy manufacturing industries with an understanding of common hazards encountered and safeguards utilized to protect them from injury. Training provides a foundation of information for satisfying the OSHA 1910 & 1926 requirements of the host employer and contract employer to inform their employees of the known potential fire, explosion, or toxic release hazards related to the contractor's work, as well as the processes and applicable provisions of the emergency action plan.

Course Format:

Safety Essentials and Safety Essentials en Español are available solely in an eLearning format. Both courses are conversational, interactive, enhance understanding, and avoid citation of regulatory requirements by presenting information from the following:

Training courses are not intended to satisfy all regulatory training obligations of the contract employer, but rather provide training on the most essential elements a worker needs prior to going onto an industrial site.

SUBJECT	CONTENT	REGULATORY REFERENCE	EMPLOYER/HOST RESPONSIBILITIES
Introduction	Work Authorization and scope control process using common non-work examples	VPP Related Subjects	
Work Orders (WO)	WO process and work scope verification, Operations Authority and permitting, Field equipment ID systems/spares, Operations preparation and isolation for maintenance, Stop Work Authority	VPP Related Subjects	
Process Overview	Petroleum and petrochemical processing, continuous flow with multiple process areas/ units, facility equipment complexity	PSM 1910.119/1926.64 VPP Related Subjects	1910.119(h)(2)(ii) & (iii), (h)(3)(ii): Employer and contract employer to inform of known potential hazards and emergency action plan; (h)(3)(i): assure employee trained in safe work practices; (i)(2)(iv): train each employee involved in operating a process; (j)(3): process overview and applicable procedures training.
Safety & Health Hazards	Industry safety records, safety ownership, primary process hazards, teamwork and communication with site resources, changing conditions and Stop Work Authority	PSM 1910.119/1926.64 VPP Related Subjects	1910.119(h)(2)(ii) & (iii), (h)(3)(ii): Employer and contract employer to inform of known potential hazards and emergency action plan; (h)(3)(i): assure employee trained in safe work practices; (i)(2)(iv): train each employee involved in operating a process; (j)(3): process overview and applicable procedures training; (l)(3): Identify and inform of site-specific processes and Management of Change (MOC).
Hazardous Chemicals and Common Hazards	Hazards of process and maintenance chemicals, common physical hazards, controls/prevention methods, bloodborne pathogens, OPIM, Universal Precautions, Hepatitis B, fire extinguisher classes, PASS method, extinguisher maintenance and inspection	HAZCOM 1910.1200/1926.59 BBP 1910.1030 Extinguishers 1910.157/1926.150	1910.1200(e)(1): written hazard communication program; (h)(1): Identify and inform of site specific hazards upon initial assignment and when new hazards are introduced; train on hazard categories or chemicals, including labels and SDS; (h)(2)(ii): Identify and inform of site- specific chemicals in the workplace; (h)(2)(iii): location and availability of written program, chemical list and SDS at job site; (h)(3)(iii): Identify and inform of site- specific procedures for employee protection from exposure, work practices, emergency procedures and PPE; 1910.1030(c)(1)(i): establish written Exposure Control Plan; 1910.1030(f)(1): make available the hepatitis B vaccine and vaccination series; 1910.1030(g)(2)(i): train each employee with occupational exposure; 1910.157(c)(1): provide portable fire extinguishers; 1910.157(e)(1): shall be responsible for inspection, maintenance and testing of extinguishers.

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Major Shutdowns and Turnarounds	Increased activity, 24/7 schedule, exposure potential from opening equipment/piping		
Process Safety Management	Review of select historical incidents leading up to OSHA PSM standard, contractor employer responsibilities, key safety procedures, and basic hazards. Also introduces the PSM standard elements	PSM 1910.119/1926.64	1910.119(h)(2)(ii) & (iii), (h)(3)(ii): employer and contract employer to inform of known potential hazards and emergency action plan; (h)(3)(i): assure employee trained in safe work practices; (i)(2)(iv): train each employee involved in operating a process; (j)(3): process overview and applicable procedures training; (l)(3): Identify and inform of site-specific processes and Management of Change (MOC).
Work Permits	Provides a detailed walkthrough of procedures and field practices related to the work authorization process	PSM 1910.119/1926.64 LO/TO 1910.147 Confined Spaces 1910.146 1926 Subpart AA Welding 1910.252 1926 Subpart J Excavations 1926.651 Toxic Substances 1910 Subpart Z 1926 Subpart Z Electrical 1910 Subpart S 1926 Subpart K	1910.119(h)(2)(ii) & (iii), (h)(3)(ii): employer and contract employer to inform of known potential hazards and emergency action plan; (h)(3)(i): assure employee trained in safe work practices; (i)(2)(iv): train each employee involved in operating a process; (j)(3): process overview and applicable procedures training.
Joint-Jobsite Visit/Permit Recipients	Purpose and steps to complete a JJV, pre-job walk requirements and permit documents	PSM 1910.119/1926.64 VPP Related Subjects	1910.119(h)(2)(ii) & (iii), (h)(3)(ii): employer and contract employer to inform of known potential hazards and emergency action plan; (h)(3)(i): assure employee trained in safe work practices; (i)(1): pre-startup safety review for new and modified facilities; (j)(3): process overview and applicable procedures training.
JSA/JHA Process	Purpose and different JSA methods, and the steps needed to complete a JSA	PSM 1910.119/1926.64 JHA OSHA 3071 VPP Related Subjects	1910.119 (h)(2)(ii) & (iii), (h)(3)(ii): employer and contract employer to inform of known potential hazards and emergency action plan; (h)(3)(i): assure employee trained in safe work practices; (i)(2)(iv): train each employee involved in operating a process; (j)(3): process overview and applicable procedures training; (OSHA 3071): refer to publication for best practices.
Line Breaking	Hazards of opening process equipment and piping, and procedures, special authorizations, and field oversight	LO/TO 1910.147 PSM 1910.119/1926.64 Appendix C	1910.147(c)(1): establish program consisting of energy control procedures; (c)(7)(i): The employer shall provide training to ensure the purpose and function of the energy control program are understood by employees.
Energy Isolation	Detailed review of energy isolation methods and responsibilities, types of energy, zero-energy state, lock/tag/try requirements	LO/TO 1910.147 Electrical 1926.417	1910.147(c)(1): establish program consisting of energy control procedures; (c)(7)(i): The employer shall provide training to ensure the purpose and function of the energy control program are understood by employees.
Reporting Incidents/Safety	Requirement to report all incidents	PSM 1910.119/1926.64 VPP Related Subjects	1910.119(m)(1): employer shall investigate each incident which resulted in, or could have resulted in a catastrophic release.
Emergency Evacuations	Site alarms, evacuation and muster procedures	EAP 1910.38/1926.35	1910.38(a): employer must have an emergency action plan 1926.35(e)(1): Before implementing the emergency action plan, the employer shall designate and train a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees.

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Hazard Controls	Detailed review of control methods with field examples, and combination of methods	Signs and Tags 1910.145 1926 Subpart G Materials Handling 1910.176 1926 Subpart H OTM OSHA Technical Manual Section V: Chapter 3 VPP Related Subjects	1910.176(e): provide clearance signs to warn of clearance limits; 1910.145(e)(2): wording of any sign should be easily read and concise; OTM: refer to publication for best practices.
Housekeeping	Individual/Team responsibility, with examples for field practice	Materials Handling 1910.176/1926.252 Walking/Working 1910.22 Housekeeping: 1926.25 VPP Related Subjects	1910.176(c): storage areas to be kept free from accumulation of materials; 1910.22(a)(1): keep all places of employment clean, orderly and in a sanitary condition; 1926.25(c): Containers shall be provided for the collection and separation of waste, trash, oily and used rags, and other refuse.
Hazardous Waste	Identifies specific EPA regulated items, collection areas, and reporting if see/smell/hear leaks	Hazardous Waste 40 CFR 261	
PPE	Personal responsibility, inspect and use correctly, detailed review of all types of PPE by body part, and Employer responsibilities	PPE 1910.132 - 1910.138/1926.95 General Safety 1926.20, 21, 28 PPE Test Methods 1926.65 App A HAZWOPER 1910.120	1910.132(d)(1): Document hazard assessment; (f)(3)(i) Inform and update training as changes in the work place occur (f)(3)(ii): Inform and update training as changes in the types of PPE occur.
Noise Exposure	Identifies noise sources, field practices to reduce exposure, hearing protectors, hearing loss, and non-work exposures	Hearing Conservation 1910.95/1926.101	1910.95(c)(1): employer to administer effective hearing conservation program; (d)(1): develop and implement monitoring program; (i)(1): make hearing protectors available; (k)(1): train all employees exposed to set noise level; (k)(3)(ii) & (iii): explain purpose, fit, use and care of hearing protectors and procedures of audiometric testing; (l)(1): post standard in workplace.
Process Area Signs and Barricades	Access control requirements, standard colors and wording for signs/tags, and types of barricades and entry procedures	EAP 1910.38/1926.35 Signs and Tags 1910.145 1926 Subpart G PSM 1910.119/1926.64	1910.145(c)(3): signs shall be used for general instructions and safety hazards; 1910.119(d): develop written process safety information; 1910.119(g)(1)(i): employee training; 1910.119(h)(2)(iv): control entry and exit of covered process area.
Radiation/NORM	Awareness for types and sources of radiation hazards in the field, RSO responsibilities	Radiation 1910.1096/1926.53-54 VPP Related Subjects	1910.1096(e)(2): each radiation area shall be posted with a sign or signs; (i)(2): Individuals working in radiation areas shall be informed of occurrence and instructed in safety problems associated with exposure; 1926.53(b): Any activity which involves use of radioactive materials or X-rays shall be performed by competent persons specially trained in proper and safe operation.

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HAZCOM	Comprehensive review of hazards, SDS, labels, terminology and employer responsibilities associated with the standard	HAZCOM 1910.1200/1926.59 Labels 1910.1200 App C SDS 1910.1200 App D	1910.1200(e)(1): develop, implement, and maintain written hazard communication program; (h)(1): Identify and inform of site specific hazards upon initial assignment and when new hazards are introduced; train on hazard categories or chemicals, including labels and SDS; (h)(2)(ii): Identify and inform of site specific chemicals in the workplace; (h)(2)(iii): Identify and inform of location of SDS and labels at the job site; (h)(3)(iii): Identify and inform of site-specific procedures for employee protection from exposure, work practices, emergency procedures and PPE.
Health Hazards, Toxicity and Exposure	Detailed review of exposure terminology, types of exposure and health effects of several common chemical hazards	PSM 1910.119/1926.64 Exposure 1910.1450 VPP Related Subjects	1910.119(h)(2)(ii) & (iii), (h)(3)(ii): employer and contract employer to inform of known potential hazards and emergency action plan; h)(3)(i): assure employee trained in safe work practices; (i)(2)(iv): train each employee involved in operating a process; (j)(3): process overview and applicable procedures training; (OSHA 3071): refer to publication for best practices.
Physical Hazards	Detailed review of flammable materials, terminology, and oxidizing hazards	HAZCOM 1910.1200/1926.59	1910.1200(e)(1): develop, implement, and maintain written hazard communication program; (h)(1): Identify and inform of site specific hazards upon initial assignment and when new hazards are introduced; train on hazard categories or chemicals, including labels and SDS; (h)(2)(ii): Identify and inform of site specific chemicals in the workplace; (h)(2)(iii): Identify and inform of location of SDS and labels at the job site; (h)(3)(iii): Identify and inform of site-specific procedures for employee protection from exposure, work practices, emergency procedures and PPE.
Chemical Clothing	Overview of protective clothing types, limitations, and selection	PPE 1910.132/1926.28, 1926.95	1910.132(d)(1): employer to conduct hazard assessment; 1910.132(f)(3)(i): Inform and update training as changes in the workplace occur; 1910.132(f)(3)(ii): Inform and update training as changes in the types of PPE occur; 1926.28(a): The wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions or where this part indicates the need for using such equipment to reduce the hazards to the employees. The employer is responsible for requiring the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions or where this part.
Respiratory Protection	Overview of respirator types and limitations, common chemicals where respirators are used	Respiratory 1910.134/1926.103	1910.134(c): Develop and implement a written program; (c)(1)(vii): Train employees in respiratory hazards specific to their job tasks at the specific site; (c)(1)(viii): Train employees in the proper use and maintenance of respirators; (d)(1)(i): select and provide appropriate respirator.
Environmental Hazards	Heat and cold stress, inclement weather, insects and animals	First Aid 1910.151/1926.23 Controls 1926 Subpart D Cold Stress OSHA 3156 Heat Stress OSHA 3154	1910.151(h)(2)(ii) & (iii): Identify and inform of the site specific hazards and emergency action plan; (h)(3)(i): Evaluate individual for skills competency; (h)(3)(ii): Identify and inform of site specific hazards and emergency action plan; (i)(2)(iv): Identify and inform of site specific hazards and emergency action plan; (j)(3): Identify and inform of site specific tasks and hazards; (l)(3): Identify and inform of site specific processes and Management of Change (MOC); 1926.23: First aid services and provisions for medical care shall be made available by the employer for every employee covered by these regulations.
Permit-Required Confined Spaces	Overview of PRCS definitions and hazards, roles & responsibilities	Permit Spaces 1910.146 VPP Related Subjects Permit Spaces 1926.1204	1910.146(g)(1): The employer shall provide training so that all affected employees acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned; 1926.1204(c): Each entry employer must: Develop and implement the means, procedures, and practices necessary for safe permit space entry operations.

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Hot Work	Overview of hot work types and authorization procedures, spark containment and fire watch duties	Welding 1910.252 PSM 1910.119/1926.64 Fire Prevention 1926.352	1910.252(a)(2)(iii)(B): fire watchers trained and equipped; (h)(2)(ii) & (iii), (h)(3)(ii): employer and contract employer to inform of known potential hazards and emergency action plan; (h)(3)(i): assure employee trained in safe work practices; (i)(2)(iv): train each employee involved in operating a process; (j)(3): process overview and applicable procedures training; (OSHA 3071): refer to publication for best practices.
Working from Heights	Overview of fall protection, fall arrest systems, scaffolds, ladders, housekeeping/dropped objects	Fall Protection 1910.28, 1910.29, 1910.140 Walking/Working 1910.30 Elevated Work 1926.503 Fall Protection 1926.501, 1926.503 Scaffolding 1926.451, 1926.452 1926.454, 1910.27 Ladders 1910.23 Stairways 1910.25 Dockboards 1910.26	1910.28(a): provide protection for exposure to fall or falling object hazards; 1910.29(b)(1)-(b)(15): guardrail fall prevention requirements; 1910.30(a)(1): provide fall protection training; 1910.140(c): fall protection systems to meet established requirements.
Excavations & Trenching	Overview of Competent Person role, permits, design, inspection, mobile equipment and spoils, confined spaces	Excavations 1926.650, 1926.651, 1926.652	1926.651(d)(1): daily inspections shall be made by competent person; 1926.652(a)(1): protect employees from cave-ins by adequate protective system.
Electrical Hazards	Switchyards and MCC restricted areas, authorized persons, GFCI, pre-use tool inspection, power line clearances	Electrical 1910.331-1910.335, 1926.403, 1926.416	1910.332: training requirements for those at risk of electric shock; 1910.333(b)(2)(i): maintain written copy of procedures; 1910.335(a)(1)(i): Employees shall be provided with and shall use appropriate electrical protective equipment; 1926.416(a)(1): No employer shall permit work in such proximity to any part of an electric power circuit unless employee is protected against electric shock by deenergizing circuit and grounding or guarding; 1926.403(b)(1): Employer shall ensure electrical equipment is free from recognized hazards likely to cause death or serious physical harm.
Operating mobile Equipment	Authorized/qualified users only, operator responsibilities, forklifts, mobile lifts, cranes, spotters, tie-off	PITs 1910.178 General 1926.6 1926.600-602	1910.178(l)(1)(i) & (ii): ensure employee is competent and trained.
Power Tools	Tool selection, pre-use inspection, guards, tag and remove if damaged, line of fire	Tools 1926.302, 1910.242	1910.242: employer responsible for safe condition of tools and equipment used by employees.
Safety Responsibility	Personal safety commitment, every day, every task, teamwork, always follow procedures and requirements	General Duty 29 USC 654 VPP Related Subjects	General Duty(a): employer shall furnish place of employment free from recognized hazards; (b): employee shall comply with standards and rules.