



OIL & GAS INDUSTRY Infographic

The oil and gas industry is one of the most dangerous jobs in America, this is why it has one of the most thorough safety training programs.

Despite safety procedures and safeguards in place, according to the CDC, the fatality rate was

7x higher compared to ALL OTHER INDUSTRIES in the U.S. from 2003-2010.

The American Petroleum Institute (API) represents all facets of the oil and natural gas industry.

The API represents nearly **400 corporations** in the petroleum industry and assists with standards for refinement, production, and distribution of petroleum products.



From 2003-2013, the oil and gas extraction industry went through

UNEXPECTED GROWTH...

doubling the size of their workforce



x2



...and increasing the number of drilling rigs by

71%



A new study from 2017 by API showed the natural gas and oil industry employed

10.3 million people in the U.S. and contributed more than **\$1 TRILLION** to the U.S. economy in 2015.

The boom in employment and activity also spiked the number of work-related fatalities by

27.6% and resulted in 1,089 deaths (CDC).



Since May 2017, oil and gas resources generated nearly

\$55 billion in total spending in the economy (BDO | Fair Share).

Biggest Threats to Oil Rig Worker Safety:

- ✓ Human Error
- ✓ Worker Culture
- ✓ Recklessness
- ✓ Negligence
- ✓ Lack of proper personal protective equipment (PPE)
- ✓ Miscommunication
- ✓ Misuse of equipment



2015 Fatalities in the Mining Sector

Reported by the Bureau of Labor Statistics, 2017



A recent report by the International Labour Organization found that **the challenge for the oil and gas industry is to be able to quickly and effectively respond to potential vast and serious incidents.**

After the Deepwater Horizon oil spill disaster in 2010,

the U.S. Department of the Interior formed two new independent agencies to be responsible for offshore energy management and enforcement:

1. The Bureau of Safety and Environmental Enforcement (BSEE): enforces safety and environmental protection regulations for the offshore oil and natural gas industry on the U.S. Outer Continental Shelf (OCS).

2. The Bureau of Ocean Energy Management (BOEM): responsible for offshore renewable energy-related management activities and development on the U.S. Outer Continental Shelf (OCS).

By year 2012 marked the beginning of the modern safety culture in the offshore industry when OSHA Safety and Environmental Management System became a law.

SEMS II is a mandatory program enforced by BSEE. The program serves as a four-step system to enhance employee training, improve hazard safety, manage with their safety management decisions, and improve auditing procedures.

Top 5 Most Cited Federal OSHA Standards in the Mining, Quarrying, and Oil and Gas Extraction Industry (October 2015-September 2016)

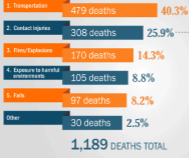
1. Hazard Communication	2. General Requirements	3. OSHA Act General Duty Paragraph	4. Wiring methods, equipment, for general use and components	5. Guarding floor and wall openings and holes
☞ Citations: 57	☞ Citations: 34	☞ Citations: 32	☞ Citations: 29	☞ Citations: 23
☛ Penalty: \$61,114	☛ Penalty: \$68,793	☛ Penalty: \$172,124	☛ Penalty: \$47,502	☛ Penalty: \$36,381

A survey conducted by ISIRI revealed the top health and safety goal for 2017 for oil and gas and utility/energy professionals was to

- develop and/or improve their safety culture (60%)
- following new hires safety training and refresher training (58%)



Top 5 Events with the Most Fatalities in the U.S. Oil & Gas Extraction Industry (2003-2015)



Highway vehicle accidents make up **4 OUT OF 10** fatalities of workers in the oil and gas extraction industry

Contact injuries (objects or equipment) are responsible for the second highest number of deaths.

Most Important Safety Signs in the Oil & Gas Industry

Effective safety labeling and signage is essential to communicate specific worker equipment and safety procedures when face-to-face communication isn't always possible.

Understand how these three main categories of safety signs mandated by OSHA are crucial to the oil and gas industry:

⚠ DANGER

Apply in areas where there's a threat of immediate danger that will cause serious injury or death if not avoided, such as:

- Arc flash and shock hazards
- Rotating driveline hazards
- Hydrogen sulfide (H₂S) exposure
- Confined spaces entry
- Critical for workers who may be unfamiliar with the job site

Safety Instructions

Clearly communicate procedures in various locations on the job site.

- Convey procedures and hazards specific to the work site and work crew
- Standardize the workflow in all areas of the job site
- Direct personnel to safety equipment like eye wash stations and first aid kits
- Communicate steps for safe operation of specific equipment
- Reduce overall confusion

⚠ CAUTION

Communicate areas where protection is needed to prevent against unsafe practices such as:

- Slip and trip hazards
- Moving vehicles and machinery on the work site
- High pressure vessels
- PPE requirements
- Highly flammable material storage areas

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