

Major accidents, 1989-2026

Table

Year	Incident	Deaths, injuries	Key findings
1989	ARCO Oil and Gas Co. (ARCO) rig, GoM	7, 10	Contract personnel were installing a pig trap on an 18-in. OD export gas pipeline on ARCO's Platform B, South Pass Block 60, Lease OCS-G 1608 in the Gulf of Mexico, offshore Louisiana . As a cold cut was made into the pipeline, hydrocarbons sprayed from the cut and ignited.
1998	Esso Australia Ltd.'s Longford gas plant, Longford, Victoria, Australia	2, 8	A heat exchanger vessel ruptured due to thermal stress, releasing flammable hydrocarbon vapors that ignited. The Longford Commission found that Esso's safety culture was too focused on lost-time incidents, not safe plant maintenance and operations, citing an operations misalignment of process flow as a root cause of the incident.
2005	BP PLC's refinery, Texas City, Tex.	15, 180	Fire and explosion occurred on the isom unit involved the raffinate splitter and blowdown drum. The US Chemical Safety Board (CSB) investigation determined the disaster was caused by a PSM program with serious deficiencies. Cost-cutting and failure to invest in the refinery left the plant vulnerable, as operator training and staffing had been downsized.
2010	BP-operated Macondo deepwater well, Transocean Ltd.'s Deepwater Horizon drilling rig, offshore	11, 17	A final report from a Joint Investigation Team of the US Bureau of Ocean Energy Management, Regulation, and Enforcement and the US Coast Guard determined the Deepwater Horizon semisubmersible explosion and subsequent Gulf of Mexico oil spill from a blowout of the abandoned BP-operated Macondo deepwater well was caused by a series of decisions that complicated cementing operations and added

	Louisiana, Gulf of Mexico		incremental risk contributing to the ultimate failure of Halliburton Co.'s cement work to seal the well. Investigators concluded BP and Transocean crew members on the Deepwater Horizon “missed the opportunity to remedy the cement problems when they misinterpreted anomalies encountered during a critical test of cement barriers called a negative test, which seeks to simulate what will happen if the well is temporarily abandoned and to show whether the cement will hold against hydrocarbon flow.” The report concluded that “the loss of life at the Macondo site on Apr. 20, 2010, and the subsequent pollution of the Gulf of Mexico through the summer of 2010 were the result of poor risk management, last-minute changes to plans, failure to observe and respond to critical indicators, inadequate well control response, and insufficient emergency bridge response training by companies and individuals responsible for drilling at the Macondo well and for the operation of the Deepwater Horizon.”
2012	Petróleos Mexicanos (Pemex) natural gas processing plant, Reynosa, Tamaulipas, Mexico	33, -	The explosion at the Tamaulipas gas processing complex on Sept. 18, 2012, was believed to be caused by rupture of a pipeline due to integrity issues, which led to a localized gas leak that ignited inside the complex. A final report on the incident was never made publicly available.
2015	Pemex's Abkatun A platform, Bay of Campeche, offshore Mexico	4, 16	Mexico's National Agency of Industrial Safety and Environmental Protection Sector Hydrocarbons (ASEA) determined the explosion and subsequent fire at the compression unit of the platform resulted from a gas leak in a rarely used support fuel line. ASEA's inspection of the ruptured line revealed an unusual form of localized, accelerated

			structural degradation caused by the internal presence of microscopic organisms combined with highly corrosive hydrogen sulfide gas.
2016	Petroquímica Mexicana de Vinilo, SA de CV (PMV) V's Mexichem SAB de CV-operated petrochemical complex, Coatzacoalcos, Veracruz, Mexico	30, 136	The petrochemical plant explosion on Apr. 20, 2016, was caused by a possible process leak in an area of the plant that was known for frequent leaks . A final report on the incident was not made publicly available.
2019	Philadelphia Energy Solutions LLC's (PES) refining complex in Philadelphia, PA.	5, 15	An investigation by the CSB into the June 21, 2019, disaster concluded the massive fire and series of three separate explosions in an alkylation unit occurred when an extensively corroded pipe elbow ruptured, releasing process fluid into the refinery's hydrofluoric acid alkylation unit. Despite regulations from both the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) requiring companies to determine that their equipment is safe to operate after industry standards are updated, the CSB said that PES never conducted any type of comprehensive evaluation of its unit piping to ensure its compliance with revised industry standards. Had PES carried out the required evaluation, it would have shown high levels of nickel and copper in the pipe elbow that triggered the explosion no longer met standards. The entirely preventable catastrophe ultimately led to the refinery's permanent shutdown and PES' bankruptcy .

2020	Engen Petroleum Ltd.'s Enref refinery at Merebank, Wentworth, Durban, South Africa	-, 7	The massive explosion and subsequent fire at the refinery in early December 2020 reportedly started in a pressurized diesel process unit in the refinery's North Complex, possibly caused by a dip in electricity supply. While an official report on the incident was never made publicly available, parliamentary proceedings addressing it outlined a pattern of Engen's growing disregard for the health of surrounding communities—including steadily rising harmful releases from and decreased investment in maintenance at the refinery—ahead of the 2020 explosion, following Engen's earlier announcement of its intention to sell the refinery.
2021	ExxonMobil Corp.'s integrated refining and petrochemical complex, Baytown, Tex.	-, 4	A major explosion and subsequent fire at ExxonMobil's Baytown refinery on Dec. 23, 2021, was attributed to rupturing of the pipe holding a flange in the complex's hydrodesulfurization unit , which released naphtha vapor that ignited. At the time of the incident, ExxonMobil had a documented history of failing to inspect for corrosion in piping in both its onshore and offshore operating assets, including the Baytown complex . The December 2021 incident followed a separate explosion and fire at the olefins plant of the operator's Baytown complex that injured about 40 people in July 2019. Subsequent legal proceedings determined that the 2019 Baytown incident resulted from an accumulation of popcorn polymer that led to the rupture of a plant line and a sudden loss of containment. Evidence also proved ExxonMobil had knowledge of the risks regarding popcorn-polymer buildup for decades ahead of the disaster but did nothing to implement safety practices to prevent or reduce the risks of an explosion occurring. Alongside failing to establish necessary safety procedures to address or remedy the known danger, case facts also confirmed the operator actively withheld its knowledge

			of the personal safety risks to both direct employees of the plant and contractors working at the site.
2021	PT Pertamina subsidiary PT Kilang Pertamina Internasional's Refinery Unit VI, Balongan, Indramayu District, West Java	1, 20	The explosion and ensuing fire in the storage tank farm of the refinery on Mar. 29, 2021 , occurred during severe weather conditions after a hydrocarbon leak from tank equipment was ignited presumably by lightning strikes. Post-incident analysis highlighted critical failures in operational safety that, had they been addressed, could have prevented the disaster, including vulnerabilities in the site's tank-fire protection systems and degradation of preventative barriers between the hydrocarbon storage tanks that could have slowed or precluded rapid spread of fire to combustible infrastructure.
2022	BP-Husky Refining LLC's Toledo refinery, Oregon, Ohio	2, -	CSB's final investigation report outlined a chain of breakdowns in BP-Husky's PMS program across the day on Sept. 20, 2022, that led to the fatal refinery fire, beginning with a naphtha hydrotreater upset followed by subsequent operational decisions that directly resulted in a liquid-naphtha overflow into fuel-gas piping and conditions for ignition. During the increasingly worsening sequence of events, the refinery experienced an "alarm flood" (3,712 alarms in 12 hours) that overwhelmed operators and contributed to delayed or erroneous responses by board operators. CSB also found the refinery failed to implement a shutdown or hot circulation in time to prevent the incident. The report underscored the necessity of having readily accessible tools in place that employees can use to manage highly stressful and abnormal operating situations, which BP-Husky failed to do. CSB also noted the company's failure to develop or improve safety measures to address the naphtha overflow issue after becoming aware of the potential danger in 2019.

2023	Marathon Petroleum Corp.'s (MPC) Galveston Bay refinery, Texas City, Tex.	1, 2	On May 15, 2023, an accidental release of naphtha caught fire during an equipment oil change on an elevated platform above a pump supplying naphtha to downstream equipment, a CSB report said . The pump's coupling failed, reducing outlet flow and resulting in a break in a small-bore piping section, releasing flammable naphtha that ignited. A pump inspection in June 2022 had previously identified damage to the coupling of the pump, but no repairs were made, leaving the pump's motor to spin the damaged coupling, the friction of which ignited the naphtha. MPC's mechanical integrity program required vibration analysis to be performed every 2 months to predict pump and coupling failures, but the last vibration analysis test on the pump was completed in October 2022, 7 months before the incident. The CSB determined that MPC's mechanical integrity program contributed to the incident by not repairing the damaged coupling identified by the inspection. CSB found that had MPC performed its required vibration analysis on the pump, the coupling failure could have been predicted, repairs made, and the incident prevented.
2024	Petróleos Mexicanos (Pemex) subsidiary Pemex Transformación Industrial (PTI) Norteamérica SA de CV's refinery, Deer Park, Tex.	2, 13	A 27,000-lb leak of hydrogen sulfide from the refinery's amine regeneration unit occurred Oct. 10, 2024 , during maintenance of the equipment. In addition to concluding Pemex Deer Park failed to establish an adequate method to clearly identify the equipment that workers were to open before the work was authorized to begin, the CSB's final report on the incident said the operator's work-permitting process was too broad to control the hazards associated with opening piping in the unit and its precautions to workers regarding hazards of working on the unit incomplete. The investigation also identified numerous instances in which PEMEX Deer Park policies and procedures were not

			aligned with actual practices so that both the refinery's management and operations personnel often misunderstood or were unaware of these expectations and frequently deviated from required practices. These deviations from documented work-permitting and hazard-evaluation requirements contributed to the incident
2024	Eni SPA's fuel depot, Calenzano, Italy	2, 9	The Italian government's investigation into the fuel depot explosion found that it was caused by a leak at the site's loading platform resulting from deliberate and systematic bypassing of safety protocols by the operator's on-site management to avoid halting fuel distribution. External contractors assigned to convert a line from gasoline to hydrotreated vegetable oil (HVO) service were not informed that the pipeline was still active and under high pressure, with site supervisors failing to execute the safety verification procedures required to confirm the line was empty and safe before allowing contractors access. Investigations also cited an "intentional removal or omission of precautions against accidents at work," with on-site management found to have deliberately chosen not to put localized safety barriers or operational stops in place. Eni was cleared of corporate liability, but individual on-site managers from Eni and the contracting company were charged with multiple counts of culpable homicide (manslaughter), causing a culpable disaster, and bodily harm.
2025	Petronas Gas Bhd.'s high-pressure Peninsular Gas Utilization (PGU) pipeline, Putra	-, 150	Malaysia's Parliamentary Special Select Committee (PSSC) on Infrastructure, Transport and Communications identified long-term soil subsidence beneath the pipeline as the root cause of the failure that led to its rupture and explosion on Apr. 1, 2025. While the PSSC investigation found no indications of sabotage, construction

	Heights, Subang Jaya, Selangor, Malaysia		interference, over-pressurization, or operator negligence, speculation persists regarding the high-pressure gas pipeline's siting in such close proximity to residential areas without appropriate buffer zones in place.
2025	Chevron Corp. subsidiary Chevron USA Inc.'s refinery, El Segundo, Calif.	Indeterminate number of minor injuries reported	The Oct. 2, 2025, fire originated at a process unit at the southeast corner of the refinery. Further details on the incident have yet to be released.
2025	ONEOK Inc.'s fractionation complex, Mont Belvieu, Tex.	-, 3	An explosion and fire at the complex's heating system on Oct. 6, 2025 , was isolated to the site's MB-4 fractionator. Further details on the incident have yet to be released.
2025	HF Sinclair Corp. subsidiary HF Sinclair Navajo Refining LLC's refinery, Artesia, NM	-, 3	Details regarding an explosion and fire reported at the refinery on Oct. 31, 2025 , have yet to be released.
2026	Pemex's Refinería Olmeca, Dos Bocas, Tabasco, Mexico	5, -	Pemex confirmed heavy rains on Mar. 17, 2026 , caused an overflow of oily waters that stagnated and, after breaching the refinery's perimeter, subsequently ignited on a road bordering the complex. Details regarding other factors contributing to the fatal incident have yet to be disclosed.
2026	Valero Energy Corp.'s refinery, Port Arthur, Tex.	Indeterminate number of minor injuries	The official cause of a late-March 2026 explosion and subsequent fire in the refinery's diesel hydrotreater has yet to be made publicly available. Formal investigations into the incident presumably remain ongoing.

		reported	
2026	bp PLC's Cherry Point refinery, Blaine, Wash.	-, 3	Investigations into the Apr. 18, 2026, explosion and subsequent fire remain underway by the Northwest Clean Air Agency and the Washington State Department of Labor and Industries . No official details regarding the incident have been made publicly available.