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History of accidents in the LNG industry

1944	Cleveland, Ohio, USA	At the peak-shaving plant a tank failed and spilled its contents into the street and storm sewer system. The resulting explosion and fire killed 128 people. The tank was built with a steel alloy that had low-nickel content, which made the alloy brittle when exposed to the extreme cold of LNG.
1964	Arzew, Algeria	During loading operations, lightning struck the forward vent riser of the Methane Progress and ignited vapor which was being routinely vented through the ship venting system. A similar event happened early in 1965 while the vessel was at sea shortly after leaving Arzew. In both cases, the flame was quickly extinguished by purging with nitrogen through a connection to the riser.
1965	Jules Verne Spill, Arzew, Algeria	LNG liquid spill caused by overflowing of a cargo tank that resulted in the fracture of the cover plating of the tank and adjacent deck plating.
1965	Methane Princess Spill	LNG discharging arms were disconnected prematurely before the lines had been completely drained, causing LNG liquid to pass through a partially opened valve and onto a stainless steel drip pan placed underneath the arms. This caused a star-shaped fracture to appear in the deck plating in spite of the application of seawater.
1969	Portland, Oregon, USA	An explosion occurred in an LNG tank under construction. No LNG had ever been introduced into the tank. The cause of the accident was attributed to the accidental removal of blinds from natural gas pipelines which were connected to the tank. This led to the flow of natural gas into the tank while it was being constructed.
1971	La Spezia, Italy	This accident was caused by “rollover” where two layers of LNG with different densities and heat content form. The sudden mixing of these two layers results in the release of large volumes of vapor. In this case, about 2,000 tons of LNG vapor discharged from the tank safety valves and vents over a period of a few hours, damaging the roof of the tank.
1972	Montreal, Quebec, Canada	A back flow of natural gas from the compressor to the nitrogen line occurred during defrosting operations at an LNG liquefaction and peak shaving plant in Montreal East. The valves on the nitrogen were not closed after completing the operation. This caused over-pressurization of the compressor and the natural gas entered the control room (where operators were allowed to smoke) through the nitrogen header. An explosion occurred when an operator tried to light a cigarette.
1973	Staten Island, NY, USA	In February 1973, a fire started while repairing the interior of an empty storage tank at Staten Island. The resulting increase in pressure inside the tank was so fast that the concrete dome on the tank lifted and then collapsed down inside the tank killing the 37 construction workers inside.
1974	Massachusetts Barge Spill, USA	After a power failure and the automatic closure of the main liquid line valves, 40 gallons of LNG leaked as it was being loaded on a barge. The LNG leaked from a one-inch nitrogen-purge globe valve on the vessel’s liquid header, causing several fractures to the deck plates.
1977	Aquarius Spill, Bontang, Indonesia	During the filling of a cargo tank, LNG overflowed through the vent mast serving that tank. The incident may have been caused by difficulties in the liquid level gauge system. The high-level alarm had been placed in the override mode to eliminate nuisance alarms.
1978	Das Island, U.A.E.	An accident occurred due to the failure of a bottom pipe connection of an LNG tank. The tank had a double wall (a 9% nickel steel inner wall and a carbon steel outer wall). Vapor from the outer shell of the tank formed a large heavier-than-air cloud which did not ignite.

1979	Mostafa Ben Bouliad Spill, USA	While discharging cargo at Cove Point, Maryland, a check valve in the piping system of the vessel failed releasing a small quantity of LNG. This resulted in minor fractures of the deck plating.
1979	Cove Point, Maryland, USA	In October 1979, a natural gas leak at Cove Point caused an explosion killing one plant employee and seriously injuring another and causing about $3 million in damages.
1983	Bontang, Indonesia	A rupture in an LNG plant occurred as a result of over-pressurization of the heat exchanger caused by a closed valve on a blow-down line. The exchanger was designed to operate at 25.5 psig. When the gas pressure reached 500 psig, the exchanger failed and the explosion occurred.
1987	Mercury, Nevada, USA	In August 1987 an accidental ignition of an LNG vapor cloud occurred at the U.S. Department of Energy Nevada Test Site during large-scale tests involving spills of LNG. The cloud was accidentally ignited and damaged and propelled polyurethane pipe insulation outside the fence.
2003	Bintulu, Malaysia	A major fire occurred in the exhaust system of the propane gas turbine in the first train (Train Number 7) of the MLNG Tiga project at the Petronas' LNG Complex.
2004	Skikda, Algeria	A steam boiler that was part of an LNG production plant exploded, triggering a second, more massive vapor-cloud explosion and fire. The explosions and fire destroyed a portion of the LNG plant and caused 27 deaths, 74 injuries, and material damage outside the plant's boundaries.
2004	Ghislenghien, Belgium	A pipeline carrying natural gas from the Belgian port of Zeebrugge to northern France exploded, resulting in 23 known fatalities. The cause of the incident is still under investigation but it appears that a contractor accidentally damaged the pipe.
2004	Trinidad & Tobago	In June 2004, workers were evacuated after a gas turbine at Atlantic LNG's Train 3 (Trinidad & Tobago) facility exploded.
2005	District Heights, Maryland, USA	A Washington Gas Company-sponsored study released in July 2005 pointed to subtle molecular differences in the imported liquefied natural gas the utility began using in August 2003 as the cause of a house explosion in March 2003.
2005	Nigeria	A 28-inch LNG underground pipeline exploded in Nigeria and the resulting fire engulfed an estimated 27 square kilometers.