

California Legislature

Background

The Elder California Pipeline Safety Act of 1981 (the Elder Act) provides the Office of the State Fire Marshall (SFM) the authority to regulate intrastate hazardous liquid pipelines and portions of interstate hazardous liquid pipelines located within the state, if there is an agreement between the Pipeline and Hazardous Materials Safety Administration (PHMSA) and the SFM. The SFM is only allowed to enter into an agreement with PHMSA if it is given all regulatory and enforcement authority of the pipelines subject to the agreement. An interstate pipeline is a pipeline that has been designated by PHMSA for interstate or foreign commerce use. The vast majority of pipelines in California carry petroleum based hazardous liquids. There are a small number of intrastate pipelines that carry carbon dioxide. According to SFM, there are 1,188 miles of interstate pipeline and 4,500 miles of intrastate pipelines. SFM estimates that there are 2,000 miles of intrastate pipeline located within state waters and coastlines. SFM's pipeline safety staff inspects pipelines to ensure compliance with federal and state pipeline safety laws and regulations. The SFM is also responsible for the investigation of all spills, ruptures, fires, or pipeline incidents for cause and determination of probable violations.

In the past ten years, there have been 87 significant pipelines incidents in California. Corrosion is the largest cause of pipeline failure. Factors that affect the probability of a pipelines incident include the age of the pipeline, the type of fluid put through the pipeline, the temperature of the fluid, the pressure the pipeline is under, and whether the pipeline uses cathodic protection.

One way to avoid hazardous liquid pipeline incidents is through testing to detect problems before they occur. The two primary methods to test the integrity of pipelines is hydrostatic and In-line inspection.

- 1) **Hydrostatic Testing.** A test medium (typically water) inside the pipeline is pressurized to at least 125% of the maximum operating pressure (MOP) for 4 continuous hours (the operator must test for an additional 4 hours at 110% of the MOP if the pipeline is not visible). If there is concern with seam failures or dormant cracks that might grow due to a phenomenon known as "pressure reversals", then a "spike" test at the maximum pressure of 139% of MOP for a short period (~1/2 hour) may be conducted. The spike test should expose any cracks that might otherwise grow during pressure reductions after the hydrostatic test or as a result of operational pressure cycles. A hydrostatic pressure test is a pass or fail test that only verifies the integrity of the pipeline at that time.



- 2) **In-line Inspection (ILI).** A tool (such as a “Smart Pig”) travels through the pipeline and uses sensitive instruments to measure and record irregularities that identify corrosion, dents, gouges, or other anomalies on a pipeline. There is no ILI tool that can detect every anomaly on a pipeline. Operators may have to use more than one ILI tool to accurately identify conditions on a pipeline that need repair. ILI tools allow operators to identify and repair defects on a pipeline before a failure occurs. In-line inspection tools may not be able to detect cracking in a pipeline that a hydrostatic test could.

Federal law requires every new, relocated or replaced pipeline to go through a hydrostatic test. The SFM requires tests at least every five years after that. The test must be hydrostatic unless the SFM waives that requirement and allows an in-line inspection. The SFM seems to prefer ILI because of the information they can provide about the pipelines; and operators usually prefer them because they do not cause failure of the pipeline if there is a problem. The SFM would not provide a waiver of a hydrostatic test if there was historical information or leak history that showed that the pipeline was susceptible to longitudinal seam failures, dormant pipeline cracks, or a pipeline configuration that could not accommodate an in-line tool (such as multi diameter, valve types, or sharp bends in the pipeline). A major difference between state and federal rules for pipeline testing is the SFM reviews and maintains the results of the test and certifies the test conductor. PHMSA does not maintain the test results and must ask the operator for them. The SFM also conducts inspections to ensure compliance with federal and state laws. These inspections are a review of procedure manuals operations and maintenance records, as well as field reviews.

On May 19, 2015, a pipeline owned by Houston-based Plains All American Pipeline ruptured, spilling approximately 101,000 gallons to 140,000 gallons of heavy crude oil along the Gaviota coast in Santa Barbara County. It is estimated that 21,000 gallons of the oil went down a storm culvert onto cliffs and into the Pacific Ocean. The immediate oil spill area stretched over nine miles of California coastline, and tar balls have washed up as far as one hundred miles from the spill site. The pipeline that ruptured, known as Line 901, is a common carrier pipeline that transports oil that was produced on platforms offshore in both state and federal waters to be refined in Santa Maria or Kern County. On May 20, 2015, Governor Brown issued an emergency proclamation for Santa Barbara County due to the effects of the oil spill. Refugio State Beach and El Capitan State Beach were closed for over a month because of the oil spill. Fisheries from Canada de Alegria to Coal Oil Point were also closed for over a month, which negatively impacted several commercial fisheries – including lobster, crab, shrimp, halibut, urchin, squid, whelk, and sea cucumber. The Oiled Wildlife Care Network recovered 195 dead birds and 106 dead marine mammals from the spill. Dead marine mammals recovered included dolphins, sea lions, and seals. Sensitive habitat of the California Least Tern and the Snowy Plover, birds protected by the Endangered Species Act, has been damaged. Hotels, tour outfits, and other

tourism businesses have experienced cancelations and decreased bookings due to the spill. More than 1,000 workers from local, state and federal agencies worked to clean up the beaches. Over 14,000 gallons of oily water have been recovered to date. News reports indicate the pipeline was potentially severely corroded where it ruptured. The spill and events leading up to the spill remain under investigation.

SB 295 (Jackson), Chapter 607, Statutes of 2015, and AB 864 (Williams), Chapter 592, Statutes of 2015, amended the Elder Act in reaction to the oil spill in Santa Barbara. SB 295 requires the SFM to annually inspect all pipelines under its jurisdiction and allows it to increase its fees to cover those costs. SB 295 also prohibits the SFM from acting as an inspection agent for PHMSA unless it is given complete regulatory and enforcement authority. AB 864 requires pipelines near environmentally sensitive areas to have the best available technology to reduce the amount of oil released in an oil spill to protect state waters and wildlife. The SFM will be developing regulations to implement each piece of legislation. On October 1, 2015, PHMSA announced proposed regulations to revise and update its pipeline safety standards and reporting requirements. PHMSA's new regulations will likely not change much for California pipelines.