

Containment Dikes and Pads



Most people recognize that containment dikes around storage tanks and sloped containment pads for pumps, process buildings and structures, truck and railcar unloading areas, and other potential spill locations have an important environmental protection function — preventing contamination of soil and surface water. But, they often also have important safety functions, such as:

- limiting the spread of a fire and preventing exposure of other equipment if a flammable material spills and is ignited
- preventing contact of incompatible reactive materials in case of leaks or spills
- limiting the spread of spilled corrosive material and preventing contact with equipment that could be damaged by contact with the corrosive material.

In 2001, the U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated a fire that destroyed a petroleum blending facility in Texas. Poor dike design and maintenance resulted in burning liquid spreading the fire from tank to tank, eventually engulfing the whole plant.



- ◀ Spill containment dikes for chemical storage tanks.
- ▶ A sloped containment pad directs any spills from a truck unloading facility to a chemical sewer trench.



The arrow shows a hole in a containment dike; more damage can be seen at the base and the top of the dike wall. Other examples of damage include cracks in dike walls or floors, holes where pipes have been installed passing through dike walls, and anything else that would allow spilled material to flow out of the dike area.

What Can You Do?

- Periodically include containment dikes around storage tanks, sloped containment areas, and drainage trenches as part of your routine plant safety inspections. Look for physical damage, spilled material, accumulation of rainwater in dikes, or blocked drainage. Look for debris, equipment, or anything that restricts flow of a spill.
- Make sure that your plant procedures include pumping out or draining rainwater from containment dikes — if a dike is partly filled with rainwater, it may not be able to contain a large spill.
- If you have any kind of valves or other piping to remove rainwater from a containment dike, make sure these are closed or otherwise blocked when they are not being used.
- If you do any maintenance or construction work on a storage dike that results in damage to the integrity of the dike, make sure the damage is repaired before the job is finished.

Inspect and maintain your containment dikes and pads!

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