

Wrong hose causes ammonia leak!

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Early on a July 2009 morning, a truck of anhydrous ammonia was being unloaded into a storage tank at a plant in South Carolina using a hose stored on the truck trailer. Soon after the transfer began, the unloading hose ruptured releasing a cloud of ammonia, a toxic gas. The cloud traveled across a highway and into a wooded area where it dissipated. A motorist on the highway drove into the cloud of ammonia and apparently drove off of the road. She got out of her car and subsequently died from exposure to ammonia. Fourteen people reported medical problems, and seven were treated for respiratory symptoms and released the same day. Residents in the area were told to shelter in place, and the highway was closed for several hours. Approximately 7,000 pounds of ammonia were released.

The investigation found that one probable cause of the rupture was the use of an unloading hose which was not chemically compatible with anhydrous ammonia. Other contributing causes included inadequate unloading procedures and inadequate inspection of the unloading hose. The hose that was used to unload the ammonia was clearly labeled “LPG TRANSFER ONLY” (LPG – Liquefied Petroleum Gas). The trucking company found that one of their LPG trailers had an unloading hose intended for ammonia use on board, and it is likely that the hoses had been switched some time before the incident. The incorrect hose which failed may have been used to unload ammonia somewhere between 2 and 12 times.

What can you do?

- Always check that the correct hose is being used for unloading or loading operations. Be particularly careful if you are using a hose that comes with the truck.
- Read labels or warnings on hoses and ask for help if you are not sure the hose is appropriate for use.
- Always inspect hoses for damage, including hoses that come with the truck. Do not use hoses which are not in good condition. Also inspect any gaskets and fittings used with the hoses.
- Properly store hoses to avoid them being kinked, run over, or damaged.
- Follow your plant’s requirements for inspection and replacement of all hoses.
- If you routinely unload a material using a hose that comes with the delivery truck and you see that the hose for a delivery looks different, ask somebody to check that it is suitable for use.
- Read the August 2004, July 2007, and October 2011 issues of the *Beacon* on other hose failure incidents.

Are you using the right hose?

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