



Why Does My House Smell Like Rotten Eggs?

By Keith Hegney
NDRWSA Wastewater Technical Advisor

Have you ever experienced a “rotten egg” smell in your home? This is most likely an indication of a P-trap issue. P-traps are what holds on to sewer gases so that they will not pass through the pipes and back into your home or dwelling. They do this by keeping a small amount of water in a little “dip,” which then creates a seal for the dangerous gases, ultimately trapping the sewer gases. Thusly, if a P-trap does NOT get any water, it cannot create that seal, and will not prevent the harmful sewer gases from shooting back into the pipes and into your home.

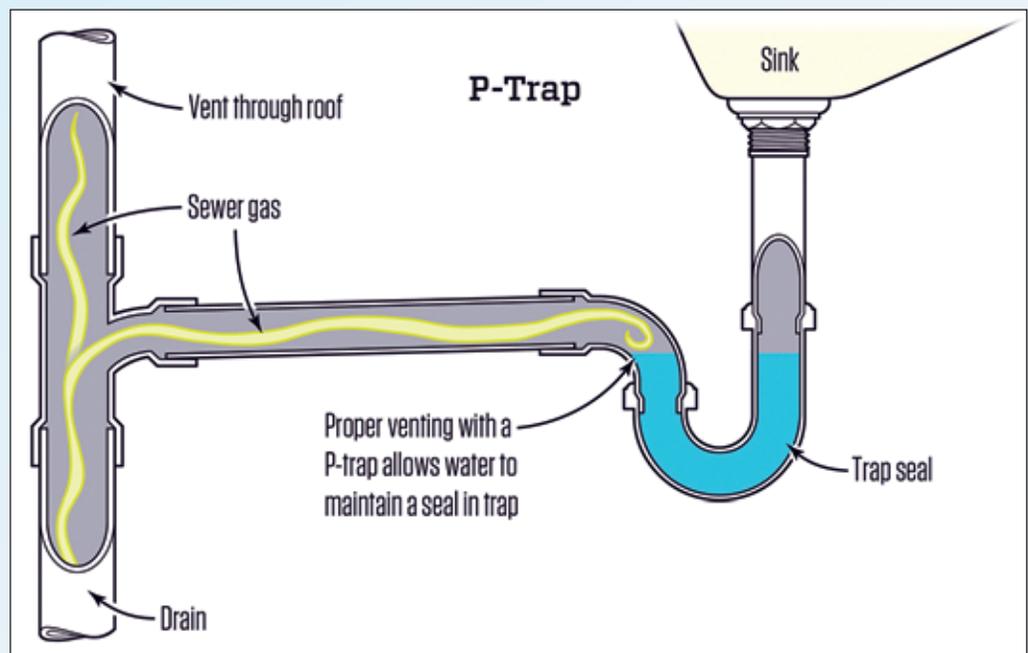
P-traps dry out for a few different reasons, but the most common is due to frozen or clogged vent stack that is no longer allowing air into your plumbing system. The air flow is important to force water throughout the pipes. If there is an obstruction, the water will become stagnant and eventually water will flow back up and out of drains. Homes that have heated floors are more likely to have issues due to higher evaporation.

The first indication that you have a P-trap issue is a foul smell. Ammonia and hydrogen sulfide are toxic gases that smell like rotten eggs. Methane gas is the largest and most dangerous constituent of sewer gases. Methane is colorless and odorless, but when inhaled, can lead to symptoms like nausea, dizziness, and headaches. If you detect a foul smell or experience any symptoms of methane gas, chances are that what you are smelling is the result of a dried-out P-trap.

P-traps are the U-shaped pipes in toilets and underneath sinks. Floor drains, typically found in storage rooms, washrooms, or utility rooms, also have a P-trap. It is very common to have *hidden or unused floor drains* in your home as well. These drains can become dry any time of year, resulting in harmful effects of sewer gas. If this is the

case, after locating the problematic drain, simply fill the drain with water. You can administer an environmentally safe oil, such as mineral oil, into the drain. (Mineral oil will reduce the evaporation rate of the water in the trap and is safe to use in any septic system).

If you are still experiencing sewer gas odors inside your home and unable to pinpoint the problem to an exact drain, North Dakota Rural Water Systems Association (NDRWSA), has the equipment available to assist with a “smoke test” in your home, business, or city’s sewer



system. A sewer smoke test can conveniently locate the source of the sewer odor, allowing the source of the sewer gas leak to be fixed. Quite often, the smell from a sewer is traced back to unused drains with dry traps. (However, there may also be a worn-out pipe, a tree root that has cracked and entered the pipe causing a leak, or simply an unsealed toilet wax ring). In any event, a leak may be very hard to find on your own. Smoke testing allows for “visual proof” to locate the exact source of a leaky sewer system.

The smoke testing method can be administered by the highly trained technical advisors of NDRWSA and is very efficient and cost-effective way to identify a sewer leak. The smoke is non-toxic, non-staining and odorless, it is harmless to humans, pets, plants, food, and material goods.

Asbestos Concrete Pipe (ACP)

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In North Dakota, there are many cities with asbestos concrete pipe (ACP) in their drinking water or wastewater lines. North Dakota Rural Water Systems Association's technical advisors have had many questions from system operators about how to handle ACP during and after a line repair. ACP lines, if they remain undisturbed, pose no threat to your health. However, disturbed lines and the exposure to asbestos can result in severe health issues. The North Dakota Department of Environmental Quality (NDDEQ) regulates the removal, handling and disposal of ACP.

North Dakota Administrative Code (NDAC) 33.1-15-13-02 - Emissions Standards for Asbestos

This section will outline the handling of ACP during and after repairs. The safest way to deal with ACP is to use a licensed contractor and individuals certified to do asbestos abatement.

A list of licensed asbestos contractors can be found at: <https://deq.nd.gov/forms/WM/asbestos/SFN17987.pdf>

Removal of ACP using Hand Tools

The safest way to handle ACP is to make sure the material stays in a non-friable condition. Non-friable means that it is a material that does not crumble easily. The use of EPA-approved ACP hand tools used properly will ensure the pipe ends remain nonfriable. The NDDEQ recommends wrapping the pipe in plastic to contain asbestos waste and prevent further damage until the ACP is disposed of properly. A contractor would not be required to be a licensed asbestos contractor if using hand tools. If the material is not regulated asbestos containing materials (RACM), a waste shipment record is not required.

Removal of ACP using Mechanical Tools

If more than three linear feet of ACP is disturbed or removed using mechanical grinders or cutters, or the ACP is in a friable condition, the pipe must be removed by a licensed contractor and individuals certified to do asbestos abatement. This material must be removed in accordance with the North Dakota Air Pollution Control Rules. Intentional crushing of a pipe with a bucket is considered "demolition by mechanical means" and would also be considered a regulated activity. The owner/operator must also notify the NDDEQ by completing and submitting a

"Notification of Demolition and Renovation" form at least 10 working days prior to removing, cutting or damaging any ACP. The state of North Dakota does not allow pipe bursting. If unexpected regulated ACP is found, work must be stopped immediately and a licensed asbestos abatement contractor must be contacted.

Disposal

Since ACP is considered a Category II nonfriable asbestos-containing waste, it must be disposed of at an approved landfill and is prohibited from being recycled. Always contact landfill personnel prior to arrival to confirm they will accept this waste. ACP that is in a friable condition or removed by mechanical methods must be wrapped and labeled with asbestos warning labels, along with generator information labels. After disposal, a waste shipment record must be sent to the NDDEQ by the owner or operator within 10 days. A copy of the waste shipment record can be found at: <https://deq.nd.gov/forms/WM/asbestos/SFN58174.pdf>

Abandonment

The abandonment of ACP in place is acceptable if it is not rendered friable during abandonment activities. ACP buried under a roadway or that goes under a structure normally is considered an acceptable reason for abandonment in place. However, the NDDEQ recommends removing and disposing of ACP if it will be uncovered and exposed during renovation or demolition activities. If the abandonment will take place on private property, a Notice of Waste Disposal must be filed with the County Recorder's office, and it must include a statement that asbestos is present. A copy of this notice must be submitted to the NDDEQ after filing with the County Recorder. If the abandonment of ACP is in a public right-of-way, the owner/operator must keep information on record for as long as the ACP remains in the ground. If the right of way is relinquished or abandoned, a Notice of Waste Disposal must be filed with the County Recorder's office and a copy submitted to the NDDEQ.

The NDDEQ does not enforce OSHA rules, and ACP removal may have implications for worker protection that are not covered in this article. Please contact the federal OSHA office at 701-250-4521 for more information. For more information about ACP rules and regulations in North Dakota, please contact Justin Otto at 701-328-5246 or Jane Kangas at 701-499-5208 with the NDDEQ.