
ENVIRONMENTAL Fact Sheet



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Manufactured Gas Plant Waste

What is a manufactured gas plant?

Until natural gas was introduced, coal was the primary natural resource used for making the gas used to illuminate street lights and mills, as well as for cooking and heating. By the later half of the 19th century, most of the big cities in America had manufactured gas plants (MGPs) that were operated by utility companies. To manufacture the fuel, coal and other ingredients were heated in large brick ovens. As the coal was heated, it produced a gas. The gas was filtered from the ovens and stored in tanks. The gas was then used as fuel throughout a community.

MGP production declined as a network of natural gas pipelines was built across the country in the 1950s. As natural gas became widely available, MGPs closed. It was cheaper to use natural gas. Many MGPs were abandoned and eventually demolished. However, waste and contamination from MGPs still pose an environmental and public health concern.

Why be concerned about wastes from a MGP?

Manufacturing gas from coal generated a lot of waste. Typically, MGP waste in the form of tars, oils, cinders, coke and ash, was buried or used as fill for construction projects. The wastes contain many chemical constituents that are hazardous to human health. The composition of the waste depends on the type of coal and the gasification process used. Chemicals associated with MGP waste include volatile organic compounds (VOCs) like benzene and toluene, polynuclear aromatic hydrocarbons (PAHs) like naphthalene, tar acids like phenol and cresol, creosote, and coal tar pitch.

Can MGP waste be a health hazard?

Waste from the gas manufacturing processes can be found in soil, surface water, and ground water. Depending on the site, the contamination can be minimal or extensive. Most of the contamination is buried under soil and does not pose a direct health risk. However, if coal tar residues come in contact with skin, it can cause redness or a rash. In some people, the coal tar can cause a sunburn effect on skin. Eye irritation is another hazard if coal tar residues get in the eyes.

Can it affect my drinking water?

In cases where the contamination has spread into groundwater, exposure to drinking water contaminants can be a concern. Tests can be performed to determine if water quality is affected by MGP waste.

What are the health hazards from MGP waste?

The Agency for Toxic Substances and Disease Registry (ATSDR), a branch of the US Department of Health and Human Services, provides information on the health hazards from chemical exposures. Toxicology fact sheets for the specific chemical constituents of MGP waste are available at the ATSDR website: <http://www.atsdr.cdc.gov/toxfaq.html>.

What are the health concerns of cleaning up former MGP sites?

Cleaning up a MGP waste site may temporarily cause discomfort to a neighborhood. The cleanup problems include odors, noise and the presence of heavy machinery. Odors are the most commonly reported nuisance. The odors that may occur can have either a gasoline or mothball-like smell. People with breathing difficulties, such as asthma, may be affected if the odors reach hazardous levels.

The contractors cleaning up MGP waste are trained to manage the site for safety. They monitor and control vapors from reaching levels of health concern to nearby residents. DES actively works with the site clean up team to ensure that odors and other discomforts minimally affect a community.

For more information

For more information regarding the environment and how it relates to your health or any other topics presented here, please call the NH Department of Environmental Services Environmental Health Program at (603) 271-4664, or toll-free in New Hampshire at (800) 498-6868, Ext. 4664. Information is also available at www.des.nh.gov/ard/ehp/.

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