

Odors & Your Health

Frequently Asked Questions about smells near AmeriTies-West in The Dalles



AmeriTies-West is a wood preserving and railroad tie production facility that has operated in The Dalles since the 1920s and uses the coal-tar byproduct creosote. After receiving complaints about bad smells, the Department of Environmental Quality (DEQ) initiated an odor nuisance investigation of AmeriTies-West in 2014. The investigation is the first step in the state's Odor Nuisance Strategy. DEQ is planning to monitor the air quality around the facility beginning in late May 2016.

What is the bad smell?

Creosote is the main smell associated with operations at AmeriTies-West. The smell is similar to what mothballs smell like, and the human nose can detect it very easily. Creosote odors happen when wood is pressure treated and when the treated ties are left outside to dry. Odors also happen when some equipment (pressure treating cylinders) are open and closed.

Creosote releases components known as volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Some of them are hazardous to the environment and human health. At and around AmeriTies, an ingredient of creosote that is being released into the air is naphthalene. People are most likely to be exposed to naphthalene by breathing in the vapors. Naphthalene is also found in cigarette smoke, car exhaust, and smoke from forest fires. It is also used as an insecticide and pest repellent.

Can the smell harm my health?

Maybe. For some people, odors can cause health symptoms. Some symptoms include headache, dizziness, burning nose or throat, watery eyes, and stress. However, just because we sense an odor does not mean that we are being exposed to toxic amounts of chemicals. In general, we can smell many hazardous substances before they are at harmful levels. To learn more about odors and smell, please reference OHA's [Odors and Your Health](https://public.health.oregon.gov/HealthyEnvironments/HealthyNeighborhoods/ToxicSubstances/Documents/OdorsAndYourHealth_Final.pdf) factsheet (https://public.health.oregon.gov/HealthyEnvironments/HealthyNeighborhoods/ToxicSubstances/Documents/OdorsAndYourHealth_Final.pdf).

What health problems are caused by naphthalene?

Studies done on animals have suggested that naphthalene can cause lung and nasal cancer. The U.S. Environmental Protection Agency (EPA) has classified naphthalene as a possible human carcinogen, based on animal studies.

In animal studies, very high concentrations of naphthalene caused lesions or sores in the lining of the nose and upper respiratory system. Naphthalene can cause a specific type of anemia (red blood cell deficiency) called hemolytic anemia. This has mainly been observed in infants who

have swallowed moth balls or who were wearing clothes that had been stored in moth balls (naphthalene is the active ingredient in many moth ball preparations). People with a deficiency in the enzyme glucose-6-phosphate dehydrogenase (G6PD) are especially prone to hemolytic anemia from any cause including exposure to naphthalene.

Does this mean I'll get cancer?

No. When levels are above a benchmark level, it serves as a warning. The benchmark for naphthalene (0.03 micrograms per cubic meter ($\mu\text{g}/\text{m}^3 = 1$ in 1 million cancer risk) in Oregon is below the national median for cities, which is $1 \mu\text{g}/\text{m}^3$. In two tests done by Amerities in September 2011 and February 2012, naphthalene levels were found at levels between 0.88 and $13 \mu\text{g}/\text{m}^3$ in residential areas, and between 53 and $290 \mu\text{g}/\text{m}^3$ on plant property. These numbers mean that there may be different naphthalene levels in The Dalles from one day to the next and one location to the next. Longer term monitoring is needed to know average levels and get a better understanding of what long-term cancer risk this may pose to the community.

I've had a cancer diagnosis. Was my cancer caused by these smells?

Many types of cancer have many different causes. These links are generally based on studies of animals and of people with heavy, direct exposures for long periods of time. It is not scientifically possible to link one individual's diagnosis to an environmental exposure like this one.

I have small children and live in the area, should I be worried?

Children can be more sensitive to contaminants in air than adults because they breathe more air for their body size and are going through critical stages of development. The air quality goals and toxicity threshold numbers that we use are designed to protect children. None of the monitoring results available for residential areas around AmerTies indicate naphthalene levels that would be immediately dangerous to children. When DEQ's longer-term monitoring results are available, OHA will be able to say if there are any long term risks.

Is it safe to go outside in this neighborhood?

Yes. None of the monitoring data collected so far indicate an urgent or immediate threat to health. DEQ's air sampling data will allow us to better understand any potential long-term risk to health for people in the area.

What can I do to reduce my exposure to odors?

There are steps that people can take to reduce exposure:

- When an odor occurs, consider closing your windows and doors. You may want to turn off heating, ventilation, or air conditioning (HVAC) systems because they may draw air from the outdoors into your home.
- Consider leaving the area while the odor is present
- Report persistent odors to DEQ at 1-888-997-7888

Should I get tested?

Medical tests looking for naphthalene are not useful for diagnosing or treating illness related to naphthalene exposure. The human body quickly processes and gets rid of naphthalene so

medical tests looking for naphthalene levels only reflect exposure from the day before or so. These tests are also not able to tell exactly how much naphthalene a person was exposed to or whether they are at risk for health effects related to naphthalene exposure.

There are medical tests available to determine whether someone is experiencing hemolytic anemia or if they have a deficiency in the G6PD enzyme that makes people more sensitive to the hemolytic anemia effect of naphthalene. This enzyme deficiency is most common in people of African or Mediterranean descent and is related to resistance to the infectious disease malaria.

Before doing a test it's important to talk with your health care provider. You or your health care provider may also decide to talk with an expert in toxicology at the Oregon Poison Center (1-800-222-1222). For children, health care providers may also contact the Pediatric Environmental Health Specialty Unit (1-877-543-2436) in Seattle for free consultation.

I want my family tested. Who will pay for it?

The test for naphthalene is not available at most doctors' offices, but can be done at special laboratories that have the right equipment. Individuals and their insurance providers are responsible for the cost of these tests. If you do not have access to a health care provider or do not have health insurance please contact oregonhealthcare.gov (1-800-273-0557).

My doctor has questions. Who should they call?

Health care providers who want more information on tests and interpretation can call the Oregon Poison Center (1-800-222-1222). If necessary, the Poison Center will refer calls related to children or pregnancy to the NW Pediatric Environmental Health Specialty Unit (1-877-KID-CHEM).

I'm feeling anxious about this situation. What can I do?

Learning about an environmental exposure like this can be very stressful because of the uncertainty and worrying about loved ones and property. Take care of yourself by 1) talking to loved ones about concerns; 2) staying informed; and 3) maintaining your daily routines, especially healthy habits.

A helpful fact sheet is also available at (<http://saferair.oregon.gov/Pages/Stay-Informed.aspx>).

What are the different agencies involved?

DEQ - Oregon Department of Environmental Quality is a state agency that makes rules to protect the quality of our air, water, and land. DEQ is leading the monitoring efforts.

OHA - Oregon Health Authority is a state agency that works to ensure the health and health care of all Oregonians. OHA is providing health and toxicological consultation.

NCPHD- The North Central Public Health District is a local county agency focused on promoting and protecting the health of everyone in Wasco, Sherman, and Gilliam Counties. NCPHD is providing referrals to the appropriate agencies.

OHSU TIC- The Toxicology Information Center (TIC) at Oregon Health & Science University (OHSU) answers questions about hazards of exposure to chemicals and other agents. TIC is providing toxicological information on naphthalene.

Where can I learn more about past, current, and future activities about this issue?

You can visit DEQ's website at <http://www.deq.state.or.us/er/ameritieswest.htm> or call 541-633-2019.