

Benzene in Oregon's Air

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Benzene is one of the most serious air toxic pollutants in Oregon. Oregon has some of the highest reported levels of benzene in the United States and our gasoline is THE major source of that benzene. Why? Refineries in the Northwest rely on crude oil from Alaska that is naturally high in benzene. Most Northwest refineries do not have the equipment to remove benzene when producing the gasoline we use.

Northwest left with high levels

In March 2006, the Environmental Protection Agency (EPA) proposed the Mobile Source Air Toxics rule that will initiate nation-wide reductions of benzene levels in gasoline. Unfortunately, EPA's proposed rule leaves Oregon and the Pacific NW with the highest benzene levels in gasoline in the country. Under EPA's rule, our benzene levels will be twice east coast levels.

In May of 2006 DEQ publicly objected to EPA's rule which allows for a trading program that does very little to address unacceptably high benzene levels in Oregon. Oregon Public Health and DEQ are united in their concern about benzene, health risks from breathing benzene and sources of benzene pollution.

Effects of benzene

Current medical research demonstrates a clear association between various detrimental health effects and repeated exposure to benzene in occupational settings. Laboratory animal studies have confirmed the harmful effects of repeated exposure to high levels of benzene. Health effects include cancer (primarily leukemia) and adverse outcomes on the nervous system, immune system and blood cell production.

Cancer is a disease caused by a complex combination of factors that are difficult to link back to a specific environmental pollutant. Many factors, both voluntary and involuntary, contribute to an individual's risk of cancer. In the United States, cancer rates are approximately 50% for males and 33% for females for all types of cancer.

Public Health and DEQ are concerned about ANY additional cancer burden from benzene among the general population. Currently the benzene level in the Portland area is 20 times the DEQ acceptable cancer risk level of one in one million, about twice the national average cancer risk for this chemical.

Oregon's Air Toxics Program

Since 2004, DEQ and Public Health have worked collaboratively to develop Oregon's Air Toxics Program. The work began with a science advisory committee dedicated to identifying the most dangerous air toxic pollutants in Oregon. Recent discoveries about the levels of benzene and other pollutants in the Portland area are a result of recent DEQ and Public Health air quality studies.

Limiting our exposure to benzene

Reducing benzene in the refining process remains the most efficient way to accomplish benzene reduction in the air Oregonians breathe. DEQ is also exploring alternative ways to reduce benzene. One proposal is to require the installation of additional vapor recovery equipment to capture emissions when fuel is transferred between tanker trucks and underground storage tanks.

In addition to vehicle emissions and gasoline fumes at fueling stations, other common ways people are exposed to benzene in the air include working in certain occupational settings, breathing smoke from woodstoves and smoking.

What you can do to reduce benzene

There are many things people can do on their own to reduce benzene and other air toxics in the environment:

- Keep vehicles properly maintained
- Drive less
- Use alternative transportation (taking the bus or MAX, carpooling, riding a bike, walking, etc.)
- Use certified woodstoves or fireplaces and burn only clean, dry wood or compressed logs
- Quit smoking
- Avoid exposure to second hand smoke

For more information

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Alternative formats

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