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To: Oregon House Energy and Environmental Committee

From: Linda A. George, Professor

I am an atmospheric chemist and professor of Environmental Science and Management at Portland State University. I have been studying air quality for nearly 30 years. For the last decade I have been conducting research on the variation of air pollution in cities.

The discovery of elevated air toxics in Portland neighborhoods is very upsetting but it is not surprising. Air toxics waste is a consequence of producing many of the goods that consumers want. Waste is a necessary product of consumption and must be controlled. Elevated air toxics exposure is the failure of regulatory systems at every level to address the known risk of toxic emissions to human health.

As a result of this failure there are many so-called hot spots of unhealthy air in Portland and as the public becomes aware of these, they will demand action. In the near future, personal air quality sensors will become available to the public there will be more and more public outrage.

We do not need to wait for the public to discover hot spots - I believe that Oregon can proactively do a much better job in improving air quality.

The 1990 Clean Air Act Amendments established EPA's air toxics program. EPA's Urban Air Toxics Strategy's goal is to reduce cancer risk from urban air toxics by 75%. The Oregon DEQ was delegated the authority by EPA to conduct work in Oregon. We are nowhere near 75% reduction.

Why has Oregon been unable to fulfill the goal of reducing cancer risk from urban air toxics?

The Oregon DEQ was one of the first state agencies in the country to conduct a detailed analysis of air toxics emissions and produced its first Air Toxics Assessment in 2006. DEQ also established health benchmarks for air toxics as required. I was involved in the early stages of this process.

The air toxics modeling exercises did not, to my knowledge, result in any reduction actions, even though major hotspots were revealed. The Portland Air Toxics Solutions (PATS) process was supposed to analyze air toxics assessments and make recommendations to reduce risks AND act on them, but failed to do so. Unlike for criteria pollutants such as ozone, there are no federal consequences when air toxic levels exceed health standards.

I believe that DEQ felt that significant improvement would come with Federal emission rules for major and small sources. These federal rules are still in various stages of implementation. The funding level and culture of DEQ limits its ability to go beyond compliance with the federal and state laws - they do no more, no less. Since Oregon's laws mimic federal laws, when the federal process stalled, Oregon's efforts also effectively stalled out. We do not need another toothless PATS process that does not produce Oregon rulemaking on emissions.

In addition, we cannot rely on simply following the minimum federal guidelines for air toxics emissions. The federal regulatory framework does not take into account proximity to sources. Research in my lab and many others show how important it is to take proximity into account when assessing health impacts. In a city like Portland, where sources are woven in with residences, we may need to do far more work in achieving reduction of risk.

In other words, even if a source complies with emission rules coming from the federal government, Oregon citizens living near the source may still breathe unhealthful air. This is the situation leading to this hearing.

THIS DID NOT HAVE TO BE THE CASE.

The EPA has given the states the freedom to control air toxics as they see fit within some guidelines. Other states, notably California, have been particularly aggressive and effective on toxics reductions with modeling, monitoring, incentives and enforcement.

(If we want to be cutting edge, the EU has actual ambient air quality standards for many air toxics --- requiring monitoring near to a source.)

What can Oregon do to move forward more quickly and effectively?

Oregon at this time, can move forward by committing itself to a specific goal and timetable for toxic reduction that is verified by monitoring. It has been a decade since the first air toxics assessment and we have very little to show for it.

Oregon must see itself as a state that aspires to achieving the goal of 75% reduction of air toxics risk as fast as possible - at least 20% per year. This will require innovation in modeling, monitoring, incentives structures and financial and technical support to emitters AND enforcement. It is not sustainable to achieve reduction by shutting down every business that produces air waste -- we need to provide technical assistance, low-interest loans and incentives to reduce emissions. We need to identify problem areas and have a clear, fair plan for addressing them.

Environmental protection and education must be a shared responsibility and not silo-ed in DEQ. I believe improving air quality will be best achieved through partnerships between DEQ, other federal, state and local agencies and universities. Health departments are vital partners in

communicating risk to the public. Universities and the research arms of federal mission agencies are a sources of innovation for emission reduction technologies and practices and are well positioned and have the freedom to conduct relevant research studies.

As an example -- we recently published a paper showing how Portland tree canopy can reduce the impact of air pollutants (funded by USFS). Another project looks at how intelligent traffic management can reduce vehicle emissions (funded by NSF and EPA). These projects point to ways of innovatively reducing the impact of emissions. The USFS moss study was an example of an innovative metals screening approach - an approach that DEQ does not have the resources to develop - that enabled DEQ to target air sampling. We need more creative solutions to monitoring and emission reduction.

California, Washington, Texas and many other states fund air quality studies with universities. This has the dual benefit of producing cost-effective, relevant research and the training of the next generation of agency employees.

Oregon must invest in air toxics reduction. The human impact of elevated air toxics are significant and costly. I urge the Legislature to take steps to immediately set up a timetable and goals for air toxics reduction with the funding necessary to achieve these goals.