PUBLIC HEALTH DIVISION
Center for Health Protection, Drinking Water Services
Kate Brown, Governor

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TO: Representative Ken Helm, Chair
Representative Karin Power, Vice-Chair
Representative E. Werner Reschke, Vice-Chair
House Committee on Energy and Environment

FROM: Lillian Shirley, Public Health Director
Oregon Health Authority

SUBJECT: Cleaner Air Oregon

Dear Representatives Helm, Power and Reschke,

My name is Lillian Shirley and I am the Public Health Director at the Oregon Health Authority. I would like to provide information about HB 4002, the Cleaner Air Oregon initiative, on behalf of the Oregon Health Authority. I would like to explain the health concerns related to non-cancer risks in existing facilities.

The Cleaner Air Oregon draft rules consider the cumulative effect of all chemicals emitted by a facility to reflect the reality of what people nearby are breathing. The Oregon Health Authority, Public Health Division is supportive of the approach to reduce health risks from industrial air toxics. Exposure to industrial air toxics increases health risks from four of the top five leading causes of death in Oregon: heart disease, stroke, respiratory disease, and cancer. We are also concerned about additional non-cancer risks associated with emissions from existing facilities that must be assessed so that Oregonians both young and old can be protected from the threat of lifelong health problems, namely birth defects and disabilities.

The Oregon Health Authority, Public Health Division evaluates non-cancer risk by adding up all of the risks from chemicals that act on a similar organ or system, such as the brain or heart, in a Hazard Index. This approach aligns with federal protocols and the practices of many other jurisdictions that assess health risks from air, water, or soil contamination.

A Hazard Index of 1 means that exposures are at levels that agencies like the Environmental Protection Agency have concluded are unlikely to cause non-cancer health effects. A Hazard Index of greater than 1 means exposure to a facility's emissions is that many times above the level health experts are confident is protective of public

health. For example, a Hazard Index of 3 means that exposure to a facility's emissions is three times the level that is **not** expected to harm health and a Hazard Index of 5 means that exposure to a facility's emissions is five times the level that is **not** expected to harm health.

There are several chemicals that cause concern for lifelong human health. Some examples include:

- Beryllium, which creates irreversible pockets of inflammation in the lungs, which feels like permanent pneumonia.
- Vinyl Chloride or Methyl-ethyl-ketone, which causes skeletal deformities in mammals, such as extra ribs. These chemicals may impact a developing fetus or children.
- 1-3 Butadiene, which impairs fertility in animals through ovarian atrophy, and also increases the risk of low birth weight and fetal death.
- Benzo[a]pyrene, which in animals decreases fetal survival, impairs fertility, and may disrupt brain development.

Based on the experience in other states, we expect that the emissions of these dangerous chemicals are relatively infrequent in Oregon. However, there may be specific communities that are being exposed. Our aim is to identify any sources of emissions that do exist and make sure exposure to these chemicals stays below levels of concern for public health.

The proposed Cleaner Air Oregon rules provide business with the certainty and flexibility needed to meet health limits over time, and to take actions that are technologically feasible. The air toxics that would be regulated by Cleaner Air Oregon are known to increase risk of a wide range of health outcomes including cardiovascular and respiratory illness, lung disease, cancers, birth defects, premature births, developmental disorders, central nervous system damage, intellectual disability, and premature death.

Thank you for your time and I would be happy to answer any questions.