1830 Washington St.
Eugene, OR 97401
Feb. 18, 2011

Oregon Department of Environmental Quality
Water Quality Division
811 SW 6th Avenue
Portland, OR 97402
Attn: Andrea Matzke

To the DEQ,

Re: Commentary on the proposed new and amended rule language for human health toxics rulemaking

The proposed rule revisions are a step in the right direction in a necessary, ongoing task to safeguard public health, with an emphasis on known toxic chemical pollutants. I believe that these rule are not adequate to meet both the immediate and long-term goals inherent in the mandate that drives these rules.

My concerns are two-fold:

(1) The rules may not adequately safeguard pollution via non-point sources.

For example, consider this language: "...good faith compliance with best management practices and control measures established under the Forest Practice Act are generally deemed to not to cause violations of water quality standards..."

But do the Forest Practice Act "best practices" ensure adequate protection of water quality? I think the "best practices" should be re-examined. For example, under current rules a stream that is deemed non-fishbearing is exempt from riparian buffer requirements for pesticide application, even though this stream may feed into a fish-bearing stream or into a human water source. Moreover, the riparian buffers on fish-bearing streams that are currently required when pesticide is sprayed are likely to be inadequate. The State of Oregon does not have rigorous current data regarding aerial forest pesticide distribution over time, and there is no good monitoring policy in place.

I suggest that the DEQ develop protocols to evaluate chronic landscape pesticide burden rather than rely upon single-event, spot sampling. Perhaps DEQ is already moving in that direction, since other agencies are using passive sampling to obtain time-weighted average of the landscape chemical burden. It is my understanding that EWEB and the USGS have a sampling program in place for the McKenzie River Basin, with the intent of employing two related methods, Polar Organic Chemical Integrative Samplers (POCIS), and semipermeable membrane devices (SPMDs). Passive sampling technology is likely to improve – it will be cheaper and more

sensitive -- as demand for this technology increases world-wide. I suggest DEQ work with the Oregon Department of Forestry and related agencies to utilize this technology to gain an unbiased and accurate assessment of the post-application distribution of forest pesticides.

(2) Evaluation of pollutant toxicity outlined in the Toxics Table is on a single-chemical basis and thus ignores biochemical synergies.

I realize I raise a vexing biological question with this concern. But the DEQ should not ignore the matter. We know that it's uncommon to find just a single chemical pollutant; rather, these materials tend to be detected as "pools", not surprisingly, of related compounds or admixtures due either to formulation protocols or to several industries discharging to a common sink. As a molecular biologist with some background in cancer toxicology and developmental biology, I assert that the weight of evidence and theory of the past few decades has taught us that off-target effects and unexpected biochemical interactions of sub-threshold doses of apparently unrelated compounds have become dismayingly common. I therefore urge the DEQ to move toward a "precautionary principle" and to bring new toxicology information into public policy – sooner, rather than later.

Sincerely,

Tom Steinberg

Thomas H. Steinberg, Ph.D.