

Testimony of Christopher Larsen, West Linn, Oregon

Re: SB 462 A

House Committee on Land Use

May 9, 2013

Good afternoon. Chair Clem, members of the Committee. My name is Chris Larsen. I am an attorney, but most importantly, a husband and the father of two girls who currently attend Stafford Primary School and will attend Athey Creek Middle School. These schools are located directly across from the proposed S & H logging mining and composting facility. Both of my daughters play soccer for the Willamette United Soccer Club. I am the softball coach for my 8 year old daughters West Linn softball team. The soccer and softball fields at Athey Creek Middle school are our home fields. This isn't just a local issue: Thousands of kids and families from all over the state come to play on these athletic fields.

I will want to provide you with a brief summary of scientific research that concludes that composting activities emit what are called "bioaerosols" that pose significant health risks, especially to people that are within 1500 feet downwind of outdoor composting facilities.

"Bioaerosols" are particles of microbial, plant or animal origin, also known as "organic dust". This can include live or dead fungi, viruses, allergens, bacterial endotoxins, antigens (molecules that can produce an immune response), toxins (produced by microorganisms), mycotoxins (toxins produced by fungi, otherwise known as toxic mold), and glucans (part of the cell walls of molds). Many bioaerosols are released or produced by the composting process. Microorganisms are frequently absorbed into dust particles and are then transported along with the dust. Unless you have a completely covered composting facility, the air emissions containing these bioaerosols from composting facilities like the one proposed by S & H have been shown by scientific research to cause a wide range of adverse health effects and infection.

Measuring the various bioaerosols can be difficult because intermittent releases and changes in wind complicate air monitoring. Importantly, the research shows that all monitoring methods *underestimate* bioaerosol concentrations. However, a number of studies show that concentrations of bioaerosols downwind of outdoor composting facilities are *elevated at distances of 650-1640 feet*. This is why composting facilities should not be located in close proximity to any school.

DEQ has already identified other human health and environmental concerns for this particular proposed facility. In a January 23, 2013 letter from DEQ to S & H, they state “DEQ has determined that the proposed...composting operations are reasonably likely to cause odor impacts outside the boundaries of the facility” and those concerns include “bioaerosols and offsite dust... as well as massive culturing of *Aspergillus fumigatus* organisms [mold spores] in relatively small areas compared to most ‘natural’ or background circumstances.

Aspergillus fumigatus is a fungus that plays an essential role in composting, that is, recycling environmental carbon and nitrogen. It is found naturally in the soil, where it survives and grows on organic debris. It reproduces abundantly, releasing what are called “conidia” in the air. They are so small that they reach the lungs alveoli. Once in the air, their small size makes them buoyant, tending to keep them airborne both indoors and outdoors. *Aspergillus fumigatus* are usually not a problem for people with healthy immune systems. However, for people with immunosuppressed people, medical research shows that it poses a serious risk. In an article from *Clinical Microbiology Reviews* (April 1999) author Jean-Paul Latge writes: “*Aspergillus fumigatus* has become the most prevalent airborne fungal pathogen, causing severe and usually fatal invasive infections in immunocompromised hosts in developed countries.”

Because these composting facilities produce bioaerosols and other airborne pathogens that pose significant health risks, especially to people that are within 1500 feet downwind of outdoor composting facilities, we ask that you pass reasonable legislation to protect our children and families.

Thank you.

*Scientific Research summarized in “Compost Facilities: Off-Site Air Emissions and Health”
July 2007, Summary by Ellen Z. Harrison, Biocycle, found at
<http://cwmi.css.cornell.edu/compostairemissions.pdf>*