



Letter by Catherine Thomasson, Oregon PSR Board member, to Marion County Board of Commissioners, 8/08

Marion County Board of Commissioners
The Honorable Sam Brentano, Janet Carlson, and Patti Milne
555 Court Street NE
P. O. Box 12500
Salem, OR 97309-5036

Dear Commissioners Brentano, Carlson, and Milne,

The Board of Directors of the Oregon Chapter of Physicians for Social Responsibility represents over 1800 Oregon physicians, other health professionals, and concerned citizens in Oregon. One of our primary goals is to help protect and enhance the health of Oregonians. To that end we are offering you our comments and suggestions with regard to use of toxic incinerator ash.

One proposal apparently under consideration for the Marion County Solid Waste Management Plan is the use of incinerator ash for road construction or other construction projects. This was mentioned in an interview that Environmental Services Manager Jeff Bickford had with community representatives. It was also alluded to by Commissioner Brentano in a Solid Waste Management Advisory Council meeting in which he said he wants to "find a better use" for the ash since it is an eyesore to the Woodburn community.

We strongly oppose use of incinerator ash in construction projects for multiple reasons.

The average dioxin (2,3,7,8-TCDD toxic equivalent) concentration in the ash as officially reported by AWD Technologies, Incorporated, is over 4.4 million times the concentration that the Oregon Department of Environmental Quality (DEQ) permits in surface water.

(Please see the enclosed Table 20 regarding surface water standards from Division 41 of Oregon Administrative Rules, plus the enclosed Table 4-20 from the 1988 to 1994 official ash analyses to view the data from which the 4.4 million figure was calculated.)

Further magnifying the threat implied by these data is the fact that the most toxic portion of this mixture of bottom ash and fly ash is the fly ash, which consists of very fine particulate matter that is most subject to washing or blowing from roadway construction sites into nearby surface water. The fly ash as measured by the U. S. Environmental Protection Agency (EPA) is multiple times more toxic than the figures referred to above for the mixed ash.

Not only would ash from roadways threaten surface water, it would also be a health threat to the construction workers who would be breathing it as road graders and other equipment moved it around during road construction. Scientific studies have shown that the vast majority (up to 95% in one study) [1] of dioxin breathed into lungs is absorbed into the body.

Dioxins are Class 1 human carcinogens and can cause multiple reproductive and developmental abnormalities, including birth defects and damage to the immune and endocrine systems, occurring at even lower concentrations than dioxins' cancer-causing effects.

Not only does the ash contain dioxins, it is laden with numerous other toxins, such as mercury, cadmium, and lead. In one ash sample (see Table 4-18) the lead was almost

0.6% of the sample (5,960 mg/kg). This compares to the Federal definition of toxic leaded paint of 0.5% lead concentration. The heavy metals, cadmium, lead, and mercury are neurotoxic, especially to fetuses, infants and young children, in whom they can cause learning disabilities, attention deficit and decreased I.Q.

Cadmium in one sample (Table 4-18) was 53 mg/kg. Compare this to the U. S. Occupational Health and Safety Administration limit of only 0.005 mg per cubic meter of air. Further, consider the likelihood that the fly ash portion, which is even more toxic than the mixed ash, is what is most likely to be blowing into the air breathed by road workers using ash for construction.

It was reported that a millwright working inside the incinerator at Brooks suffered severe and debilitating cadmium poisoning, which leaves little doubt that cadmium concentrations in the ash can be toxic. An out-of-court settlement with this worker included a non-disclosure agreement so this incident was not widely known.

We believe the County would be exposing itself to potential lawsuits by construction workers and possible large clean-up costs if future regulations define the ash-filled roadways as unacceptably toxic. Lack of such regulations now is no different than the lack of regulations about leaded paint and asbestos in past decades. Subsequent damage to health and costs for removal of those substances from buildings were (and continue to be) enormous.

Thank you for your consideration of the health risks of incinerator ash.

Sincerely yours,

Catherine Thomasson, MD (Andy Harris and Martin Donohoe, MD wrote and edited)

On behalf of Physicians for Social Responsibility, Oregon Chapter

[1] Janet J. Diliberto, Joseph A. Jackson and Linda S. Birnbaum; Comparison of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) Disposition Following Pulmonary, Oral, Dermal, and Parenteral Exposures to Rats; Pharmacokinetics Branch, Experimental Toxicology Division, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, 27711; 18 October 1995. <http://cat.inist.fr/?aModele=afficheN&cpsidt=3073323>