



April 19, 2010

The Honorable Dee Freeman
Secretary
N.C. Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

Dear Secretary Freeman:

In recognition of the numerous and serious adverse health consequences that can result from human exposure to the components of emissions of biomass burning, the North Carolina Academy of Family Physicians (NCAFP) is issuing a letter of concern regarding the development of biomass burning plants in the State of North Carolina.

Biomass burning of poultry litter and wood wastes creates emissions of particulate matter that research has shown increase the risk of premature death, asthma, chronic bronchitis, and heart disease. (1, 2) This burning process also creates numerous byproducts, including nitrogen oxides and volatile organic compounds that increase smog and ozone, which are known to increase lung disease and mortality (3); sulfur dioxides which also contribute to respiratory disease (4); arsenic which can increase the risk of cancer (5); mercury which can increase the risk of brain and kidney disease and affect the developing fetus (6); and dioxins which may increase the risk of cancer, heart disease, diabetes mellitus, developmental delays in children, neurotoxicity, and thyroid disease (7). These health effects would increase disability and death in all age groups, but particularly in the most vulnerable—developing fetuses, newborns, children, those with chronic illness, and the elderly. As a result of this increased disability and disease, medical costs in the state will increase.

One of the reasons for encouraging renewable energy through legislation like the North Carolina Clean Smokestack law was to provide cleaner air for citizens. However, there is concern that burning of poultry litter may result in similar or greater emissions of nitrogen oxides, particulate matter, carbon monoxide, and carbon dioxide to coal-burning plants (8). The NCAFP requests that the North Carolina Department of Environment and Natural Resources strongly consider the potentially harmful consequences to the health and wellbeing of North Carolina citizens when contemplating the permitting of biomass burning plants in the state.

With best regards,

A handwritten signature in black ink, appearing to read "R. Watkins".

R.W. (Chip) Watkins, MD, MPH
President, NC Academy of Family Physicians

cc: Jeffrey P. Engle, MD, North Carolina State Health Director
Jennifer L. Mullendore, MD, Co-Chair, NCAFP Health of the Public Council
Thomas R. White, MD, Co-Chair, NCAFP Health of the Public Council
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REFERENCES

1. EPA. Particulate Matter. [Online]. 2008 May 9 [cited 2010 Apr 1]; [1 page]. Available from: <http://www.epa.gov/air/particlepollution/health.html>
2. Dominici F, Peng RD, Bell ML, Pham L, McDermott A, Zeger SL, Samet JM. Fine Particulate Air Pollution and Hospital Admission for Cardiovascular and Respiratory Diseases. JAMA 2006 Mar; 295(10):1127-1134.
3. Jerrett M, Burnett RT, Pope CA, Ito K, Thurston G, Krewski D, Shi Y, Calle E, Thun M. Long-Term Ozone Exposure and Mortality. NEJM 2009 Mar; 360(11):1085-1095.
4. Agency for Toxic Substances and Disease Registry. ToxFAQs for Sulfur Dioxide. [Online]. 2010 Feb 18 [cited 2010 Apr 1]; [1 page]. Available from: <http://www.atsdr.cdc.gov/tfacts116.html>
5. Agency for Toxic Substances and Disease Registry. ToxFAQs for Arsenic. [Online]. 2010 Feb 18 [cited 2010 Apr 1]; [1 page]. Available from: <http://www.atsdr.cdc.gov/tfacts2.html#bookmark05>
6. Agency for Toxic Substances and Disease Registry. ToxFAQs for Mercury. [Online]. 2010 Feb 18 [cited 2010 Apr 1]; [1 page]. Available from: <http://www.atsdr.cdc.gov/tfacts46.html#bookmark05>
7. The National Academy of Science. Health Risks from Dioxin and Related Compounds. [Online]. 2006 [cited 2009 Mar 12]; [6 pages]. Available from: http://dels.nas.edu/dels/rpt_briefs/dioxin_brief_final.pdf.
8. Henderson B. The Scoop on Future Power? [Online]. 2006 Apr 1. [cited 2010 Apr 1] Originally in the Charlotte Observer. Available from: <http://www.energyjustice.net/fibrowatch/similartocoal.html>