



## **Hemlock Hill Field Station**

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September 10, 2010

To Whom It May Concern:

We are biologists specializing in animal behavior and reproductive ecology that oppose the permitting of a tire-burning plant at the Keystone Regional Industrial Park in Greenwood Township, Crawford County, Pennsylvania. We oppose this plant because its pollutants will bring about serious damage to the ecology of the surrounding area that far overshadow any benefits to the community.

The emissions estimates provided by Crawford Renewable Energy (CRE) do not include non-emission pollutants in the ash, which would be produced in large quantities. The combustion of 1 ton of tire rubber generates about 140 kilograms (308 lbs) of bottom ash (*Energy & Fuels, vol. 18, p. 1635, 2004*). As 1000 tons of tires will be processed each day this amounts to 308,000 lbs of ash per day. This ash releases inorganic and organic pollutants, such as dioxin and furan, absorbed on their porous surface. Little information is provided by CRE on the disposition of the non-metallic ash component. The ash and other pollutants released in the emissions are of concern because of the proximity to the proposed plant of the Conneaut-Geneva Marsh.

This marsh is an Important Bird Area, a designation that makes it of national concern and certainly a pride of Pennsylvania that should not be endangered by this proposed plant. The 12,360 acre marsh is the largest fresh water marsh in Pennsylvania and has the largest breeding population of Bald Eagles in the state. Most of it is protected from development as it is a State Game Land (No. 213). This exceptional ecological heritage is threatened by the pollutants from the proposed plant.

Dioxin, for example, is a persistent fat soluble contaminant that bio-accumulates up the food chain. It is one of the most potent toxicants known that disrupts

normal hormone signaling pathways, causes reproductive and developmental defects, is toxic to the immune system, and causes liver damage, wasting syndrome, and cancer. Its effects are noticeable in the parts per trillion range. One part per trillion, for example, is like one grain of salt added to an Olympic-sized swimming pool. This contaminant would be distributed widely by the thousands of migratory waterfowl and shorebirds that feed in the marsh during migration. The CRE emission estimate of ca 138 tons per year of PM-10 and PM-2.5 microparticles seems likely to pollute this essential ecological area with dioxin and furan and other toxicants adhered to them.

We hope that our concerns will be considered during the permitting process and that the tire-burning plant will not be permitted.

Sincerely,

Eugene Morton, Ph.D.

Bridget Stutchbury, Ph.D.