



SPECIAL E FECTS

ELLICOTTVILLE, NY

The Good News....Paper

Pollution Plus Inversion Layer A Recipe for Disaster?

By Jim Gill

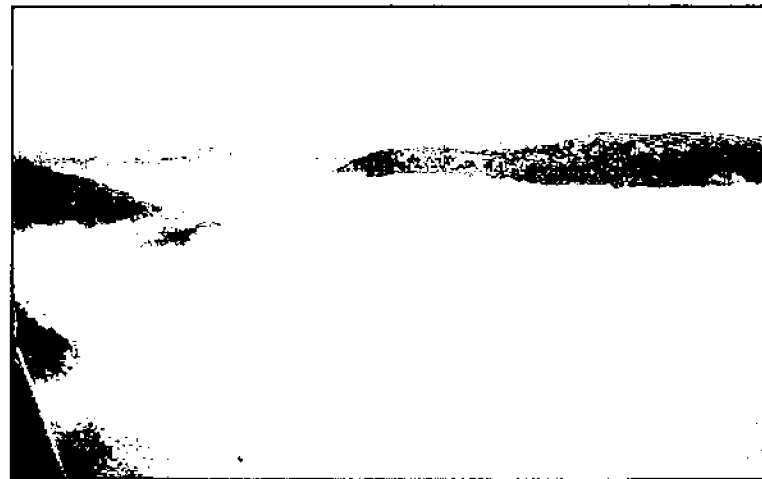
Date, 1952: Four-day fog/smog kills 4,000 people in London, England.

As the "Citizens for a Better Ellicottville" group gains momentum in their efforts to stop Laidlaw from opening a wood burning cogeneration plant all residents should be asking the question "what does it do for me?"

On the one side Laidlaw claims they will be creating a number of high paying jobs in our community. Most of the positions will involve general laborers sorting wooden skids and whatever else they plan on burning. Are these high paying positions, and do we have an unemployment problem in Ellicottville?

On the negative side there are numerous legitimate concerns that the people in our community need to be aware of.

Cogeneration plants have been around since the 1800s and as



This aerial shot shows the typical morning fog/smog, also known as an "inversion layer," that often can be seen over Ellicottville.

the need for low cost energy increases we are seeing an increase in cogeneration plants, wind farms etc. to meet this growing demand. The principals of cogeneration are relatively simple: Using natural gas, coal, nuclear energy, fuel cells, thermal energy, oil or biomass (trees, grass,

agricultural crops and other wood materials), steam is created to drive large turbines which in turn drive a generator to supply electricity, heating and other energy markets. Approximately one-third of the energy contained in certain fuels is converted into energy while the remainder is

emitted into the atmosphere as waste heat.

Due to the high cost of fossil fuels, biomass is the second-most utilized power generation resource in the U.S. The 37 billion KWH of electricity produced each year from biomass is more than the entire state of Colorado uses annually. Generating this amount of electricity requires around 60 million tons of biomass per year!

What is in Wood Smoke?

All burning creates harmful by-products of combustion, resulting in air pollution. Materials on the low end of the energy scale such as wood create the most pollution. There are over 100 different chemicals and compound groups in emissions from burning wood! A study conducted by University of Miami noted that ash from cogeneration plants that burn wood waste including construction debris as Laidlaw is propos-

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Pollution Plus Inversion Layer *cont. from Page 1*

ing contains high concentrations of chromium and arsenic and is a growing pollution problem in the U.S.

How Will the Emissions from the Laidlaw Site Influence Your Health?

Carbon Monoxide – proposed 220,000 lbs.

A poisonous gas that is colorless, odorless and tasteless, absorbed into the blood stream of people and animals, causes damage to the central nervous system, dizziness and death. Reduces ability of blood to bring oxygen to body cells and tissues; cells and tissues need oxygen to work. May be particularly hazardous to people who have heart or circulatory (blood vessel) problems and people who have damaged lungs or breathing passages.

VOCs – proposed 36,000 lbs.

Volatile Organic Compounds cause serious health problems such as cancer and has other effects. All VOCs contain carbon and causes Ozone, a major pollutant in the lower atmosphere. Ozone causes breathing problems, reduces lung function, asthma, irritated eyes, stuffy nose, reduced resistance to colds and other infections, and may speed up aging of lung tissues. Causes fatigue, generalized depression, increased lethargy, headaches, generalized aches and accelerated cardiac action. Ozone can damage plants, trees and create smog.

Formaldehyde – proposed 4,433 lbs.

The gas is toxic if inhaled or absorbed through the skin and is cancer causing.

Benzene – proposed 4,231 lbs.

Benzene is a colorless volatile liquid harmful by transdermal absorption and acutely toxic by ingestion or inhalation, causing mucous membrane irritation, neurological disorders, and death due to respiratory failure; chronic exposure may result in bone marrow depression and anemia.

Nitrogen Oxides – proposed 220,000 lbs.

Causes lung damage, illness of breathing passages and lungs (respiratory system), and acid rain which damages trees and lakes.

Sulphur Dioxide – proposed 18,000 lbs.

Causes breathing problems, may cause permanent damage to lungs. Environmental effects – SO₂ is an ingredient in acid rain (acid aerosols), which can damage trees and lakes. Acid aerosols can also reduce visibility.

Hydrogen Chloride – proposed 19,141 lbs

Forms corrosive hydrochloric acid on contact

with body tissues. Inhalation of the fumes can cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract, and in severe cases pulmonary edema, circulatory system failure, and death.

One must also keep in mind the amount of wood burning stoves and fireplaces along with the high amount of cars and trucks emitting large amounts of carbon monoxide as they pass through Ellicottville.

Inversion Layers

On many sunny mornings when you leave your house and drive into the valley you can see a blanket of fog/smog covering the entire village of Ellicottville. This is a type of surface inversion that takes place at night in valleys when cold, dense air flows down slope under the influence of gravity becoming trapped by the warm air above. The inversion layer acts as a lid to prevent air at ground level from rising and dispersing, mountains can also help trap the air. *This means any pollutants emitted accumulate in the cold, dense trapped air.*

As sunlight starts to “burn off” the smog, we now create a Photochemical type of smog that in conjunction with the volatile organic compounds creates a very dangerous lower ozone layer that may be in the form of a bluish, irritating gas of pungent odor. In addition to the serious implications to one’s health, oxidants such as ozone can also corrode and destroy many materials such as rubber, nylon, fabric, and paint.

Time is rapidly approaching when all residents of Ellicottville must answer the question, **What does it do for me?** Or perhaps the question should be, what can the proposed Laidlaw site **Do to me and my family?**

The citizens of Ellicottville are entitled to question the entire project and the process that the Planning Board has used over the past two years in hearing the Laidlaw application. Possibly the answers may come on Monday August 28, 2006 at the **American Legion Building, Post 659, 6500 Maples Road** when the Planning Board holds its regular monthly meeting. The meeting starts at 6 p.m. and the public is invited to attend this very important meeting.