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Bureau of Environmental Health
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January 29, 2010

Sandy Collins, R.N.
Director of Health Care Services
23 Depot Street
Westford, MA 01886

Dear Ms. Collins:

Thank you for the opportunity to provide further comment on the proposed Newport Materials Asphalt Plant. We have reviewed the comments provided by several others, including the January 15, 2010 peer review memo by Woodard & Curren and various consultants representing the Route 40 Clean Air Coalition.

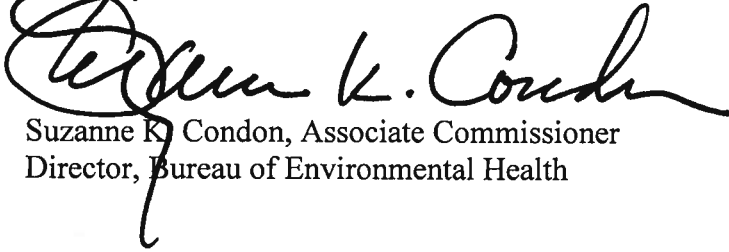
One clear issue that emerges is related to the limitations in the risk assessment associated with adequately characterizing non-source and source emissions. For that reason, the Westford Board of Health may want to ask for additional information associated with both source and non-source emissions and/or how these limitations may affect the Cambridge Environmental risk assessment in adequately characterizing overall risks related to particulate matter. For example, the Woodard & Curren comments make clear that if additional sources were considered in the air dispersion modeling that concentrations would be expected to increase, not decrease as reported in the December 28, 2009 Cambridge Environmental risk assessment report. At a minimum, Cambridge Environmental should clarify how they arrived at such a conclusion and be clear on the limitations of the risk assessment.

We believe that the largest issue associated with this siting decision is likely to be related to what is generally referred to as a public nuisance. This is because the most frequently voiced complaint from residents who live in close proximity to such facilities appears to be related to odors. We have enclosed a fact sheet prepared by the Illinois Department of Public Health that clarifies the issues associated with asphalt plants, related odor issues and health concerns. Chapter 111 of the Massachusetts General Laws Sections 31C, 143, and 122 outlines the authority of the BOH in relation to atmospheric pollution, noisome and injurious odors and nuisance odors.

While we will not be making a formal presentation on Monday evening, Margaret Round, Senior Environmental Analyst, Air Toxics, Environmental Toxicology Program, will attend and

offer technical assistance to your Board of Health as she has several times over the past few months. Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Suzanne K. Condon". The signature is fluid and cursive, with a large initial 'S' and a long, sweeping underline.

Suzanne K. Condon, Associate Commissioner
Director, Bureau of Environmental Health



Asphalt Fumes

Asphalt is used for paving roads and parking lots and for roofing. It consists of gravel, sand or stone that is bound together by cement made from crude oil. Petroleum hydrocarbons in the crude oil form a gas, which condenses into fine particles upon cooling, creating a particulate vapor. This fact sheet will answer some general questions about asphalt fumes.

What chemicals are in asphalt fumes?

Asphalt is a mixture containing thousands of different chemicals. The chemicals in asphalt vary depending on the source of the crude oil, the type of asphalt being made, and the process used. In general, the fumes are a mixture of several different types of chemicals including:

- volatile organic compounds,
- carbon monoxide,
- sulfur,
- nitrogen oxides, and
- polycyclic aromatic hydrocarbons.

Many of these chemicals also are emitted by other combustion sources such as cars and trucks, fireplaces and wood stoves, wildfires, and industries. All of these chemicals are often found in outdoor air at low levels; however, elevated levels of these chemicals may be found near an operating asphalt plant.

How are people exposed to asphalt fumes?

Fumes created from heating asphalt can be inhaled into the lungs or can condense onto exposed areas of the skin.

What are the health effects of asphalt fume exposure?

The health effects that can be caused by exposure to asphalt fumes depend on:

- how much has entered the body,
- how long you are exposed to asphalt fumes, and
- how the body responds to asphalt fumes.

People who work in asphalt plants would have the greatest exposure to asphalt fumes. Some

of the symptoms reported by workers include irritation of the upper respiratory tract, headache, fatigue, wheezing, shortness of breath, dizziness, and nausea.

These symptoms are from short-term exposure to high levels of asphalt fumes. They are typically mild and rapidly reversible once exposure ends. Asphalt fumes contain several chemicals that may cause cancer; however, studies of cancer in asphalt workers are not conclusive.

Residents living near an asphalt plant also would be more likely to breathe low levels of asphalt fumes for a long period of time. In this setting, exposure to asphalt fumes would depend on the plant emissions and the prevailing winds. Based on sampling conducted near asphalt plants in several states, residents could experience irritation from the odors from asphalt production, but the potential for adverse health effects is expected to be very low. Children may be more sensitive than adults to certain chemicals. No studies have linked residential exposure to asphalt fumes with the development of cancer.

Can odors from the plant cause adverse health effects?

If you smell odors from an asphalt plant, they are not necessarily at levels that would cause adverse health effects. Many of the highly odorous chemicals in asphalt fumes can be smelled at levels below those expected to cause adverse health effects; however, persistent odors may cause symptoms in some people.

Does living near an asphalt plant pose an increased health hazard?

An asphalt plant must meet emission criteria to receive an operating permit from the Illinois Environmental Protection Agency. If the permit criteria are met, emissions would not be expected to pose a public health hazard. Asphalt plant emissions may lead to odors in the community, but the potential for adverse health effects is expected to be low.

Where can I get more information?

Illinois Department of Public Health

Division of Environmental Health

525 W. Jefferson St.

Springfield, IL 62761

217-782-5830

TTY (hearing impaired use only) 800-547-0466

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Illinois Department of Public Health