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September 4, 2009

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

Dear Ms. Collins:

The purpose of this letter is to comment on the mobile source emissions analysis for the proposed asphalt plant in Westford that was provided in an attachment to the August 20, 2009, letter from Mr. Douglas Deschenes, attorney for the proponent, Newport Materials LLC. In previous correspondence to you (June 15, 2009; June 26, 2009; and August 3, 2009) we outlined some additional information that we believed would be helpful to the Westford BOH to ensure that the proposed facility will not adversely impact nearby residents. The additional information we suggested included: (1) assessing potential impacts from source operations that consider all emissions sources (i.e., stationary, mobile, fugitive emissions); (2) identifying sensitive populations and potential impacts; (3) further evaluating emission estimates quantified in the permit application; and (4) conducting an analysis for mitigating emissions.

As you know, the primary concern regarding the proposed facility relates to emissions from plant operations that may adversely impact residents in the vicinity of the site including an elementary school (Rita E. Miller School) located within a mile of the site where the rate of pediatric asthma is statistically significantly higher than the statewide rate. In the August 20<sup>th</sup> letter, Mr. Deschenes indicates that Newport Materials LLC is taking the following actions in response to DPH/BEH comment letters: (1) expanded emissions modeling taking into account additional sources (e.g., fugitive emissions, diesel truck emission) not included in the air quality permit application, (2) summary report of the mobile source emissions analysis (attached to the letter); and (3) hiring of a consultant to conduct a health risk assessment. As of today, DPH/BEH has not received the emissions modeling analysis (#1 above) or health risk assessment (#3 above).

We have reviewed the summary report of the mobile source emissions analysis by GPI (dated August 11, 2009). In brief, GPI estimated vehicle emissions (i.e., CO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>) within (1) a radius of 5500 feet of the Rita E. Miller School that does not include vehicle emissions associated with the proposed facility (i.e., background) and (2) a radius of 8500 feet of the Rita E. Miller School that does include vehicle emissions associated with the proposed facility. The GPI summary concludes that the expected increase in vehicle emissions in the vicinity of the

school associated with the proposed facility is only a fraction of the total vehicle-related emissions currently generated in the area of the school.

Our concerns with this analysis are as follows: GPI did not include an analysis of vehicle emissions using the proposed site (rather than the school) as the center point in the mobile source emissions analysis. Using the proposed site as the center point is more appropriate and consistent with national modeling and risk assessment methodologies and protocols for estimating emissions and assessing potential health impacts to nearby residents. In addition, the information provided in the summary was not sufficient for conducting a meaningful review of vehicle emissions estimates because critical information was missing. For example, the GPI summary did not provide important parameters including vehicle type mix, model year of vehicles, operating modes, speed of vehicles along roadway links, and idling times in the summary. This information is important for evaluating whether accurate and appropriate assumptions were made to generate emission estimates for this particular situation. There is also no information about why only CO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions were estimated when the model used to estimate emissions (MOBILE 6.2) provides a suite of 17 pollutant categories for modeling mobile sources emissions. Other factors of interest missing from the summary are whether the emissions modeling analysis considered changes in the percentage of heavy-duty diesel vehicles associated with operations of the proposed asphalt plant and rock crushing plant, and whether increased emissions of trucks hauling loads entering or exiting the proposed site was considered. We also believe that a sensitivity analysis of the key assumptions using a set of reasonable alternatives should be conducted to reduce uncertainties in the modeling results.

It also should be noted that the GPI analysis does not explicitly provide information on human health impacts. Once emission estimates are determined, the next step in the process is to model the emissions using standard air dispersion modeling techniques in order to estimate the ambient air concentrations from all emission sources associated with the operation of a proposed facility. As we have stated in our previous letters, the determination of health impacts associated with the emissions from the proposed facility should include air dispersion modeling that considers total emissions associated with facility (stationary, mobile, and fugitive emissions) plus the existing burden of air pollutant exposure – not just the “incremental increase” related to a proposed new source. In other words, it is important to determine the cumulative exposure and resulting health impacts. We believe that the inclusion of the proposed health impact assessment including the expanded emissions modeling that takes into consideration all sources associated with the proposed site and is conducted according to well-established public health assessment protocols will provide additional information to the Westford BOH for ensuring public health protection.

We hope this information is helpful to you. If you have any questions, please feel free to contact us at 617-624-5757.

Sincerely,



Martha Steele, Deputy Director,  
Bureau of Environmental Health

cc: Suzanne K. Condon, Associate Commissioner, Director, Bureau of Environmental Health  
Margaret M. Round, Senior Environmental Analyst, BEH/Environmental Toxicology  
Program