



January 9, 2009

Dear District Superintendents and Superintendents of Schools:

During the week of December 10, 2008, USA Today published a series of articles focusing national attention on the potential health risks to school children from outdoor air contaminants emitted by nearby industrial facilities. These articles have generated considerable interest. We are writing to you to provide the perspective of the NYS Department of Environmental Conservation (NYS DEC) and NYS Department of Health (NYS DOH) on the reports as they relate to New York State schools, particularly those in Rochester that were listed among the “worst” in the nation.

USA Today used a computer model developed by the US Environmental Protection Agency (US EPA) to assess toxic chemicals released by the thousands of companies that are required to report to the US EPA Toxic Release Inventory. USA Today used the results of the analysis to rank 127,800 schools based on the concentrations and potential health hazards of chemicals that may be emitted from nearby industrial facilities.

The model USA Today used is a “screening-level” model because it uses simplifying assumptions to fill data gaps and reduce the complexity of calculations. These assumptions can affect the accuracy of the model’s predictions. In general, the more simple the model, the more likely it will provide poor predictions for any particular situation. Moreover, the accuracy of the results will depend on the accuracy of the factors used in running the model (factors such as how much of a chemical is released by a facility, and exactly where and how it is released). We also emphasize that USA Today’s rankings are based on the level of emissions from industrial facilities, not actual concentrations of pollution levels in the vicinity of the schools. For all these reasons, the rankings may not represent actual conditions and the model results should not be used to determine the likelihood of any health effects or to decide whether to remove children from a school with a high ranking.

The USA Today articles acknowledge some of the limitations of its analysis and tell its readers that the rankings are estimates, based on certain assumptions. USA Today also states, “The most important point to remember: The EPA’s model cannot say definitively whether anyone is at risk. Instead, it is a screening tool to help identify places where industrial pollution might pose problems.” The US EPA also has identified many of the strengths and weaknesses of the US EPA model used by USA Today. These can be found at [http://www.epa.gov/opptintr/rsei/pubs/strengths\\_limits.html](http://www.epa.gov/opptintr/rsei/pubs/strengths_limits.html)

The USA Today analysis may be useful to states that do not have an Air Toxics Program such as we have in New York State within the NYS DEC. Before granting a permit to any industrial facility, NYS DEC assesses the potential chemical emissions from the facility to make sure that the emissions do not pose unacceptable risks to public health or the environment. Nevertheless, NYS DEC and NYS DOH believe that the results of the USA Today analysis, particularly for schools that had very high ranks (*e.g.*, some of the schools in Rochester, Olean and Niagara Falls), deserve some further investigation. This investigation has been completed for the Rochester schools.

The chemicals that USA Today identified as contributing to the high ranking of the

Rochester schools are chlorine, chromium and chromium compounds, hydrochloric acid, hydrogen fluoride and sulfuric acid. Exposure to these chemicals at high levels in air is irritating to the mucous membranes of the eyes, nose, throat and lungs. Chemicals that are irritating to the respiratory tract may exacerbate asthma symptoms. One form of chromium (trivalent chromium or chromium III) has been associated with effects on the kidneys and another form (hexavalent chromium or chromium VI) can cause cancer after high levels of exposure for a long time. These chemicals also contribute to the level of airborne fine particles when released into outdoor air. Increases in fine particle levels in ambient air are also associated with increased respiratory symptoms in people with asthma.

In consultation with NYS DOH, NYS DEC used more sophisticated models to estimate the cumulative impacts of industrial facilities on the outdoor air at some of the schools identified by USA Today. Specifically, NYS DEC looked at the highest ranked schools in Rochester and the emissions from industrial facilities that USA Today identified as affecting those schools. The models that NYS DEC used incorporate detailed data on each industrial facility's characteristics (e.g., smokestack height and permitted emissions data), local meteorological data (e.g., wind speed and direction) and other factors. Typically, the output of such models is more reliable than the output of screening models because they use more location-specific information.

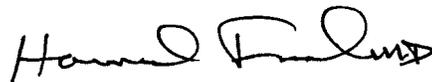
The results of the NYS DEC modeling show that the estimated concentrations of the chemicals listed above at the schools identified are all below the guidance values that NYS DEC uses in permitting industrial facilities. These guidance values, which NYS DEC developed in consultation with NYS DOH, are developed to be protective of public health. Therefore, the results of the NYS DEC analysis indicate that the impact of emissions from industrial facilities on the outdoor air at the schools does not pose significant health risks to students or staff at the schools.

Chemical concentrations in air at the schools may be lower today than in 2005 (the year for which USA Today performed its analysis). For example, the Russell Station power plant (one of the facilities identified by USA Today as affecting the Rochester schools) ceased operation in April 2008. Also, recent changes in operation at the Kodak facility are expected to result in decreased emissions.

If you have questions about the air quality modeling that NYS DEC performed, please contact NYS DEC at 518-402-8402. If you have questions about the kinds of health effects that may be associated with exposure to any of the chemicals described in the USA Today analysis, please contact NYS DOH at 1-800-458-1158.



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