

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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August 10, 2017

Dr. Joseph Giani
Superintendent of Schools
South Country Central School District
189 Dunton Avenue
East Patchogue, New York 11772

Dear Dr. Giani:

This is in response to the South Country Central School District's (District) July 27, 2017, emails to the New York State Department of Environmental Conservation (Department or DEC) asking for clarification regarding DEC's position related to the presence of benzene in the neighborhoods surrounding the Brookhaven Landfill (Landfill). This letter also provides guidance as requested for the use of appropriate comparison values for the one-hour ambient air quality data collected at the Frank P. Long Intermediate School (FPL or school) by Envirosience Consultants, Inc. (the Consultant). Lastly, this letter discusses ambient air quality samples collected at FPL and, explains how DEC's position on air quality in the Brookhaven area is being misrepresented.

Department staff's review of the volatile organic chemical (VOC) data did not uncover any consistent patterns that would indicate there is any one specific, dominant outdoor source of VOCs, other than the characteristic pattern of VOCs related to vehicular traffic.

The Consultant compared one-hour ambient VOC results of samples collected at the school to annual guideline concentrations (AGCs) developed by DEC. Given the short-term exposure periods of one hour, a more appropriate comparison value, would have been DEC's short-term guideline concentrations (SGCs). These SGCs are used by the Department to protect the general population from adverse exposure to toxic air contaminants for short-term exposure periods of one hour.

The AGCs are used by the DEC to protect the general population from adverse health effects from long-term (lifetime) exposure to toxic air contaminants. These values are used for comparisons to ambient measurements taken over the course of an entire year. For example, the current DEC Air Toxics Monitoring Network collects a 24-hour sample once every six days over the course of the year to obtain an annual averaged value. The DEC compares these annual measured values to our AGCs since they represent a measure of potential long-term exposure.



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It should be noted that there are limited instances when it is appropriate to compare one-hour short-term measurements to AGC. Such a comparison would be appropriate if the short-term measurements are extremely elevated (beyond what we would normally observe or expect in a specific location). Staff reviewed the ambient one-hour samples collected by the Consultant, and have not observed any one-hour values that would trigger this type of an assessment.

The DEC has determined the predominant source of benzene in the community to be motor vehicles, based on staff's analysis of the existing benzene ambient air quality data, emissions inventory information, and air dispersion modeling for the local area conducted by the United States Environmental Protection Agency. It is not accurate to conclude that the ambient air concentrations of benzene measured in the community are directly attributed to emissions from the Landfill. We have not reached that conclusion and there are numerous potentially attributable sources of benzene emissions in the community.

In addition, staff reviewed the July 26, 2017, presentation provided by EnviroScience Consultants Inc., and offers the following comments. As discussed above, the proper comparison value for a one-hour ambient air sample is our one-hour SGC values. There appears to be an error on slides 35 and 36, which has led to public inquiries to our office about the use of the term Semi-Annual Guideline Concentrations. This is incorrect and, as stated on earlier slides, the proper term to be used in these slides is Short-term Guideline Concentrations.

The widespread claim that the Department determined the Landfill to be the predominant source of benzene found in the neighborhood is incorrect. That claim has also sparked public inquiries and should be explained. During a February 2016 meeting DEC held to explain how odor episodes were traced back to the Landfill, an audience member took photos of selected slides from the presentation, and those selected slides are being used in ways that were not intended. The slides were never meant to be a stand-alone document, but rather part of an oral presentation that explained and expanded on the talking points laid out within.

Landfill gas is a mixture of gases that migrates as a mass; odors from some of those gases can be an indicator of landfill gas moving in ambient air. In 2015, RTP Environmental Associates Inc., the Town's consultant, had prepared an Odor and Dust Monitoring Plan that included, among other things collecting air samples at the landfill and in neighboring communities while odors were detected. The limited data collected seemed to indicate the landfill was the cause of odor episodes. The purpose of the February 2016 meeting and associated presentation was to share those results with the Brookhaven Community Coalition and Citizens Campaign for the Environment (CCE). One of the slides included the statement, "*Low levels of VOCs were detected. On-site and off-site detections are correlated indicating the landfill to be the primary source.*" That statement on the slide could have been better formulated, and would have been more accurate if the words "of odors" were added at the end. However, that unfortunate

omission was not an issue of concern at that February 2016 meeting since the slide was part of a broader presentation discussing odors and that issue was clarified during the presentation. It is worth mentioning that the Department shared with CCE its findings on ambient air quality in the Brookhaven area, in a detailed letter dated November 21, 2016, (copy enclosed). I urge you to carefully read that letter, which does not conclude that benzene in the area is predominantly from the Landfill, and explains how staff arrived at the conclusions reached.

Due to ongoing concerns about odors in the area, in June 2017 DEC installed Apptek Low Range OdaLog technology at two locations in the surrounding community to continuously monitor hydrogen sulfide that was found at elevated levels in previous DEC testing. This continuous monitoring will assist DEC in our assessment of the effectiveness of the corrective action plan being implemented by the town. The Odalog readings along with local weather conditions are currently being collected and compiled to assess conditions in the neighborhood. The town's consultant is also routinely monitoring specific areas around the landfill site for hydrogen sulfide and submitting the data to DEC on a monthly basis. In addition, the town has engaged an odor remediation expert to address the remaining sources of odors.

With regard to the complaints about ash in the vicinity, the DEC has also begun a dust particulate sampling study using Petri dishes to verify if a link can be established between the dust complaints in the neighborhood and landfill activities. Also, the town's consultant is performing onsite dust monitoring at the landfill using DustTrak equipment measuring particulate matter.

I hope my letter answers the questions posed by the District and sets the record straight on DEC's conclusions. For your reference, I am also enclosing a letter from the New York State Department of Health that discusses recent air sampling results conducted at the school. Should you have any further questions, please feel free to contact me at (631) 444-0345.

Sincerely,



Carrie Meek Gallagher
Regional Director

Enc: (3)

cc: Merlange Genece, P.E., Regional Air Pollution Control Engineer
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