

Tonawanda Community Air Quality Study



Department of
Environmental
Conservation

Community Sampling in Tonawanda, New York

January 2013

Benzene reduced

Four years of air monitoring since the conclusion of the New York State Department of Environmental Conservation's (NYSDEC's) Tonawanda Community Air Quality Study (Study) show reductions in the ambient concentrations of benzene and other air pollutants within the Tonawanda community. The results at the industrial monitor (Grand Island Boulevard Industrial or GIBI monitor) show a reduction in benzene concentration of 86%. The estimated excess annual lifetime cancer risk was calculated to be 11 in-one-million. The results at the residential monitor (Brookside Terrace Residential Site or BTRS monitor) show a reduction in benzene concentration of 69%. The estimated excess annual lifetime cancer risk was calculated to be 4.9 in-one-million, which is below most of the 2011 levels found in urban locations in the state.

Observed benzene reductions were the result, in part, of operational modifications made by the Tonawanda Coke Corporation (TCC) in response to NYSDEC and U.S. Environmental Protection Agency's (USEPA) inspections of the facility and subsequent federal and state enforcement actions against TCC. Operational modifications include TCC improving its handling of coke oven gas throughout the plant through such means as the following: installing flares to manage the coke oven gas, performing numerous repairs to address leaks in the coke oven gas system, and improving the coke oven gas leak detection and repair program. TCC also made improvements to control the ammonia emissions from its wastewater still, which were suspected to have been the major source contributing to complaints of odors and eye, nose and throat irritation in the Study area.

Additional air toxics reductions

Besides benzene, four other air contaminants with local emissions that had average annual concentrations for the Study year which exceeded the respective NYSDEC Annual Guideline Concentration (AGC) include two of the monitored Volatile Organic Compounds or VOCs (1,3-butadiene, and acrolein) and two of the monitored carbonyls (formaldehyde and acetaldehyde). The updated VOC and carbonyl data analyses presented in the "[January 2013 Data Analyses Update Graphs](#)" document include these five key contaminants. Like benzene, the ambient air concentrations and therefore exposure risks for these four other contaminants all decreased from the Study year to the 4th year post-Study at both the industrial (GIBI) and residential (BTRS) monitors. The overall reductions in both the ambient air concentrations and estimated exposure risks for all five of these

contaminants at both monitoring locations are provided in the "January 2013 Data Analyses Update Graphs" document.

In addition to the continuing VOC and carbonyl monitoring, Polycyclic Aromatic Hydrocarbon (PAH) monitoring was added at one of the monitoring locations (GIBI) after the completion of the Study year and it continued for two years (starting July 2008 and extending through June 2010). The concentrations of the 22 PAHs monitored decreased from the 1st year post-Study to the 2nd post-Study year. The percent decreases for these various PAHs are provided in the last two pages of the "January 2013 Data Analyses Update Graphs" document.

About the Tonawanda study

- In July 2007, NYSDEC initiated a year-long community air quality monitoring study in the Town of Tonawanda (Erie County) to measure the concentration of air pollutants within the community and evaluate the potential risk to public health.
- To read more about the background and major findings of the study, visit the [Tonawanda Community Air Quality Study](#) web page.

What is NYSDEC doing to improve air quality in the Tonawanda community?

- NYSDEC continues to monitor ambient air toxics at two monitoring stations in the Tonawanda community. The results have been used by NYSDEC to evaluate the effectiveness of emission reduction strategies at TCC for benzene and other air toxics found to be exceeding NYSDEC's health-based annual guideline concentrations.
- NYSDEC is participating in the Tonawanda Economy, Energy, and Environment (E3) sustainability initiative. This initiative is a coordinated federal, state and local program that helps communities work in collaboration with industry to promote sustainable manufacturing and growth while utilizing pollution prevention technologies to improve environmental quality.
- NYSDEC continues its collaboration with the USEPA by expanding inspection efforts at other facilities in the Tonawanda area.
- NYSDEC and USEPA's joint enforcement action against TCC continues. It is anticipated that these actions will result in further improvements to the air quality of the Tonawanda community. Due to the on-going nature of those proceedings, NYSDEC is not able to discuss the particulars of those proceedings at this time.

For more information please contact:

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