

BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE

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Re: 15A NCAC 2Q .0700 Toxic Air Pollutants

To Members of the Environmental Management Commission:

On behalf of the Blue Ridge Environmental Defense League, NC Healthy Communities, I would like to thank the Commission members for this opportunity to submit comments concerning the combustion source exemption proposed by the NC Division of Air Quality (DAQ).

The League represents over 2,500 members with 40 chapters located in the southeast. Our founding principles are earth stewardship, environmental democracy, social justice, and community empowerment.

The new rulemaking proposed by the DAQ for combustion sources comes on the heels of a study published by USA Today that examines toxic exposures to children at schools across the nation from polluting industries. North Carolina did not fare well in the schools study. Webb Street Special Ed School in Gastonia ranked in the 1st percentile, which means that the air is likely to be more dangerous at 190 other schools in the nation. This is not good news, particularly when the study assessed the air quality outside of 127,800 private and public schools across the nation.

The USA Today study has shortcomings; not all sources of emissions were considered in assessing potential exposures from air pollutants to children. Of these sources, and the subject of these comments, are emissions from combustion sources that use unadulterated fuels currently exempt from regulation which were not considered in the USA Today study. Emissions from combustion sources include mercury, arsenic, formaldehyde, hydrogen sulfide, hydrochloric acid, cadmium, furans, dioxins, and more than a hundred others.

Another obvious shortcoming of the study is that not all industries, even those with Title V permits, are required to report their emissions to the EPA's Toxic Release Inventory (TRI). Some of the industries not required to report are medical waste incinerators and asphalt plants. Of particular note, asphalt plants have combustion sources (cement heaters) that account for the second largest source of smokestack emissions from an

asphalt plant. Among the many toxic compounds produced from these heaters is benzene, a known human carcinogen.

Another shortcoming: Not all industries required to report their estimated emissions to the TRI were considered in the USA Today study. For example, New South Lumber, Inc., located in Alamance County, is located near a number of schools in Graham, and has four (4) combustion sources currently exempt from regulation. Air pollutants from New South Lumber, Inc. were not considered in the USA Today study because according to the study, “No Data Available.”

“Invisible” emissions from combustion sources.

Combustion sources from industries are currently exempt from regulation. Since they are exempt no data is available on the types and amounts of air pollutants from these sources. In essence, these emissions are “invisible.” The general public is not ware of them or the fact that they are not recorded, modeled, monitored nor regulated. Or happening. Nonetheless, emissions from combustion sources using unadulterated fuels represent potential sources of air pollution and additional sources of toxic exposures to children at schools not considered in the USA Today study.

Because there is evidence that these “invisible emissions” really do exist, NC Healthy Communities chose to look at industries listed in the USA Today study responsible for exposures to children to see if they also had an exempt combustion source. Because the USA Today study lists a total of 2, 858 schools in NC, and there are approximately 1,400 sources of pollution that are currently exempt from the NC Air Toxics Rules, we focused on industries associated with schools that ranked in the 1st-to-10th percentile in terms of exposures to toxic chemicals and cancer-causing agents from industries when compared with schools from across the nation.

A number of industries above the 10th percentile and higher also linked to industries with combustion sources currently exempt from regulation. Additionally, many of the industries cited below have more than one combustion source. Some of the industries cited have been placed on what is known as the DAQ’s “short list.” The short list, under the “Director’s Call approach,” requires a select number of industries to demonstrate that their emissions are below air standards set under the NC Air Toxics program.

Alamance County.

Carolina Power & Light Co. in Roxboro is listed in the USA Today study as potentially affecting three schools in the lowest percentiles in Alamance County. Carolina Power & Light is also listed on the DAQ’s “short list” of industries with combustion sources currently not regulated. As previously noted, emissions from New South Lumber Co., Inc., in Graham, adjacent to Southern High in Graham, were not considered in the USA Today study. The lumber plant is located at 4408 Mt. Hermon-Rock Creek Rd., Graham, NC. Interestingly, the TRI states “NO DATA AVAILABLE” for New South Lumber Co., Inc.

According to its permit, New South has four (4) combustion sources. Dioxins are of particular concern due to wood-fueled boilers used at New South. Dioxins belong to a group of dangerous pollutants known as the “dirty dozen” - a group of chemicals that are classified as persistent organic pollutants. Dioxins are of great concern because of their highly toxic potential. Long-term exposure to dioxins has been linked to impairment of the immune system, the developing nervous system, the endocrine system and reproductive functions. Chronic exposure of animals to dioxins has resulted in several types of cancer. Dioxin (TCDD) has been classified by IARC as a "known human carcinogen.”

The developing fetus is most sensitive to dioxin exposure. The newborn, with rapidly developing organ systems, may also be more vulnerable to certain effects. Once dioxins enter the body they last for a long time because of their chemical stability. Dioxins are absorbed by fat tissue and stored in the body. In the environment, dioxins accumulate in the food chain. Some individuals or groups of individuals may be exposed to higher levels of dioxins because of their diets (e.g., high consumers of fish in certain parts of the world) or their occupations (e.g., workers in the pulp and paper industry, in incineration plants and at hazardous waste sites), to name just a few.

<http://www.who.int/mediacentre/factsheets/fs225/en/index.html>

Beaufort County.

Beaufort County has PCS Phosphate Co. with emissions affecting at least five schools located in Beaufort. PCS has two (2) combustion sources currently exempt from regulation. Sea Safari has one (1) combustion source, an external combustion boiler that uses #1 and #2 oil used to dry crabmeat, the emissions of which are also not regulated. National Spinning is listed as having multiple unregulated combustion sources, in addition to other pollutants listed in the USA Today study.

Brunswick County.

DAK Monomers LLC is listed in the USA Today study as potentially affecting 5 nearby schools in Brunswick County. DAK has multiple combustion sources, many that burn #6 fuel oil that are currently exempt from regulation.

Burke County.

In Burke County, emissions from SGL Carbon, LLC, the USA Today study lists at least five schools with children that would be most affected by exposure to polycyclic aromatic compounds from SGL Carbon, LLC. According to DAQ, SGL Carbon has multiple combustion sources currently exempt from regulation. The USA Today study lists antimony and antimony compounds from Levitron Manufacturing as a source of toxic air pollutants to four nearby schools. Levitron Manufacturing has multiple external combustion boilers currently exempt from regulation. Emissions from BASF Corp. are

listed as most likely to affect two Burke County schools, both ranking in the low percentiles. BASF has one combustion source currently exempt from regulation.

Cabarrus County.

The USA Today study lists the Duke Energy Corp. Plant Allen as one of the polluters most responsible for toxics near Guilford schools. The plant has also been placed on the DAQ's "short list." Additionally, there are five schools affected by toxic emissions from Phillip Morris USA. If cigarettes haven't caused enough problems for people, it should be noted that Philip Morris has a number of combustion sources currently exempt from regulation.

Columbus County.

The DAQ's list of exempt combustion sources included International Paper Co. with multiple combustion sources currently exempt from regulation. The company is listed in the USA Today study as potentially affecting five schools in Columbus County.

Cumberland County.

The worst schools in Cumberland County were ranked in the 2nd percentile. Those industries listed as responsible for children's exposures to air pollutants included US Army, Fort Bragg, and DuPont Fayetteville. The US Army post at Fort Bragg boasts a number of combustion sources while Du Point is listed as having four (4) combustion sources, currently exempt from regulation.

Craven County.

The USA Today study lists Weyerhaeuser located in Craven County as a main source of exposures to schools, and particularly to West Craven Middle School ranked in the 7th percentile. The DAQ list of exempt shows a total of fifteen (15) combustion sources for Weyerhaeuser. Five of these sources burn pulp, paper and wood products, adding to concerns over dioxin emissions, which are currently exempt from regulation.

Durham County.

GE Aviation Durham Engine Facility is listed as a contributor to toxic exposures to three schools in Durham County, one of which is listed in the 5th percentile. GE has a total of eight (8) combustion sources.

Gaston County.

According to the USA Today study, Webb Street Special Ed in Gastonia is number one in NC in terms of exposures to children from toxic emissions from industries - meaning the air is worse at only 190 other schools in the nation. Three schools in Gastonia ranked in the 1st percentile, three in the 2nd percentile, three in the 3rd percentile, nine in the 4th percentile, four in the 5th percentile, two (3) in the 6th percentile, seven in the 8th percentile, one in the 9th percentile and two in the 10th percentile. The remaining schools in Gaston County ranked in the teen-percentiles in terms of potential worst exposures in the nation. Of the 65 schools ranked in Gaston County, only William B Beam Intermediate, located in Cherryville, was ranked the highest, at the 28th percentile.

Emissions listed from nearby industries include toluene, cobalt, chromium, and lead, and their respective compounds. Industries named as most likely to affect schools that also have exempt combustion sources include the Marshall Steam Station in Terrell, and the Duke Energy Corp Plant Allen, both on the DAQ's "short list." Others include Freightliner, LLC, with four (4) combustion sources, FMC Lithium, in Bessemer City, with one (1) combustion source, and Radicispandex Corp., with six (6) combustion sources.

According to the DAQ, the Radicispandex Corp. plant is no longer in operation. Obviously, this would affect the ranking of schools in the USA Today study and possibly move schools in Haywood County into first place.

Guilford County.

Among other industries, schools in Madison and Pine Hall in Guilford County are potentially most affected by emissions from the Duke Energy Corp. Belews Creek Steam Station. The Belews Creek Steam Station is also listed on the DAQ's "short list." Other industries listed in the USA Today study affecting Guilford schools ranked at the 10th percentile and below that also have combustion sources are High Point Furniture (2) and Thomas Built Buses (7).

Haywood County.

Industries listed in the USA Today study that also had combustion sources were Blue Ridge Paper Products, Inc. The study lists emissions from sulfuric acid, acetaldehyde, chlorine dioxide and formaldehyde as most affecting schools. Blue Ridge Paper has four (4) combustion sources and Blue Ridge Metals Corp. has two (2) combustion sources currently exempt from regulation.

Lincoln County.

The USA Today lists Duke Energy Corp. Plant Allen located in Belmont as a potential source of exposure to schools in Lincoln County. Plant Allen is on the “short list” of industries with emissions sources to be reviewed by DAQ.

Mecklenburg County.

Duke Energy’s Plant Allen and Marshall Steam Station are listed among other polluting industries affecting ten schools in the county. Each of the two plants has combustion sources that have earned them a place on the DAQ’s “short list.”

New Hanover County.

Three industries listed on the USA Today study as potentially affecting schools located in New Hanover County in the 2nd and 3rd percentiles located in New Hanover County were Corning, Inc., Elementis Chromium L.P., and Invista. The combustion sources from regulation from these three industries that are currently exempt from regulation are one (1), two (2) and seventeen (17), respectively.

Robeson County.

The USA Today report stated that five schools in Robeson County are most affected by glycol ether emissions from Silgan Can Co. Silgan Can Co. has three (3) combustion sources that burn natural gas that are currently exempt from regulation. Umicore Cobalt Products is listed in the USA Today study as most affecting schools with exposures to cobalt. Umicore has one (1) combustion source that burns distillate oil #1 and #2, currently exempt from regulation.

Rockingham County.

From the more than 70 combustion sources listed in Rockingham County, none of the industries with these sources were considered in the USA Today study as potentially affecting children in schools.

Rowan.

Rowan County has seven schools that rank below the 10th percentile. The Duke Energy Plant in Buck was listed among industries most affecting schools. Duke also has one (1) combustion source currently exempt from regulation. National Starch, also listed, has two (2) combustion sources currently exempt from regulation.

Sampson County.

Butler Avenue Elementary was ranked in the 3rd percentile with potential exposures to children from Hanson Brick. Five nearby schools, including Butler, were shown to be most affected by emissions from Hanson. Hanson Brick has two (2) combustion sources currently exempt from regulation.

Scotland County.

The USA Today study ranked three schools in Laurinburg below the 10th percentile as a result of potential emissions from Pilkington with five (5) combustion sources, Umicore USA with two (2) combustion sources, and Butler Manufacturing with one (1) combustion source currently exempt from regulation.

Union County.

The USA Today study lists Consolidated Metco Inc., Hanson Brick and Duke Energy Corp. Allen Plant as contributors to exposures, each affecting at least five individual schools in Union County, three of which are listed in the 5th percentile. As far as combustion sources, Consolidated Metals is listed as having five (5) combustion sources, Hanson Brick has one (1), and the Duke Energy Corp. Allen Plant has been listed on DAQ's "short list."

Wake County.

Neuse Baptist Christian School ranked in the 1st percentile in the USA Today study among five other schools affected by exposures from toxic air emissions from the Mallinckrodt, Inc., located in Raleigh. The plant has multiple combustion sources that include a combination of diesel fuel, natural gas, distillate oil #2 and #6, and liquid waste, all of them currently exempt from regulation.

Wayne County.

Southern Wayne High in Dudley ranks in the 3rd percentile based on potential exposures to children from emissions at Georgia-Pacific Corp. with multiple combustion sources and Carolina Power & Light/Progress Energy with two (2) combustion sources currently exempt from regulation.

Conclusions.

It is clear that the USA Today study caused uproar among state and federal regulators, particularly DAQ regulators, who have publicly stated that the data used in the USA Today study was used inappropriately to assess risk. However, USA Today states that the goal of the study was to "determine what sort of toxic chemicals children breathe when

they go to school” and clearly states that the EPA model used was not meant to assess risk. <http://content.usatoday.com/news/nation/environment/smokestack/methodology>

In response to the USA Today study, the DAQ has conducted a risk assessment that highlights the shortcomings of the study. Many of the limitations of the study addressed in the DAQ’s assessment were also addressed in the USA Today study. For example, the information produced was from 2005 data which may not accurately reflect the most current conditions (i.e.), industries closing, schools closing, etc. and the study did not include pollution from all sources.

Since the release of the USA Today study, a number of articles have appeared in newspapers around NC questioning the validity of the study. In one article published in the Wilmington Star News, Keith Overcash, Director of the State Division of Air Quality, is quoted as saying that the air is “relatively safe to breathe at schools and communities near industries because we closely regulate these emissions sources.” (“Schools, state deny toxic air quality issues,” Wilmington Star News, December 17, 2008).

Considering the ambiguity associated with the term, “relatively,” the word “relatively safe” may not be safe enough for children. If the DAQ requires industries to “analyze their facilities and install controls where needed to make sure that toxic air pollution does not pose health concerns, then it should do so by permanently removing the exemption that allows industries to freely release unregulated contaminants into the air.

Emissions from combustion sources that burn unadulterated fuels must be regulated as are other toxic air pollutants under NC’s Air Toxics Program. If they are not, public health will be compromised and children will be placed at further risk from chemicals that can cause cancer, respiratory problems, kidney and liver damage, renal dysfunction, learning disabilities, and other diseases associated with exposure to toxic air pollutants.

Pollutants contaminate not only air, but water, food and soil. The DAQ’s study of the impacts of the combustion source exemption on human health looked solely at the risks from inhalation, the obvious pathway for air pollutants, but failed to look at additional pathways of exposure that include ingestion and dermal contact. **This is extremely important considering that many schools are located near polluting industries.**

Scientists have long known that children are particularly susceptible to the dangers of breathing in air toxics. Children breathe more air in proportion to their weight than adults do, and their bodies are still developing. Based on the time they spend at school, their exposures could last for years, but the impacts of exposures to pollutants might not become clear for decades. <http://www.epa.gov/fedrgstr/EPA-RESEARCH/2006/October/Day-13/r16911.htm>

After looking at the multiple combustion sources located in these counties that may affect this limited number of schools, it would be interesting to see another USA Today study conducted that looks solely at schools in NC most affected by industries with combustion sources that are exempt.

Perhaps the most important message to emerge from the USA Today study is that children are exposed to an array of various air pollutants from industry, and other sources. It begs us to ask: what are the potential health impacts of air toxics from industries on children who will suffer the most? Legislation is needed to set protective limits for siting schools from polluting industries as well as building schools on land contaminated by industry.

http://www.childproofing.org/school_siting_take_action_now.htm

Finally, the clause created by DAQ that allows industries to forego regulation based on demonstration of “technical infeasibility or economic hardship” should be struck from the rules. The DAQ already issues permits for industries to pollute within limits; if industries wish to operate a polluting business they should all be subject to the same rule. The current exemption for combustion sources, with its hardship clause, is unfair to citizens who must endure the hardship of being forced to breathe toxic air pollutants.

On this last day of 2008, it is clear that the time is now to make cleaner choices for our state’s future air quality. We hope the DAQ will make the right decision in removing the air toxics combustion source exemption to protect future generations, our health, environment and quality of life.

Thank you for your consideration.

Respectfully submitted,

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