Review of the North Carolina Air Toxics Rules

A Report to the
Environmental Review Commission

Submitted by the Department of Environment and Natural Resources
Division of Air Quality

This report is submitted pursuant to the requirement of Section 3
of Session Law 2012-91, House Bill 952.

December 1, 2012

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EXECUTIVE SUMMARY

Session Law 2012-91 provides an exemption from North Carolina's air toxics rules for certain sources of toxic air pollutants as long as the Division of Air Quality (DAQ) determines that the emissions from that facility will not pose an unacceptable risk to human health. Additionally, Section 3 of the session law requires DAQ to review the existing air toxics rules and make recommendations to the Environmental Review Commission by December 1, 2012, on whether further changes could be made that would reduce unnecessary regulatory burden and increase the efficient use of Division resources while maintaining public health protections. This report addresses the Section 3 requirements and identifies six recommendations that have been developed through a stakeholder process.

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INTRODUCTION

The state air toxics rules administered by the Division of Air Quality (DAQ) were established in the early 1990s in the absence of an effective federal program to protect citizens from adverse health effects from exposure to toxic air pollutants. In the 20-plus years since, the United States Environmental Protection Agency (USEPA) has issued more than 100 national air toxics standards. The federal standards for existing sources of pollution represent stringent control levels reflecting the 12-percent best-performing units across the nation. For new sources, the federal standards require emissions control currently achieved by the best-controlled similar source. As a result of state and federal actions, toxic air emissions in North Carolina decreased by 62 percent between 1998 and 2011. Facilities required to comply with federal standards rarely have had to install additional pollution control equipment to meet the state air toxics rules.

In 2012, the General Assembly amended the statutes that authorize the state air toxics rules (See Appendix A). Session Law 2012-91 provides an exemption to the air toxics rules for any air emission source that is subject to any requirement under either:

- Regulations established by the USEPA that require sources of toxic air pollutants to control emissions of toxic air pollutants through the use of maximum achievable control technologies or generally available control technologies.
- State permits that establish case-by-case emission limits for toxic air pollutants pursuant to Section 112(j) of the Clean Air Act, which requires states to establish toxic emission standards when EPA fails to do so for a given industrial sector.

The session law, however, requires DAQ to review permit applications that result in a net increase in toxic air pollutants to ensure the emissions will not pose an unacceptable risk to human health. If DAQ finds that emissions from a facility will pose an unacceptable risk to human health, the facility must comply with state air toxics rules even if it falls within one of the two exempt categories.

Additionally, Section 3 of the session law requires DAQ to review the existing air toxics rules and make recommendations by December 1, 2012, on whether changes could be made that would reduce unnecessary regulatory burden and increase the efficient use of division resources while maintaining public health protections. The review and set of recommendations contained in this report are pursuant to Section 3 of S.L. 2012-91.

CURRENT AIR TOXICS RULES

The state air toxics rules administered by the Division of Air Quality (DAQ) were established in the early 1990s in the absence of an effective federal program to protect citizens from adverse health effects from exposure to toxic air pollutants. North Carolina's health risk-based air toxics rules provide for local scale evaluation of the maximum impact of air toxic emissions from a facility at or beyond its property boundary through site-specific emissions estimates and modeling. It is designed to protect public health by minimizing exposure to (and the resulting risk from) toxic air pollutants emitted from the entire facility.

The rules are designed around a set of Acceptable Ambient Level (AAL) guidelines. "Acceptable" in this context is intended to be a level "below the concentration that would produce adverse health effects in sensitive subgroups of the general population." Regulated pollution sources are required by North Carolina air toxics rules to reduce emissions of toxic air pollutants below those levels that are predicted to exceed the AAL beyond their property line. The rules allow the use of computer-based air dispersion models to compare the impact of toxic air pollutant emissions to the appropriate AAL.

Currently, the Secretary of Environment and Natural Resources maintains a scientific body of experts known as the Science Advisory Board (NCSAB) whose job it is to continually review the scientific information that forms the basis of the AALs. As this information changes, the NCSAB recommends updates to the AALs. The NCSAB reviews are focused on recommending safe exposure concentrations for toxic air pollutants that allow an ample margin of safety for people with potential exposures. The NCSAB is composed of eight individuals, appointed to four-year terms, having expertise in environmental health, occupational and pediatric medicine, toxicology, risk assessment, exposure assessment, epidemiology and biostatistics. The NCSAB meets regularly to perform risk assessments on toxic air pollutants emitted in North Carolina. Its final recommendations are considered by DAQ in drafting rules for AAL concentrations for 97 toxic air pollutants. Any changes to the AALs go through the normal rulemaking process with the Environmental Management Commission making the final decision.

Determining what exposure level to a toxic air pollutant is acceptable is very challenging. The approach used by health assessment professionals is to carefully study what is known about a pollutant in order to determine if it is a carcinogen or not. Next they identify the lowest level known to harm people or the highest level at which health effects are not observed. Then, from one of these starting points, several safety factors may be used to reduce that level in order to protect sensitive people such as children or asthmatics, or to account for other possible adverse health effects that have not been fully studied. In general, larger safety factors are used when less is known about the health impacts of a chemical. For example, if an adverse health effect is observed in a study of human adult males, then in order to protect children, the level that caused harm in the adults is reduced using safety factors that address differences in body mass or gender. In the some cases, evidence of toxic effects in animals can be extrapolated to humans after making adjustments for differences in physiology, breathing patterns or other factors. The use of safety factors is a standard approach employed by health professionals in federal, state and academic institutions when determining safe exposure levels. It is especially valuable when there are gaps in scientific data.

For toxic air pollutants that are known to cause cancer, risk assessment methods assume by default that no exposure is without at least some risk. In these cases, the conventional scientific approach is to set exposure guidelines at levels that represent extremely low risk. This is especially true for those chemicals that are known to cause cancer in humans, such as benzene. In these cases, the standard convention used by academia and state and federal health protection programs is to establish an exposure level based on a concept of excess or additional cancers not to exceed “one in a million.” So, for toxic air pollutants that are known human carcinogens, AALs are set such that they represent a "one in a million" excess cancer risk. Using this approach, if one million people were exposed to this level continuously, then statistically one additional person would be expected to develop cancer from this exposure over and above the “usual” cancer rate expected in a population. Similarly, the excess cancer risk is less restrictive for those chemicals that are known to cause cancer in animals, but evidence in humans is incomplete.

The North Carolina air toxics rules approach protection of public health differently than the United States Environmental Protection Agency’s (USEPA) regulations for toxic air pollution. In the 1990 Clean Air Act Amendments, Congress directed USEPA to use a technology-based approach to significantly reduce emissions of air toxics from major stationary sources of air pollution, followed by a risk-based approach to address any remaining, or residual risks. Under the technology-based approach, USEPA develops standards for controlling the emissions of air toxics from each major type of source within an industry group. These standards, known as Maximum Achievable Control Technology (MACT) standards and Generally Available Control Technology (GACT) standards are based on emission levels that are already being achieved by the better-controlled and lower-emitting sources in an industry. The USEPA has issued all of the technology based standards (although a few are being reconsidered), and is in the process of addressing residual risks from each of the source categories. To date, USEPA has issued 40 percent of the residual risk regulations.

The state program evaluates actual toxic air emissions at the property boundary – where those emissions affect other businesses and residences. Often times, installing the technologies required under the federal rules allows a facility to also meet the state health-based standard at its property boundaries. When that is the case, the state program does not require any further action. Other times, those levels exceed the public health guideline at the property boundary even after the facility has installed technology required under the federal rule. In those cases, the state program works with the facility to identify other measures that can lower the level of toxic air pollutants.

The state rules that set forth the control of toxic air pollutants to protect human health (including the AALs) are found in the North Carolina Administrative Code at 15A NCAC 02D .1100 (Control of Toxic Air Pollutants). The state rules that set forth the permitting requirements for sources of toxic air pollutants are found at 15A NCAC 02Q .0700 (Toxic Air Pollutant Procedures). Both sections can be found in Appendix B and C, respectively.

THE REVIEW PURSUANT TO SECTION 3 OF S.L. 2012-91

Upon the enactment of S.L. 2012-91, DAQ began the process of reviewing the air toxics rules in 15A NCAC 02D .1100 and 02Q .0700 to determine whether changes could be made to the rules or their implementation to reduce unnecessary regulatory burden and increase the efficient use of Division resources while maintaining public health protections. The law also instructed DAQ to conduct this review in consultation with interested parties.

The DAQ began meeting with its management team in early July 2012 to discuss an approach for the Section 3 review. The first step included survey discussions with three DAQ workgroups – Permitting, Compliance and the Maximum Achievable Control Technology Implementation group. The goal was to get the staff members that have worked on implementing the rules for many years to share their experiences and identify possible changes that would be consistent with the requirements of Section 3. Next, DAQ management asked stakeholders for ideas on what changes could be made to the air toxics rules consistent with the requirements of Section 3. One such opportunity was during DAQ's August 2012 Outside Involvement Committee Meeting – a diverse stakeholder group that meets quarterly to receive updates on the complex and ever-changing nature of air quality regulations and issues. The group regularly includes representatives from industry, consultants and the environmental community.

On September 7, 2012, DAQ announced a stakeholder meeting for September 25, 2012 to specifically take comments on changes that could be made to the existing North Carolina air toxics rules. Further, DAQ accepted written comments on this matter from September 7, 2012, through October 9, 2012.

Approximately 30 individuals attended the September 25, 2012, stakeholder meeting representing the full spectrum of interested parties - industry, consultants and the environmental community. The DAQ presented seven concepts during the meeting for the purposes of stimulating thought and discussion on what changes might be possible that fit the criteria laid out in Section 3 of the law. Those concepts evolved out of DAQ's experience implementing the air toxics rules and from comments from the regulated community through the years. By the time the written comment period had ended, DAQ received 18 written comments. See Appendix D for a summary of comments and Appendix E for the actual comments.

RECOMMENDATIONS

After carefully considering all of the input received since S.L. 2012-91 became law, DAQ has determined that several changes could be made to the air toxics rules to reduce unnecessary regulatory burden and increase the efficient use of DAQ resources while maintaining protection of public health.

1. **Develop an additional set of toxic permitting emission rates (TPERs) in 15A NCAC 02Q .0711 for situations where air pollutant emission release points at a given facility are non-obstructed and vertically oriented.**

   The TPER is used in the first step of evaluating a facility's toxic air emissions. The facility-wide emissions level is simply compared to the TPER for a given toxic air pollutant to determine whether further analysis (modeling) is necessary. One can think of this as a simple screening step. The TPER is a conservatively set threshold below which, even under the worst case air pollutant dispersion conditions, impacts at the property boundary would not be expected to approach the health based AALs.

   The DAQ's experience with modeling analyses indicates that in some cases facility emissions need to be 100 times the TPER to actually exceed the health based AAL at the property boundary. This significant gap between the TPER threshold for modeling of toxic air emissions and actual emissions at the property boundary occurs most often at facilities where emissions are released through an unobstructed, vertical smokestack. DAQ's recent examination of actual stack exit velocities – the speed at which air emissions leave the stack and disperse (a critical variable in estimating air pollution impacts) – shows the lowest value at current NC facilities to be in the 1.5 meter per second (m/s) range for unobstructed vertical stacks. By comparison, the current value used to establish the TPERs is 0.01 m/s. While this value represents a reasonable worst case scenario for horizontally oriented stacks and for some stacks obstructed by rain caps, it is not a reasonable value for an unobstructed vertical stack.

   The change being proposed by DAQ does not change the AAL; the health-based standard would remain the same. The DAQ proposes to develop a separate set of screening thresholds for analyzing toxic air pollutants emitted from unobstructed vertical stacks at a facility. The DAQ estimates that at a minimum, one-third of all facilities subject to the air toxics rules could use this additional set of TPERs. The DAQ anticipates that use of the new TPERS would relieve a number of those facilities from the need to model toxic air emissions.

2. **Exempt natural gas and propane fired boilers from state air toxics permitting when the aggregate allowable heat input value of such sources is less than 450 million British thermal units per hour (mmbtu/hr) and those sources are the only sources of benzene emissions at the facility.**

   The proposed threshold-based exemption to the air toxics permitting rules for some natural gas and propane fired boilers is based on several points. First, DAQ's analysis of

natural gas and propane fired boilers indicates that boilers with a heat input value less than 450 mmbtu/hr do not exceed the TPER for any toxic air pollutant. Larger boilers have the potential to exceed the TPER for benzene. Since total emissions at a facility with multiple natural gas or propane fired boilers, a mix of natural gas or propane fired boilers, or other sources of benzene may exceed the TPER, DAQ proposes to limit the exemption to natural gas and propane fired boilers that: 1) represent the only source of benzene emissions at a facility; and 2) have an aggregate allowable heat input value less than 450 mmbtu/hr.

Second is a consideration of how USEPA has treated natural gas and propane fired boilers in two federal air toxics rules. Neither the Generally Available Control Technology (GACT) rule for industrial and institutional boilers nor the Maximum Achievable Control Technology (MACT) rule for electric generating units imposes any requirements for natural gas or propane fired boilers. In developing those rules, USEPA found the public health risks from toxic air pollutants emitted by these types of boilers to be negligible.

DAQ estimates that approximately 150 facilities have sources that may qualify for this proposed threshold-based exemption.

3. **Exempt emergency engines from air toxics permitting when the aggregate capacity of such sources is less than 4,843 horsepower (HP) and those sources are the only sources of formaldehyde at the facility.**

   The DAQ recommends a threshold-based exemption to the air toxics permitting rules for emergency engines. The DAQ recommends defining emergency engines consistently with how USEPA has defined them in 40 CFR 63, Subpart ZZZZ. These engines are designed for use in emergency situations to produce power for critical equipment when the normal power source is interrupted, or pump water in the case of a fire, flood or other emergency situation. As a result, the engines are used infrequently and generally operate less than 50 hours per year. The DAQ's analysis of emergency engines indicates that emergency engines below 4,843 horsepower do not exceed the TPERs for any toxic air pollutant. An emergency engine above that horsepower threshold has the potential to exceed the hourly TPER for formaldehyde. Since total emissions at a facility with multiple emergency engines or other sources of formaldehyde may exceed the TPER, DAQ proposes to limit the exemption to emergency engines that: 1) represent the only source of formaldehyde at a facility; and 2) in the aggregate, total less than 4,843 horsepower. The DAQ estimates that approximately 150 facilities have sources that may qualify for this exemption.

4. **Do not retain the Standard Industrial Classification (SIC) Call rule.**

   The air toxics rules provide a mechanism for the DAQ director to require all facilities under the same four-digit Standard Industrial Classification (SIC) to submit an application to comply with the air toxics rules. The DAQ does not believe it is necessary

to retain this capability since the existing Director's Call rule and S.L. 2012-91 provide adequate authority to address any unacceptable risks to human health from any facility.

5. **Clarify the use of actual rate of emissions in the air toxics rules.**

   The DAQ recommends the use of the term "actual rate of emissions" as defined in 15A NCAC 02Q .0703 for purposes of determining whether a permit to emit toxic air pollutants is required. This term is used in several of the air toxics rules when describing the air toxics permitting process. However, it is not clear in rule 15A NCAC 02Q .0711 where a reference to permitted rate of emissions exists. DAQ recommends clarifying in rule 15A NCAC 02Q .0711, that any facility's "actual rate of emissions" is to be used when comparing to the toxic air pollutant permitting emissions rates (TPER).

6. **Remove the term "unadulterated wood" from the air toxics rules.**

   The DAQ recommends simplifying the air toxics rules by removing the term "unadulterated wood." The term is used in the definition of combustion sources in 15A NCAC 02Q .0703. The DAQ does not believe it is necessary to retain a distinction between types of wood when defining combustion sources. The federal regulations that were published on March 21, 2011, that classify any combusted material (including wood) as either a fuel or solid waste make further distinctions in the state rules unnecessary.

The DAQ plans to initiate the administrative rule-making process in January 2013 to incorporate the changes outlined above and exemptions included in Section 1 of S.L. 2012-91.

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2011

SESSION LAW 2012-91
HOUSE BILL 952

AN ACT TO EXEMPT FROM STATE AIR TOXICS EMISSIONS CONTROLS THOSE SOURCES OF EMISSIONS THAT ARE SUBJECT TO CERTAIN FEDERAL EMISSIONS REQUIREMENTS, TO DIRECT THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES TO REQUIRE PERMIT CONDITIONS THAT ELIMINATE UNACCEPTABLE RISKS TO HUMAN HEALTH, TO DIRECT THE DIVISION OF AIR QUALITY TO REVIEW THE STATE AIR TOXICS PROGRAM, AND TO REQUIRE REPORTS ON THE IMPLEMENTATION OF THIS ACT, AS RECOMMENDED BY THE ENVIRONMENTAL REVIEW COMMISSION.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 143-215.107(a) reads as rewritten:

"(a) Duty to Adopt Plans, Standards, etc. – The Commission is hereby directed and empowered, as rapidly as possible within the limits of funds and facilities available to it, and subject to the procedural requirements of this Article and Article 21:

…

(5) To develop and adopt emission control standards as in the judgment of the Commission may be necessary to prohibit, abate, or control air pollution commensurate with established air quality standards. ~~This subdivision does not apply to that portion of the National Emission Standards for Hazardous Air Pollutants for asbestos that governs demolition and renovation as set out in 40 C.F.R. § 61.141, 61.145, 61.150, and 61.154 (1 July 1993 edition).~~The Department shall implement rules adopted pursuant to this subsection as follows:

a. Except as provided in sub-subdivision b. of this subdivision, rules adopted pursuant to this subdivision that control emissions of toxic air pollutants shall not apply to an air emission source that is any of the following:

1. Subject to an applicable requirement under 40 C.F.R. Part 61, as amended.
2. An affected source under 40 C.F.R. Part 63, as amended.
3. Subject to a case-by-case maximum achievable control technology (MACT) permit requirement issued by the Department pursuant to 42 U.S.C. § 7412(j), as amended.

b. Upon receipt of a permit application for a new source or facility, or for the modification of an existing source or facility, that would result in an increase in the emission of toxic air pollutants, the Department shall review the application to determine if the emission of toxic air pollutants from the source or facility would present an unacceptable risk to human health. Upon making a written finding that a source or facility presents or would present an unacceptable risk to human health, the Department shall require the owner or operator of the source or facility to submit a permit application for any or all emissions of toxic air pollutants from the facility that eliminates the unacceptable risk to human health. The written finding may be based on modeling, epidemiological studies, actual monitoring data, or other information that indicates an unacceptable

health risk. When the Department requires the owner or operator of a source or facility to submit a permit application pursuant to this sub-subdivision, the Department shall report to the Chairs of the Environmental Review Commission on the circumstances surrounding the permit requirement, including a copy of the written finding.

…."

SECTION 2. The Environmental Management Commission shall amend its rules adopted pursuant to G.S. 143-215.107(a) so that they are consistent with the provisions of Section 1 of this act.

SECTION 3. The Division of Air Quality of the Department of Environment and Natural Resources shall review toxic air pollutant rules adopted pursuant to G.S. 143-215.107(a) and the implementation of those rules to determine whether changes could be made to the rules or their implementation to reduce unnecessary regulatory burden and increase the efficient use of Division resources while maintaining protection of public health. The Division shall conduct this review in consultation with interested parties. The Division shall report the results of its review, including recommendations, if any, to the Environmental Review Commission no later than December 1, 2012.

SECTION 4. The Division of Air Quality in the Department of Environment and Natural Resources shall report on the implementation of this act to the Environmental Review Commission no later than December 1 for the years 2012, 2013, and 2014. The report shall include an analysis of air toxic emissions changes and a summary of results of the Division's analysis of air quality impacts.

SECTION 5. This act is effective when it becomes law.

In the General Assembly read three times and ratified this the 21st day of June, 2012.

s/ Walter H. Dalton
President of the Senate

s/ Thom Tillis
Speaker of the House of Representatives

s/ Beverly E. Perdue
Governor

Approved 1:34 p.m. this 28th day of June, 2012

SECTION .1100 - CONTROL OF TOXIC AIR POLLUTANTS

15A NCAC 02D .1101 PURPOSE
This Section sets forth the rules for the control of toxic air pollutants to protect human health.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(1),(3),(4),(5); 143B-282; S.L. 1989, c. 168, s. 45; Eff. May 1, 1990.*

15A NCAC 02D .1102 APPLICABILITY

(a) The toxic air pollutant rules in this Section apply to all facilities that emit a toxic air pollutant that are required to have a permit under 15A NCAC 2Q .0700.

(b) Sources at facilities subject to this Section shall comply with the requirements of this Section as well as with any applicable requirements in Sections .0500, .0900, and .1200 of this Subchapter.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(1),(3),(4),(5); 143B-282; S.L. 1989, c. 168, s. 45;*
Eff. May 1, 1990;
Amended Eff. July 1, 1998; December 1, 1991.

15A NCAC 02D .1103 DEFINITION

For the purpose of this Section, the following definitions apply:

(1) "Asbestos" means asbestos fibers as defined in 40 CFR 61.141.

(2) "Bioavailable chromate pigments" means the group of chromium (VI) compounds consisting of calcium chromate (CAS No.13765-19-0), calcium dichromate (CAS No. 14307-33-6), strontium chromate (CAS No. 7789-06-2), strontium dichromate (CAS No. 7789-06-2), zinc chromate (CAS No. 13530-65-9), and zinc dichromate (CAS No. 7789-12-0).

(3) "CAS Number" means the Chemical Abstract Service registry number identifying a particular substance.

(4) "Chromium (VI) equivalent" means the molecular weight ratio of the chromium (VI) portion of a compound to the total molecular weight of the compound multiplied by the associated compound emission rate or concentration at the facility.

(5) "Non-specific chromium (VI) compounds" means the group of compounds consisting of any chromium (VI) compounds not specified in this Section as a bioavailable chromate pigment or a soluble chromate compound.

(6) "Cresol" means o-cresol, p-cresol, m-cresol or any combination of these compounds.

(7) "GACT" means any generally available control technology emission standard applied to an area source or facility pursuant to Section 112 of the federal Clean Air Act.

(8) "Hexane isomers except n-hexane" means 2-methyl pentane, 3-methyl pentane, 2,2-dimethyl butane, 2,3-dimethyl butane, or any combination of these compounds.

(9) "MACT" means any maximum achievable control technology emission standard applied to a source or facility pursuant to Section 112 of the federal Clean Air Act.

(10) "Nickel, soluble compounds" means the soluble nickel salts of chloride ($NiCl_2$, CAS No. 7718-54-9), sulfate ($NiSO_4$, CAS No. 7786-81-4), and nitrate ($Ni(NO_3)_2$, CAS No. 13138-45-9).

(11) "Polychlorinated biphenyls" means any chlorinated biphenyl compound or mixture of chlorinated biphenyl compounds.

(12) "Soluble chromate compounds" means the group of chromium (VI) compounds consisting of ammonium chromate (CAS No. 7788-98-9), ammonium dichromate (CAS No. 7789-09-5), chromic acid (CAS No. 7738-94-5), potassium chromate (CAS No. 7789-00-6), potassium dichromate (CAS No. 7778-50-9), sodium chromate (CAS No. 7775-11-3), and sodium dichromate (CAS No. 10588-01-9).

(13) "Toxic air pollutant" means any of those carcinogens, chronic toxicants, acute systemic toxicants, or acute irritants listed in Rule .1104 of this Section.

History Note: *Authority G.S. 143-213; 143-215.3(a)(1); 143B-282; S.L. 1989, c. 168, s. 45;*
Eff. May 1, 1990;
Amended Eff. April 1, 2001; July 1, 1998.

15A NCAC 02D .1104 TOXIC AIR POLLUTANT GUIDELINES

A facility shall not emit any of the following toxic air pollutants in such quantities that may cause or contribute beyond the premises (adjacent property boundary) to any significant ambient air concentration that may adversely affect human health. In determining these significant ambient air concentrations, the Division shall be guided by the following list of acceptable ambient levels in milligrams per cubic meter at 77° F (25° C) and 29.92 inches (760 mm) of mercury pressure (except for asbestos):

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
acetaldehyde (75-07-0)				27
acetic acid (64-19-7)				3.7
acrolein (107-02-8)				0.08
acrylonitrile (107-13-1)		0.03	1	
ammonia (7664-41-7)				2.7
aniline (62-53-3)			1	
arsenic and inorganic arsenic compounds	2.3×10^{-7}			
asbestos (1332-21-4)	2.8×10^{-11} fibers/ml			
aziridine (151-56-4)		0.006		
benzene (71-43-2)	1.2×10^{-4}			
benzidine and salts (92-87-5)	1.5×10^{-8}			
benzo(a)pyrene (50-32-8)	3.3×10^{-5}			
benzyl chloride (100-44-7)			0.5	
beryllium (7440-41-7)	4.1×10^{-6}			
beryllium chloride (7787-47-5)	4.1×10^{-6}			
beryllium fluoride (7787-49-7)	4.1×10^{-6}			
beryllium nitrate (13597-99-4)	4.1×10^{-6}			
bioavailable chromate pigments, as chromium (VI) equivalent	8.3×10^{-8}			
bis-chloromethyl ether (542-88-1)	3.7×10^{-7}			
bromine (7726-95-6)				0.2
1,3-butadiene (106-99-0)	4.4×10^{-4}			
cadmium (7440-43-9)	5.5×10^{-6}			
cadmium acetate (543-90-8)	5.5×10^{-6}			
cadmium bromide (7789-42-6)	5.5×10^{-6}			
carbon disulfide (75-15-0)		0.186		
carbon tetrachloride (56-23-5)	6.7×10^{-3}			
chlorine (7782-50-5)		0.0375		0.9
chlorobenzene (108-90-7)		2.2		
chloroform (67-66-3)	4.3×10^{-3}			
chloroprene (126-99-8)		0.44	3.5	
cresol (1319-77-3)			2.2	
p-dichlorobenzene (106-46-7)				66
dichlorodifluoromethane (75-71-8)		248		
dichlorofluoromethane (75-43-4)		0.5		
di(2-ethylhexyl)phthalate (117-81-7)		0.03		
dimethyl sulfate (77-78-1)		0.003		
1,4-dioxane (123-91-1)		0.56		

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
epichlorohydrin (106-89-8)	8.3×10^{-2}			
ethyl acetate (141-78-6)			140	
ethylenediamine (107-15-3)		0.3	2.5	
ethylene dibromide (106-93-4)	4.0×10^{-4}			
ethylene dichloride (107-06-2)	3.8×10^{-3}			
ethylene glycol monoethyl ether (110-80-5)		0.12	1.9	
ethylene oxide (75-21-8)	2.7×10^{-5}			
ethyl mercaptan (75-08-1)			0.1	
fluorides		0.016	0.25	
formaldehyde (50-00-0)				0.15
hexachlorocyclopentadiene (77-47-4)		0.0006	0.01	
hexachlorodibenzo-p-dioxin (57653-85-7)	7.6×10^{-8}			
n-hexane (110-54-3)		1.1		
hexane isomers except n-hexane				360
hydrazine (302-01-2)		0.0006		
hydrogen chloride (7647-01-0)				0.7
hydrogen cyanide (74-90-8)		0.14	1.1	
hydrogen fluoride (7664-39-3)		0.03		0.25
hydrogen sulfide (7783-06-4)		0.12		
maleic anhydride (108-31-6)		0.012	0.1	
manganese and compounds		0.031		
manganese cyclopentadienyl tricarbonyl (12079-65-1)		0.0006		
manganese tetroxide (1317-35-7)		0.0062		
mercury, alkyl		0.00006		
mercury, aryl and inorganic compounds		0.0006		
mercury, vapor (7439-97-6)		0.0006		
methyl chloroform (71-55-6)		12		245
methylene chloride (75-09-2)	2.4×10^{-2}		1.7	
methyl ethyl ketone (78-93-3)		3.7		88.5
methyl isobutyl ketone (108-10-1)		2.56		30
methyl mercaptan (74-93-1)			0.05	
nickel carbonyl (13463-39-3)		0.0006		
nickel metal (7440-02-0)		0.006		
nickel, soluble compounds, as nickel		0.0006		
nickel subsulfide (12035-72-2)	2.1×10^{-6}			
nitric acid (7697-37-2)				1
nitrobenzene (98-95-3)		0.06	0.5	
n-nitrosodimethylamine (62-75-9)	5.0×10^{-5}			
non-specific chromium (VI) compounds, as chromium (VI) equivalent	8.3×10^{-8}			
pentachlorophenol (87-86-5)		0.003	0.025	
perchloroethylene (127-18-4)	1.9×10^{-1}			

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
phenol (108-95-2)			0.95	
phosgene (75-44-5)		0.0025		
phosphine (7803-51-2)				0.13
polychlorinated biphenyls (1336-36-3)	8.3×10^{-5}			
soluble chromate compounds, as chromium (VI) equivalent		6.2×10^{-4}		
styrene (100-42-5)			10.6	
sulfuric acid (7664-93-9)		0.012	0.1	
tetrachlorodibenzo-p-dioxin (1746-01-6)	3.0×10^{-9}			
1,1,1,2-tetrachloro-2,2,- difluoroethane (76-11-9)		52		
1,1,2,2-tetrachloro-1,2- difluoroethane (76-12-0)		52		
1,1,2,2-tetrachloroethane (79-34-5)	6.3×10^{-3}			
toluene (108-88-3)		4.7		56
toluene diisocyanate, 2,4- (584-84-9) and 2,6- (91-08-7) isomers		0.0002		
trichloroethylene (79-01-6)	5.9×10^{-2}			
trichlorofluoromethane (75-69-4)			560	
1,1,2-trichloro-1,2,2- trifluoroethane (76-13-1)				950
vinyl chloride (75-01-4)	3.8×10^{-4}			
vinylidene chloride (75-35-4)		0.12		
xylene (1330-20-7)		2.7		65

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(4),(5); 143B-282; S.L. 1989, c. 168, s. 45; Eff. May 1, 1990;*
Amended Eff. September 1, 1992; March 1, 1992;
Temporary Amendment Eff. July 20, 1997;
Amended Eff. March 1, 2010; June 1, 2008; April 1, 2005; April 1, 2001; July 1, 1998.

15A NCAC 02D .1105 FACILITY REPORTING, RECORDKEEPING

The Director may require, according to Section .0600 of this Subchapter, the owner or operator of a source subject to this Section to monitor emissions of toxic air pollutants, to maintain records of these emissions, and to report these emissions. The owner or operator of any toxic air pollutant emission source subject to the requirements of this Section shall comply with the monitoring, recordkeeping, and reporting requirements in Section .0600 of this Subchapter.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4),(5); 143B-282;*
Eff. May 1, 1990;
Amended Eff. April 1, 1999; October 1, 1991.

15A NCAC 02D .1106 DETERMINATION OF AMBIENT AIR CONCENTRATION

(a) Modeling shall not be used for enforcement. Modeling shall be used to determine process operational and air pollution control parameters and emission rates for toxic air pollutants to place in the air quality permit for that facility that will prevent any of the acceptable ambient levels in Rule .1104 of this Section from being exceeded, with such exceptions as may be allowed under 15A NCAC 2Q .0700. Enforcing these permit stipulations and conditions shall be the mechanism used to ensure that the requirements of Rule .1104 of this Section, with such exceptions as may be allowed by 15A NCAC 2Q .0700, are met.

(b) The owner or operator of the facility may request the Division to perform a modeling analysis of the facility or provide the analysis himself. If the owner or operator of the facility requests the Division to perform the modeling analysis, he shall provide emissions rates, stack parameters, and other information that the Division needs to do the modeling. The data that the owner or operator of the facility provides the Division to use in the model or in deriving the data used in the model shall be the process, operational and air pollution control equipment parameters and emission rates that will be contained in the facility=s permit. If the Division=s initial review of the modeling request indicates extensive or inappropriate use of state resources or if the Division=s modeling analysis fails to show compliance with the acceptable ambient levels in Rule .1104 of this Section, the modeling demonstration becomes the responsibility of the owner or operator of the facility.

(c) When the owner or operator of the facility is responsible for providing the modeling demonstration and the data used in the modeling, the owner or operator of the facility shall use in the model or in deriving data used in the model the process operational and air pollution control equipment parameters and emission rates that will be contained in his permit. Sources that are not required to be included in the model will not be included in the permit to emit toxic air pollutants.

(d) For the following pollutants, modeled emission rates shall be based on the highest emissions occurring in any single 15 minute period. The resultant modeled 1-hour concentrations shall then be compared to the applicable 1-hour acceptable ambient levels to determine compliance. These pollutants are:

(1) acetaldehyde (75-07-0)
(2) acetic acid (64-19-7)
(3) acrolein (107-02-8)
(4) ammonia (7664-41-7)
(5) bromine (7726-95-6)
(6) chlorine (7782-50-5)
(7) formaldehyde (50-00-0)
(8) hydrogen chloride (7647-01-0)
(9) hydrogen fluoride (7664-39-3)
(10) nitric acid (7697-37-2)

(e) The owner or operator of the facility and the Division may use any model allowed by 40 CFR 51.166(l) provided that the model is appropriate for the facility being modeled. The owner or operator or the Division may use a model other than one allowed by 40 CFR 51.166(l) provided that the Director determines that the model is equivalent to the model allowed by 40 CFR 51.166(l). Regardless of model used, the owner or operator and the Division shall model for cavity effects and shall comply with the modeling requirements for stack height set out in Rule .0533 of this Subchapter.

(f) Ambient air concentrations are to be evaluated for annual periods over a calendar year, for 24-hour periods from midnight to midnight, and for one-hour periods beginning on the hour.

(g) The owner or operator of the facility shall identify each toxic air pollutant emitted and its corresponding emission rate using mass balancing analysis, source testing, or other methods that the Director may approve as providing an equivalently accurate estimate of the emission rate.

(h) The owner or operator of the facility shall submit a modeling plan to the Director and shall have received approval of that plan from the before submitting a modeling demonstration to the Director. The modeling plan shall include:

(1) a diagram of the plant site, including locations of all stacks and associated buildings;
(2) on-site building dimensions;
(3) a diagram showing property boundaries, including a scale, key and north indicator;
(4) the location of the site on a United States Geological Survey (USGS) map;
(5) discussion of good engineering stack height and building wake effects for each stack;
(6) discussion of cavity calculations, impact on rolling and complex terrain, building wake effects, and urban/rural considerations;
(7) discussion of reasons for model selection;
(8) discussion of meteorological data to be used;
(9) discussion of sources emitting the pollutant that are not to be included in the model with an explanation of why they are being excluded (i.e. why the source will not affect the modeling analysis); and

(10) any other pertinent information.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(5); 143B-282; S.L. 1989, c. 168, s. 45; Eff. May 1, 1990;*
Amended Eff. July 1, 1998.

15A NCAC 02D .1107 MULTIPLE FACILITIES

(a) If an acceptable ambient level in Rule .1104 of this Section is exceeded because of emissions of two or more facilities and if public exposure is such that the commission has evidence that human health may be adversely affected, then the Commission shall require the subject facilities to apply addition controls or to otherwise reduce emissions. The type of evidence that the Commission shall consider shall include one or more of the following:

(1) emission inventory,
(2) ambient monitoring,
(3) modeling, or
(4) epidemiological study.

(b) The allocation of the additional reductions shall be based on the relative contributions to the pollutant concentrations unless the owners or operators agree otherwise.

(c) The owner or operator of a facility shall not be required to conduct the multi-facility ambient impact analysis described in Paragraph (a) of this Rule. This type of analysis shall be done by the Division of Air Quality. In performing its analysis, the Division shall:

(1) develop a modeling plan that includes the elements set out in Paragraph (f) of Rule .1106 of this Section;
(2) use for the source modeling parameters, the modeling parameters used by the owner or operator of the source in his modeling demonstration, or if a modeling demonstration has not been done or if a needed parameter has not been used in the modeling demonstration, parameters contained in, or derived from data contained in, the source's permit;
(3) use a model allowed by Paragraph (c) of Rule .1106 of this Section;
(4) model for cavity effects and comply with the modeling requirements for stack height set out in Rule .0533 of this Section;
(5) use the time periods required by Paragraph (d) of Rule .1106 of this Section; and
(6) only consider impacts of a facility=s emissions beyond the premises of that facility.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(5); 143B-282;*
Eff. May 1, 1990;
Amended Eff. July 1, 1998.

15A NCAC 02D .1108 MULTIPLE POLLUTANTS

If the Commission has evidence that two or more toxic air pollutants being emitted from a facility or combination of facilities act in the same way to affect human health so that their effects may be additive or enhanced and that public exposure is such that human health may be adversely affected, then the Commission will consider developing acceptable ambient levels for the combination of toxic air pollutants or other appropriate control measures.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(5); 143B-282; Eff. May 1, 1990.*

15A NCAC 02D .1109 112(J) CASE-BY-CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

(a) Applicability. This Rule applies only to sources of hazardous air pollutants required to have a permit under 15A NCAC 02Q .0500 and as described in 40 CFR 63.50. This Rule does not apply to research or laboratory activities as defined in Paragraph (b) of this Rule.

(b) Definitions. For the purposes of this Rule, the definitions in 40 CFR 63.2, 63.51, 15A NCAC 02Q .0526, and the following definitions apply:

(1) "Affected source" means the collection of equipment, activities, or both within a single contiguous area and under common control that is in a Section 112(c) source category or subcategory that the Administrator has failed to promulgate an emission standard by the Section 112(j) deadline, and that is addressed by an applicable MACT emission limitation established pursuant to 40 CFR Part 63 Subpart B;

(2) "Control technology" means measures, processes, methods, systems, or techniques to limit the emission of hazardous air pollutants including measures that:
- (A) reduce the quantity, or eliminate emissions, of such pollutants through process changes, substitution of materials, or other modifications;
- (B) enclose systems or processes to eliminate emissions;
- (C) collect, capture, or treat such pollutants when released from a process, stack, storage, or fugitive emission point;
- (D) are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in 42 USC 7412(h); or
- (E) are a combination of Parts (A) through (D) of this definition.

(3) "EPA" means the United States Environmental Protection Agency or the Administrator of U.S. Environmental Protection Agency.

(4) "Hazardous air pollutant" means any pollutant listed under Section 112(b) of the federal Clean Air Act.

(5) "MACT" means maximum achievable control technology.

(6) "Maximum achievable control technology" means:
- (A) for existing sources,
  - (i) a MACT standard that EPA has proposed or promulgated for a particular category of facility or source,
  - (ii) the average emission limitation achieved by the best performing 12 percent of the existing facilities or sources for which EPA has emissions information if the particular category of source contains 30 or more sources, or
  - (iii) the average emission limitation achieved by the best performing five facilities or sources for which EPA has emissions information if the particular category of source contains fewer than 30 sources, or
- (B) for new sources, the maximum degree of reduction in emissions that is deemed achievable but not less stringent than the emission control that is achieved in practice by the best controlled similar source.

(7) "MACT floor" means:
- (A) for existing sources:
  - (i) the average emission limitation achieved by the best performing 12 percent of the existing sources (for which EPA has emissions information) excluding those sources that have, within 18 months before the emission standard is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction which complies, or would comply if the source is not subject to such standard, with the lowest achievable emission rate (as defined in Section 171 of the federal Clean Air Act) applicable to the source category or subcategory for categories and subcategories with 30 or more sources; or
  - (ii) the average emission limitation achieved by the best performing five sources (for which EPA has emissions or could reasonably obtain emissions information) , in the category or subcategory, for categories or subcategories with fewer than 30 sources;
- (B) for new sources, the emission limitation achieved in practice by the best controlled similar source.

(8) "New affected source" means the collection of equipment, activities, or both, that constructed after the issuance of a Section 112(j) permit for the source pursuant to 40 CFR 63.52, is subject to the applicable MACT emission limitation for new sources. Each permit shall define the term "new affected source," that will be the same as the "affected source" unless a different collection is warranted based on consideration of factors including:
  (A) Emission reduction impacts of controlling individual sources versus groups of sources;
  (B) Cost effectiveness of controlling individual equipment;
  (C) Flexibility to accommodate common control strategies;
  (D) Cost/benefits of emissions averaging;
  (E) Incentives for pollution prevention;
  (F) Feasibility and cost of controlling processes that share common equipment (e.g., product recovery devices); and
  (G) Feasibility and cost of monitoring,.

(9) "New facility" means a facility for which construction is commenced after the Section 112(j) deadline, or after proposal of a relevant standard under Section 112(d) or (h) of the Federal Clean Air Act, whichever comes first.

(10) "Research or laboratory activities" means activities whose primary purpose is to conduct research and development into new processes and products; where such activities are operated under the supervision of technically trained personnel and are not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner; and where the source is not in a source category specifically addressing research or laboratory activities, that is listed pursuant to Section 112(c)(7) of the Clean Air Act.

(11) "Section 112(j) deadline" means the date 18 months after the date for which a relevant standard is scheduled to be promulgated under 40 CFR Part 63, except that for all major sources listed in the source category schedule for which a relevant standard is scheduled to be promulgated by November 15, 1994, the Section 112(j) deadline is November 15, 1996, and for all major sources listed in the source category schedule for which a relevant standard is scheduled to be promulgated by November 15, 1997, the Section 112(j) deadline is December 15, 1999.

(12) "Similar source" means that equipment or collection of equipment that, by virtue of its structure, operability, type of emissions and volume and concentration of emissions, is substantially equivalent to the new affected source and employs control technology for control of emissions of hazardous air pollutants that is practical for use on the new affected source.

(c) Missed promulgation dates: 112(j). If EPA fails to promulgate a standard for a category of source under Section 112 of the Federal Clean Air Act by the date established pursuant to Sections 112(e)(1) or (3) of the federal Clean Air Act, the owner or operator of any source in such category shall submit, within 18 months after such date, a permit application, in accordance with the procedures in 15A NCAC 02Q .0526, to the Director and to EPA to apply MACT to such sources. Sources subject to this Paragraph shall be in compliance with this Rule within three years from the date that the permit is issued.

(d) New facilities. The owner or operator of any new facility that is a major source of hazardous air pollutants (HAP) that is subject to this Rule shall apply MACT in accordance with the provisions of Rule .1112 of this Section, 15A NCAC 02Q .0528, and 02Q .0526(e)(2).

(e) Case-by-case MACT determination. The Director shall determine MACT according to 40 CFR 63.55(a).

(f) Monitoring and recordkeeping. The owner or operator of a source subject to this Rule shall install, operate, and maintain monitoring capable of detecting deviations from each applicable emission limitation or other standards with sufficient reliability and timeliness to determine continuous compliance over the applicable reporting period. Such monitoring data may be used as a basis for enforcing emissions limitations established under this Rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5), (10);*
Temporary Adoption Eff. March 8, 1994 for a period of 180 days or until the permanent rule is effective, whichever is sooner;
Eff. July 1, 1994;
Amended Eff. February 1, 2004; July 1, 1998; July 1, 1996.

15A NCAC 02D .1110 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

(a) With the exception of Paragraph (b) of this Rule, sources subject to national emission standards for hazardous air pollutants promulgated in 40 CFR Part 61 shall comply with emission standards, monitoring and reporting requirements, maintenance requirements, notification and record keeping requirements, performance test requirements, test method and procedural provisions, and any other provisions, as required therein, rather than with any otherwise-applicable Rule in Section .0500 of this Subchapter that would be in conflict therewith.

(b) Along with the notice appearing in the North Carolina Register for a public hearing to amend this Rule to exclude a standard from this Rule, the Director shall state whether or not the national emission standards for hazardous air pollutants promulgated under 40 CFR Part 61, or part thereof, shall be enforced. If the Commission does not adopt the amendment to this Rule to exclude or amend the standard within 12 months after the close of the comment period on the proposed amendment, the Director shall begin enforcing that standard when 12 months has elapsed after the end of the comment period on the proposed amendment.

(c) New sources of volatile organic compounds that are located in an area designated in 40 CFR 81.334 as nonattainment for ozone or an area identified in accordance with 15A NCAC 02D .0902 as in violation of the ambient air quality standard for ozone shall comply with the requirements of 40 CFR Part 61 that are not excluded by this Rule, as well as with any applicable requirements in Section .0900 of this Subchapter.

(d) All requests, reports, applications, submittals, and other communications to the administrator required under Paragraph (a) of this Rule shall be submitted to the Director of the Division of Air Quality rather than to the Environmental Protection Agency; except that all such reports, applications, submittals, and other communications to the administrator required by 40 CFR 61.145 shall be submitted to the Director, Division of Epidemiology.

(e) In the application of this Rule, definitions contained in 40 CFR Part 61 shall apply rather than those of Section .0100 of this Subchapter.

(f) 15A NCAC 02Q .0102 and .0302 are not applicable to any source to which this Rule applies. The owner or operator of the source shall apply for and receive a permit as required in 15A NCAC 02Q .0300 or .0500.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107 (a)(5); 150B-21.6;*
Eff. July 1, 1996;
Amended Eff. June 1, 2008; July 1, 1997.

15A NCAC 02D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

(a) With the exception of Paragraph (b) or (c) of this Rule, sources subject to national emission standards for hazardous air pollutants for source categories promulgated in 40 CFR Part 63 shall comply with emission standards, monitoring and reporting requirements, maintenance requirements, notification and record keeping requirements, performance test requirements, test method and procedural provisions, and any other provisions, as required therein, rather than with any otherwise-applicable rule in Section .0500 of this Subchapter which would be in conflict therewith.

(b) The following are not included under this Rule:

(1) approval of state programs and delegation of federal authorities (40 CFR 63.90 to 63.96, Subpart E); and

(2) requirements for control technology determined for major sources in accordance with Clean Air Act Sections 112(g) and 112(j) (40 CFR 63.50 to 63.57, Subpart B).

(c) Along with the notice appearing in the North Carolina Register for a public hearing to amend this Rule to exclude a standard from this Rule, the Director shall state whether or not the national emission standard for hazardous air pollutants for source categories promulgated under 40 CFR Part 63, or part thereof, shall be enforced. If the Commission does not adopt the amendment to this Rule to exclude or amend the standard within 12 months after the close of the comment period on the proposed amendment, the Director shall begin enforcing that standard when 12 months has elapsed after the end of the comment period on the proposed amendment.

(d) New sources of volatile organic compounds that are located in an area designated in 40 CFR 81.334 as nonattainment for ozone or an area identified in accordance with 15A NCAC 02D .0902 as being in violation of the ambient air quality standard for ozone shall comply with the requirements of 40 CFR Part 63 that are not excluded by this Rule as well as with any applicable requirements in Section .0900 of this Subchapter.

(e) All requests, reports, applications, submittals, and other communications to the administrator required under Paragraph (a) of this Rule shall be submitted to the Director of the Division of Air Quality rather than to the Environmental Protection Agency; except that all such reports, applications, submittals, and other communications to the administrator required by 40 CFR Part 63, Subpart M for dry cleaners covered under Chapter 143, Article 21A, Part 6 of the General Statutes shall be submitted to the Director of the Division of Waste Management.

(f) In the application of this Rule, definitions contained in 40 CFR Part 63 shall apply rather than those of Section .0100 of this Subchapter when conflict exists.

(g) 15A NCAC 02Q .0102 and .0302 are not applicable to any source to which this Rule applies if the source is required to be permitted under 15A NCAC 02Q .0500, Title V Procedures. The owner or operator of the source shall apply for and receive a permit as required in 15A NCAC 02Q .0300 or .0500. Sources that have heretofore been exempted from needing a permit and become subject to requirements promulgated under 40 CFR 63 shall apply for a permit in accordance to 15A NCAC 02Q .0109.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 150B-21.6;*
Eff. July 1, 1996;
Amended Eff. January 1, 2007; April 1, 1997.

15A NCAC 02D .1112 112(G) CASE BY CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

(a) Applicability. This Rule applies to the construction or reconstruction of major sources of hazardous air pollutants unless:
- (1) the major source has been specifically regulated or exempted from regulation under:
  - (A) Rule .1109 or .1111 of this Section; or
  - (B) a standard issued pursuant to Section 112(d), 112(h), or 112(j) of the federal Clean Air Act and incorporated in another Subpart of 40 CFR Part 63; or
- (2) the owner or operator of such major source has received all necessary air quality permits for such construction or reconstruction project before July 1, 1998.

(b) Exclusions. The requirements of this Rule shall not apply to:
- (1) electric utility steam generating units unless and until such time as these units are added to the source category list pursuant to Section 112(c)(5) of the federal Clean Air Act.
- (2) stationary sources that are within a source category that has been deleted from the source category list pursuant to Section 112(c)(9) of the federal Clean Air Act.
- (3) research and development activities.

(c) Definitions. For the purposes of this Rule, the following definitions apply:
- (1) "Affected source" means the stationary source or group of stationary sources that, when fabricated (on site), erected, or installed meets the definition of "construct a major source" or the definition of "reconstruct a major source" contained in this Paragraph.
- (2) "Affected States" means all States or local air pollution agencies whose areas of jurisdiction are:
  - (A) contiguous to North Carolina and located less than D=Q/12.5 from the facility, where:
    - (i) Q = emissions of the pollutant emitted at the highest permitted rate in tons per year, and
    - (ii) D = distance from the facility to the contiguous state or local air pollution control agency in miles; or
  - (B) within 50 miles of the permitted facility.
- (3) "Available information" means, for purposes of identifying control technology options for the affected source, information contained in the following information sources as of the date of approval of the MACT determination by the Division:
  - (A) a relevant proposed regulation, including all supporting information;
  - (B) background information documents for a draft or proposed regulation;
  - (C) data and information available from the Control Technology Center developed pursuant to Section 113 of the federal Clean Air Act;
  - (D) data and information contained in the Aerometric Informational Retrieval System including information in the MACT data base;
  - (E) any additional information that can be expeditiously provided by the Division and EPA; and
  - (F) for the purpose of determinations by the Division, any additional information provided by the applicant or others, and any additional information considered available by the Division.
- (4) "Construct a major source" means:
  - (A) To fabricate, erect, or install at any greenfield site a stationary source or group of stationary sources which is located within a contiguous area and under common control and which emits or has the potential to emit 10 tons per year of any HAP's or 25 tons per year of any combination of HAP, or
  - (B) To fabricate, erect, or install at any developed site a new process or production unit which in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, unless the process or production unit satisfies Subparts (i) through (vi) of this Paragraph:
    - (i) All HAP emitted by the process or production unit that would otherwise be controlled under the requirements of this Rule will be controlled by emission control equipment which was previously installed at the same site as the process or production unit;
    - (ii) The Division:
      - (I) has determined within a period of five years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented best available control technology (BACT) under Rule .0530 of this Subchapter or lowest achievable emission rate (LAER) under Rule .0531 of this Subchapter for the category of pollutants which includes those HAP's to be emitted by the process or production unit; or

(II) determines that the control of HAP emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (i.e., equivalent to the level of control that would be provided by a current BACT, LAER, or MACT determination under Rule .1109 of this Section);

(iii) The Division determines that the percent control efficiency for emissions of HAP from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit;

(iv) The Division has provided notice and an opportunity for public comment concerning its determination that criteria in Subparts (i), (ii), and (iii) of this Subparagraph apply and concerning the continued adequacy of any prior LAER, BACT, or MACT determination under Rule .1109 of this Section;

(v) If any commenter has asserted that a prior LAER, BACT, or MACT determination under Rule .1109 of this Section determination is no longer adequate, the Division has determined that the level of control required by that prior determination remains adequate; and

(vi) Any emission limitations, work practice requirements, or other terms and conditions upon which the above determinations by the Division are predicated will be construed by the Division as applicable requirements under Section 504(a) of the federal Clean Air Act and either have been incorporated into an existing permit issued under 15A NCAC 2Q .0500 for the affected facility or will be incorporated into such permit upon issuance.

(5) "Control technology" means measures, processes, methods, systems, or techniques to limit the emission of hazardous air pollutants including measures that:

(A) reduce the quantity of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications;

(B) enclose systems or processes to eliminate emissions;

(C) collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point;

(D) are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in 42 U.S.C. 7412(h); or

(E) are a combination of Parts (A) through (D) of this definition.

(6) "Electric utility steam generating unit" means any fossil fuel fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A unit that co-generates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electric output to any utility power distribution system for sale shall be considered an electric utility steam generating unit.

(7) "Greenfield site" means a contiguous area under common control that is an undeveloped site.

(8) "HAP" means hazardous air pollutants.

(9) "Hazardous air pollutant" means any pollutant listed under Section 112(b) of the federal Clean Air Act.

(10) "List of source categories" means the source category list required by Section 112(c) of the federal Clean Air Act.

(11) "MACT" means maximum achievable control technology.

(12) "Maximum achievable control technology emission limitation for new sources" means the emission limitation which is not less stringent than the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in emissions that the permitting authority, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by the constructed or reconstructed major source.

(13) "Process or production unit" means any collection of structures or equipment, that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one process or production unit.

(14) "Reconstruct a major source" means the replacement of components at an existing process or production unit that in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, whenever:

(A) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable process or production unit; and

(B) It is technically and economically feasible for the reconstructed major source to meet the applicable maximum achievable control technology emission limitation for new sources established under this Subpart.

(15) "Research and development activities" means activities conducted at a research or laboratory facility whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a de minimis manner.

(16) "Similar source" means a stationary source or process that has comparable emissions and is structurally similar in design and capacity to a constructed or reconstructed major source such that the source could be controlled using the same control technology.

(d) Principles of MACT determinations. The following general principles shall be used to make a case-by-case MACT determination concerning construction or reconstruction of a major source under this Rule:

(1) The MACT emission limitation or MACT requirements recommended by the applicant and approved by the Division shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Division.

(2) Based upon available information, the MACT emission limitation and control technology (including any requirements under Subparagraph (3) of this Paragraph) recommended by the applicant and approved by the Division shall achieve the maximum degree of reduction in emissions of HAP that can be achieved by utilizing those control technologies that can be identified from the available information, taking into consideration the costs of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements associated with the emission reduction.

(3) The owner or operator may recommend a specific design, equipment, work practice, or operational standard, or a combination thereof, and the Director may approve such a standard if the Division specifically determines that it is not feasible to prescribe or enforce an emission limitation under the criteria set forth in Section 112(h)(2) of the federal Clean Air Act.

(4) If the EPA has either proposed a relevant emission standard pursuant to Section 112(d) or 112(h) of the federal Clean Air Act or adopted a presumptive MACT determination for the source category that includes the constructed or reconstructed major source, then the MACT requirements applied to the constructed or reconstructed major source shall have considered those MACT emission limitations and requirements of the proposed standard or presumptive MACT determination.

(e) Effective date of MACT determination. The effective date of a MACT determination shall be the date of issuance of a permit under procedures of 15A NCAC 2Q .0300 or .0500 incorporating a MACT determination.

(f) Compliance date. On and after the date of start-up, a constructed or reconstructed major source that is subject to the requirements of this Rule shall be in compliance with all applicable requirements specified in the MACT determination.

(g) Compliance with MACT determinations. The owner or operator of a constructed or reconstructed major source that:

(1) is subject to a MACT determination shall comply with all requirements set forth in the permit issued under 15A NCAC 2Q .0300 or .0500, including any MACT emission limitation or MACT work practice standard, and any notification, operation and maintenance, performance testing, monitoring, reporting, and recordkeeping requirements; or

(2) has obtained a MACT determination shall be deemed to be in compliance with Section 112(g)(2)(B) of the federal Clean Air Act only to the extent that the constructed or reconstructed major source is in compliance with all requirements set forth in the permit issued under 15A NCAC 2Q .0300 or .0500. Any violation of such requirements by the owner of operator shall be deemed by the Division and by EPA to be a violation of the prohibition on construction or reconstruction in Section 112(g)(2)(B) of the federal Clean Air Act for whatever period the owner or operator is determined to be in violation of such requirements, and shall subject the owner or operator to appropriate enforcement action under the General Statutes and the federal Clean Air Act.

(h) Requirements for constructed or reconstructed major sources subject to a subsequently promulgated MACT standard or MACT requirement. If EPA promulgates an emission standard under Section 112(d) or 112(h) of the federal Clean Air Act or the Division issues a determination under Rule .1109 of this Section that is applicable to a stationary source or group of sources that would be deemed to be a constructed or reconstructed major source under this Rule:

(1) before the date that the owner or operator has obtained a final and legally effective MACT determination under 15A NCAC 2Q .0300 or .0500, the owner or operator of the source(s) shall comply with the

promulgated standard or determination rather than any MACT determination under this Rule by the compliance date in the promulgated standard; or

(2) after the source has been subject to a prior case-by-case MACT under this Rule, and the owner or operator obtained a final and legally effective case-by-case MACT determination prior to the promulgation date of such emission standard, the Division shall (if the initial permit has not yet been issued under 15A NCAC 2Q .0500) issue an initial permit that incorporates the emission standard or determination, or shall (if the initial permit has been issued under 15A NCAC 2Q .0500) revise the permit according to the reopening procedures in 15A NCAC 2Q .0517, Reopening for Cause, whichever is relevant, to incorporate the emission standard or determination.

(i) Compliance with subsequent 112(d), 112(h),or 112(j) standards. EPA may include in the emission standard established under Section 112(d) or 112(h) of the federal Clean Air Act a specific compliance date for those sources that have obtained a final and legally effective MACT determination under this Rule and that have submitted the information required by 40 CFR 63.43 to EPA before the close of the public comment period for the standard established under section 112(d) of the federal Clean Air Act. Such date shall assure that the owner or operator shall comply with the promulgated standard as expeditiously as practicable, but not longer than eight years after such standard is promulgated. In that event, the Division shall incorporate the applicable compliance date in the permit issued under 15A NCAC 2Q .0500. If no compliance date has been established in the promulgated 112(d) or 112(h) standard or determination under Rule .1109 of this Section, for those sources that have obtained a final and legally effective MACT determination under this Rule, then the Director shall establish a compliance date in the permit that assures that the owner or operator shall comply with the promulgated standard or determination as expeditiously as practicable, but not longer than eight years after such standard is promulgated or a determination is made under Rule .1109 of this Section.

(j) Revision of permit to incorporate less stringent control. Notwithstanding the requirements of Paragraph (h) of this Rule, if the Administrator of EPA promulgates an emission standard under Section 112(d) or Section 112(h) of the federal Clean Air Act or the Division issues a determination under Rule .1109 of this Section that is applicable to a stationary source or group of sources that was deemed to be a constructed or reconstructed major source under this Rule and that is the subject of a prior case-by-case MACT determination pursuant to 40 CFR 63.43, and the level of control required by the emission standard issued under Section 112(d) or 112(h) or the determination issued under Rule .1109 of this Section is less stringent than the level of control required by any emission limitation or standard in the prior MACT determination, the Division is not required to incorporate any less stringent terms of the promulgated standard in the permit issued under 15A NCAC 2Q .0500 applicable to such source(s) and may consider any more stringent provisions of the prior MACT determination to be applicable legal requirements when issuing or revising such an operating permit.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5),(10);*
Eff. July 1, 1998.

SECTION .0700 - TOXIC AIR POLLUTANT PROCEDURES

15A NCAC 02Q .0701 APPLICABILITY

(a) With the exceptions in Rule .0702 of this Section, no person shall cause or allow any toxic air pollutant named in 15A NCAC 02D .1104 to be emitted from any facility into the atmosphere at a rate that exceeds the applicable rate(s) in Rule .0711 of this Section without having received a permit to emit toxic air pollutants as follows:

(1) new facilities according to Rule .0704 of this Section;
(2) existing facilities according to Rule .0705 of this Section;
(3) modifications according to Rule .0706 of this Section.

(b) The Division shall assess risks from all existing exempt combustion sources using exposure and risk assessment methodologies and information and report findings to the EMC no later than July 1, 2014, and every five years thereafter. Based on these findings, the EMC shall determine if amendments to this Section are appropriate and necessary.

(c) Facilities required to comply with MACT standards under 15A NCAC 02D .1109, .1111, or .1112 or 40 CFR Part 63 shall be deemed in compliance with this Subchapter and 15A NCAC 02D .1100 unless the Division determines that modeled emissions result in one or more acceptable ambient levels in 15A NCAC 02D .1104 being exceeded. This review shall be made according to the procedures in 15A NCAC 02D .1106. Once a facility demonstrates compliance with the acceptable ambient levels in 15A NCAC 02D .1104, future demonstrations shall only be required on a five-year basis. When an acceptable ambient level for a toxic air pollutant in 15A NCAC 02D .1104 is changed, any condition that has previously been put in a permit to protect the previous acceptable ambient level for that toxic air pollutant shall not be changed until the permit is renewed, at which time the owner or operator of the facility shall submit an air toxic evaluation showing that the new acceptable ambient level will not be exceeded.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 2H .0610;
Eff. July 1, 1998;
Amended Eff. July 10, 2010; February 1, 2005.

15A NCAC 02Q .0702 EXEMPTIONS

(a) A permit to emit toxic air pollutants shall not be required under this Section for:

(1) residential wood stoves, heaters, or fireplaces;

(2) hot water heaters that are used for domestic purposes only and are not used to heat process water;

(3) maintenance, structural changes, or repairs that do not change capacity of that process, fuel-burning, refuse-burning, or control equipment, and do not involve any change in quality or nature or increase in quantity of emission of any regulated air pollutant or toxic air pollutant;

(4) housekeeping activities or building maintenance procedures, including painting buildings, resurfacing floors, roof repair, washing, portable vacuum cleaners, sweeping, use and associated storage of janitorial products, or non-asbestos bearing insulation removal;

(5) use of office supplies, supplies to maintain copying equipment, or blueprint machines;

(6) paving parking lots;

(7) replacement of existing equipment with equipment of the same size, type, and function if the new equipment:

(A) does not result in an increase to the actual or potential emissions of any regulated air pollutant or toxic air pollutant;

(B) does not affect compliance status; and

(C) fits the description of the existing equipment in the permit, including the application, such that the replacement equipment can be operated under that permit without any changes to the permit;

(8) comfort air conditioning or comfort ventilation systems that do not transport, remove, or exhaust regulated air pollutants to the atmosphere;

(9) equipment used for the preparation of food for direct on-site human consumption;

(10) non-self-propelled non-road engines, except generators, regulated by rules adopted under Title II of the federal Clean Air Act;

(11) stacks or vents to prevent escape of sewer gases from domestic waste through plumbing traps;

(12) use of fire fighting equipment;

(13) the use for agricultural operations by a farmer of fertilizers, pesticides, or other agricultural chemicals containing one or more of the compounds listed in 15A NCAC 02D .1104 if such compounds are applied according to agronomic practices acceptable to the North Carolina Department of Agriculture;

(14) asbestos demolition and renovation projects that comply with 15A NCAC 02D .1110 and that are being done by persons accredited by the Department of Health and Human Services under the Asbestos Hazard Emergency Response Act;

(15) incinerators used only to dispose of dead animals or poultry as identified in 15A NCAC 02D .1201(c)(4) or incinerators used only to dispose of dead pets as identified in 15A NCAC 02D .1208(a)(2)(A);

(16) refrigeration equipment that is consistent with Section 601 through 618 of Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, 40 CFR Part 82, and any other regulations promulgated by EPA under Title VI for stratospheric ozone protection, except those units used as or with air pollution control equipment;

(17) laboratory activities:

(A) bench-scale, on-site equipment used exclusively for chemical or physical analysis for quality control purposes, staff instruction, water or wastewater analyses, or non-production environmental compliance assessments;

(B) bench scale experimentation, chemical or physical analyses, training or instruction from nonprofit, non-production educational laboratories;

(C) bench scale experimentation, chemical or physical analyses, training or instruction from hospital or health laboratories pursuant to the determination or diagnoses of illnesses; and

(D) research and development laboratory activities that are not required to be permitted under Section .0500 of this Subchapter provided the activity produces no commercial product or feedstock material;

(18) combustion sources as defined in 15A NCAC 02Q .0703 except new or modified combustion sources permitted on or after July 10, 2010.

The DAQ shall review and recommend to the EMC no later than July 1, 2014, and every five years thereafter, whether the exemption shall remain in place or be removed.

(19) storage tanks used only to store:
  (A) inorganic liquids with a true vapor pressure less than 1.5 pounds per square inch absolute;
  (B) fuel oils, kerosene, diesel, crude oil, used motor oil, lubricants, cooling oils, natural gas, liquefied petroleum gas, or petroleum products with a true vapor pressure less than 1.5 pounds per square inch absolute;

(20) dispensing equipment used solely to dispense diesel fuel, kerosene, lubricants or cooling oils;

(21) portable solvent distillation systems that are exempted under 15A NCAC 02Q .0102(c)(1)(I).

(22) processes:
  (A) electric motor burn-out ovens with secondary combustion chambers or afterburners;
  (B) electric motor bake-on ovens;
  (C) burn-off ovens for paint-line hangers with afterburners;
  (D) hosiery knitting machines and associated lint screens, hosiery dryers and associated lint screens, and hosiery dyeing processes where bleach or solvent dyes are not used;
  (E) blade wood planers planing only green wood;
  (F) saw mills that saw no more than 2,000,000 board feet per year provided only green wood is sawed;
  (G) perchloroethylene drycleaning processes with 12-month rolling total consumption of:
    (i) less than 1366 gallons of perchloroethylene per year for facilities with dry-to-dry machines only;
    (ii) less than 1171 gallons of perchloroethylene per year for facilities with transfer machines only; or
    (iii) less than 1171 gallons of perchloroethylene per year for facilities with both transfer and dry-to-dry machines;

(23) wood furniture manufacturing operations as defined in 40 CFR 63.801(a) that comply with the emission limitations and other requirements of 40 CFR Part 63 Subpart JJ, provided that the terms of this exclusion shall not affect the authority of the Director under 15A NCAC 02Q .0712;

(24) wastewater treatment systems at pulp and paper mills for hydrogen sulfide and methyl mercaptan only;

(25) gasoline dispensing facilities or gasoline service station operations that comply with 15A NCAC 02D .0928 and .0932 and that receive gasoline from bulk gasoline plants or bulk gasoline terminals that comply with 15A NCAC 02D .0524, .0925, .0926, .0927, .0932, and .0933 via tank trucks that comply with 15A NCAC 02D .0932;

(26) the use of ethylene oxide as a sterilant in the production and subsequent storage of medical devices or the packaging and subsequent storage of medical devices for sale if the emissions from all new and existing sources at the facility described in 15A NCAC 02D .0538(d) are controlled at least to the degree described in 15A NCAC 02D .0538(d) and the facility complies with 15A NCAC 02D .0538(e) and (f);

(27) bulk gasoline plants, including the storage and handling of fuel oils, kerosenes, and jet fuels but excluding the storage and handling of other organic liquids, that comply with 15A NCAC 02D .0524, .0925, .0926, .0932, and .0933; unless the Director finds that a permit to emit toxic air pollutants is required under Paragraph (b) of this Rule or Rule .0712 of this Section for a particular bulk gasoline plant; or

(28) bulk gasoline terminals, including the storage and handling of fuel oils, kerosenes, and jet fuels but excluding the storage and handling of other organic liquids, that comply with 15A NCAC 02D .0524, .0925, .0927, .0932, and .0933 if the bulk gasoline terminal existed before November 1, 1992; unless:
  (A) the Director finds that a permit to emit toxic air pollutants is required under Paragraph (b) of this Rule or Rule .0712 of this Section for a particular bulk gasoline terminal, or
  (B) the owner or operator of the bulk gasoline terminal meets the requirements of 15A NCAC 02D .0927(i).

(b) Emissions from the activities identified in Subparagraphs (a)(25) through (a)(28) of this Rule shall be included in determining compliance with the toxic air pollutant requirements in this Section and shall be included in the permit if necessary to assure compliance. Emissions from the activities identified in Subparagraphs (a)(1) through (a)(24) of this Rule shall not be included in determining compliance with the toxic air pollutant requirements in this Section.

(c) The addition or modification of an activity identified in Paragraph (a) of this Rule shall not cause the source or facility to be evaluated for emissions of toxic air pollutants.

(d) Because an activity is exempted from being required to have a permit does not mean that the activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 02H .0610;
Eff. July 1, 1998;
Amended Eff. July 10, 2010; April 1, 2005; July 1, 2002; July 1, 2000.

15A NCAC 02Q .0703 DEFINITIONS

For the purposes of this Section, the following definitions apply:

(1) "Actual rate of emissions" means:
  (a) for existing sources:
    (i) for toxic air pollutants with an annual averaging period, the average rate or rates at which the source actually emitted the pollutant during the two-year period preceding the date of the particular modification and that represents normal operation of the source. If this period does not represent normal operation, the Director may allow the use of a different, more representative, period.
    (ii) for toxic air pollutants with a 24-hour or one-hour averaging period, the maximum actual emission rate at which the source actually emitted for the applicable averaging period during the two-year period preceding the date of the particular modification and that represents normal operation of the source. If this period does not represent normal operation, the Director may require or allow the use of a different, more representative, period.
  (b) for new or modified sources, the average rate or rates, determined for the applicable averaging period(s), that the proposed source will actually emit the pollutant as determined by engineering evaluation.

(2) "Applicable averaging period" means the averaging period for which an acceptable ambient limit has been established by the Commission and is listed in 15A NCAC 02D .1104.

(3) "Bioavailable chromate pigments" means the group of chromium (VI) compounds consisting of calcium chromate (CAS No.13765-19-0), calcium dichromate (CAS No. 14307-33-6), strontium chromate (CAS No. 7789-06-2), strontium dichromate (CAS No. 7789-06-2), zinc chromate (CAS No. 13530-65-9), and zinc dichromate (CAS No. 7789-12-0).

(4) "CAS Number" means the Chemical Abstract Service registry number identifying a particular substance.

(5) "Chromium (VI) equivalent" means the molecular weight ratio of the chromium (VI) portion of a compound to the total molecular weight of the compound multiplied by the associated compound emission rate or concentration at the facility.

(6) "Combustion sources" means boilers, space heaters, process heaters, internal combustion engines, and combustion turbines, which burn only unadulterated wood or unadulterated fossil fuel. It does not include incinerators, waste combustors, kilns, dryers, or direct heat exchange industrial processes.

(7) "Creditable emissions" means actual decreased emissions that have not been previously relied on to comply with Subchapter 15A NCAC 02D. All creditable emissions shall be enforceable by permit condition.

(8) "Cresol" means o-cresol, p-cresol, m-cresol, or any combination of these compounds.

(9) "Evaluation" means:
  (a) a determination that the emissions from the facility, including emissions from sources exempted by Rule .0702 (a) (24) through (27) of this Section, are less than the rate listed in Rule .0711 of this Section; or
  (b) a determination of ambient air concentrations as described under 15A NCAC 02D .1106, including emissions from sources exempted by Rule .0702 (24) through (27) of this Section.

(10) "GACT" means any generally available control technology emission standard applied to an area source or facility pursuant to Section 112 of the federal Clean Air Act.

(11) "Hexane isomers except n-hexane" means 2-methyl pentane, 3-methyl pentane, 2,2-dimethyl butane, 2,3-dimethyl butane, or any combination of these compounds.

(12) "MACT" means any maximum achievable control technology emission standard applied to a source or facility pursuant to Section 112 federal Clean Air Act.

(13) "Maximum feasible control" means the maximum degree of reduction for each pollutant subject to regulation under this Section using the best technology that is available taking into account, on a case-by-case basis, human health, energy, environmental, and economic impacts and other costs.

(14) "Modification" means any physical changes or changes in the methods of operation that result in a net increase in emissions or ambient concentration of any pollutant listed in Rule .0711 of this Section or that result in the emission of any pollutant listed in Rule .0711 of this Section not previously emitted.

(15) "Net increase in emissions" means for a modification the sum of any increases in permitted allowable and decreases in the actual rates of emissions from the proposed modification from the sources at the facility for which the air permit application is being filed. If the net increase in emissions from the proposed modification is greater than zero, all other increases in permitted allowable and decreases in the actual rates of emissions at the facility within five years immediately preceding the filing of the air permit application for the proposed modification that are otherwise creditable emissions may be included.

(16) "Nickel, soluble compounds" means the soluble nickel salts of chloride ($NiCl_2$, CAS No. 7718-54-9), sulfate ($NiSO_4$, CAS No. 7786-81-4), and nitrate ($Ni(NO_3)_2$, CAS No. 13138-45-9).

(17) "Non-specific chromium (VI) compounds" means the group of compounds consisting of any chromium (VI) compounds not specified in this Section as a bioavailable chromate pigment or a soluble chromate compound.

(18) "Polychlorinated biphenyls" means any chlorinated biphenyl compound or mixture of chlorinated biphenyl compounds.

(19) "Pollution prevention plan" means a written description of current and projected plans to reduce, prevent, or minimize the generation of pollutants by source reduction and recycling and includes a site-wide assessment of pollution prevention opportunities at a facility that addresses sources of air pollution, water pollution, and solid and hazardous waste generation.

(20) "SIC" means standard industrial classification code.

(21) "Soluble chromate compounds" means the group of chromium (VI) compounds consisting of ammonium chromate (CAS No. 7788-98-9), ammonium dichromate (CAS No. 7789-09-5), chromic acid (CAS No. 7738-94-5), potassium chromate (CAS No. 7789-00-6), potassium dichromate (CAS No. 7778-50-9), sodium chromate (CAS No. 7775-11-3), and sodium dichromate (CAS No. 10588-01-9).

(22) "Toxic air pollutant" means any of those carcinogens, chronic toxicants, acute systemic toxicants, or acute irritants listed in 15A NCAC 02D .1104.

(23) "Unadulterated wood" means wood that is not painted, varnished, stained, oiled, waxed, or otherwise coated or treated with any chemical. Plywood, particle board, and resinated wood are not unadulterated wood.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 02H .0610;
Eff. July 1, 1998;
Amended Eff. April 1, 2001.

15A NCAC 02Q .0704 NEW FACILITIES

(a) This Rule applies only to facilities that begin construction after September 30, 1993.

(b) The owner or operator of a facility that:

(1) is required to have a permit because of applicability of a Section in Subchapter 2D of this Chapter other than Section .1100 of Subchapter 2D of this Chapter except for facilities whose emissions of toxic air pollutants result only from sources exempted under Rule .0102 of this Subchapter;

(2) has one or more sources subject to a MACT or GACT standard that has previously been promulgated under Section 112(d) of the federal Clean Air Act or established under Section 112(e) or 112(j) of the Clean Air Act; or

(3) has a standard industrial classification code that has previously been called under Rule .0705 of this Section;

shall have received a permit to emit toxic air pollutants before beginning construction, and shall comply with such permit when beginning operation.

(c) The owner or operator of a facility subject to this Rule who has not received a permit to emit toxic air pollutants under Paragraph (b) of this Rule shall apply for a permit to emit toxic air pollutants according to Paragraph (b) or (c) of Rule .0705 of this Section.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 2H .0610;
Eff. July 1, 1998.

15A NCAC 02Q .0705 EXISTING FACILITIES AND SIC CALLS

(a) This Rule applies only to facilities that were in operation or permitted to construct before October 1, 1993 and new facilities subject to Rule .0704(c) of this Section.

(b) For sources at a facility subject to a MACT or GACT standard, or that may be subject to a MACT or GACT standard based on studies required by Section 112(n)(1) of the Clean Air Act, 42 U.S.C. Section 7412(n)(1), the owner or operator of the facility shall comply with 15A NCAC 2D .1100 as follows:

(1) When the owner or operator submits a permit application to comply with the last MACT or GACT, excluding the MACT or GACT for combustion sources, known to apply to the facility, he shall also submit a permit application to comply with 15A NCAC 2D .1100. The facility shall comply with 15A NCAC 2D .1100 by the same deadline that it is required to comply with the last MACT or GACT.

(2) If the owner or operator does not have to submit a permit application to comply with the last MACT or GACT, excluding the MACT or GACT for combustion sources, he shall submit a permit application to comply with 15A NCAC 2D .1100 within six months after the promulgation of the last MACT or GACT, excluding the MACT or GACT for combustion sources, known to apply to the facility or by January 1, 1999, whichever is later. The facility shall comply with 15A NCAC 2D .1100 by the same deadline that it is required to comply with the last MACT or GACT.

(3) If the owner or operator submitted a permit application for the last MACT or GACT, excluding the MACT or GACT for combustion sources, known to apply to the facility before July 1, 1998, he shall submit a permit application to comply with 15A NCAC 2D .1100 by January 1, 1999. The facility shall comply with 15A NCAC 2D .1100 within three years from the date that the permit is issued.

The permit application shall include an evaluation for all toxic air pollutants covered under 15A NCAC 2D .1104 for all sources at the facility, excluding those sources exempt from evaluation under Rule .0702 of this Section. The owner or operator of a facility whose actual rate of emissions from all sources are not greater than the toxic permitting emissions rates listed in Rule .0711 of this Section does not have to file a permit application to comply with 15A NCAC 2D .1100. He shall provide documentation that the facility=s emissions of toxic air pollutants are below the levels in Rule .0711 of this Section if the Director requests this documentation.

(c) For facilities that will not be subject to a MACT or GACT standard, or that will be subject only to a MACT or GACT standard for unadulterated fuel combustion sources, the owner or operator of the facility shall have 180 days to apply for a permit or permit modification for the emissions of toxic air pollutants after receiving written notification from the Director that such permit or permit modification is required. The permit application shall include an evaluation for all toxic air pollutants covered under 15A NCAC 2D .1104 for all sources at the facility, excluding sources exempt from evaluation in Rule .0702 of this Section. Such facilities shall comply with 15A NCAC 2D .1100 within three years from the date that the permit is issued. The Director shall notify facilities subject to this Paragraph by calling for permit applications based on standard industrial classifications, that is, the Director shall call at one time for permits for all facilities statewide that have the same four-digit standard industrial classification code, except those facilities in certified local air pollution control agency areas. (Local air pollution control agencies shall call the standard industrial classification code within their jurisdiction when the Director calls that code. A local air pollution control agency may call a particular standard industrial classification code before the Director calls that code if the Commission approves the call by the local air pollution control agency. In deciding if it shall grant permission to a local air pollution control agency to call a particular standard industrial classification code before the Director calls that code, the Commission shall consider if the call is necessary to protect human health or to allow the local program to better implement these Rules in its jurisdiction.) Facilities with sources that will be subject to MACT that receive an SIC call shall notify the Director and shall comply with 15 NCAC 2D .1100 in accordance with Paragraph (b) of this Rule. All sources, regardless of their standard industrial classification code, excluding sources exempt from evaluation in Rule .0702 of this Section, at the facility shall be included in the call for permit applications. When the Environmental Protection Agency (EPA) promulgates MACT under Section 112(e) of the federal Clean Air Act, excluding cooling towers, the Director shall notify the owners or operators of facilities in the standard industrial classification that best corresponds to the MACT category that they are required to submit a permit application for the emissions of toxic air pollutants from their facilities. If the EPA fails to promulgate a MACT as scheduled, the Director shall notify the owners or operators of facilities 18 months after the missed promulgation date that they are required to submit a permit application for the emissions of toxic air pollutants from their facilities. The owner or operator of a facility whose actual rate of emissions from all sources are not greater than the toxic permitting emissions rates listed in Rule .0711 of this Section does not have to file a permit application to comply with 15A NCAC 2D .1100. He shall provide documentation that the facility=s emissions of toxic air pollutants are below the levels in Rule .0711 of this Section if the Director requests this documentation. The Director may request this documentation if he finds that the facility's potential emissions of toxic air pollutants are above the levels in Rule .0711 of this Section.

(d) The owner or operator of a facility may request a permit to emit toxic air pollutants any time before such application is required. The permit application shall include an evaluation for all toxic air pollutants covered under 15A NCAC 2D .1104 for all sources at the facility, excluding sources exempt from evaluation in Rule .0702 of this Section.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 2H .0610;
Eff. July 1, 1998.

15A NCAC 02Q .0706 MODIFICATIONS

(a) For modification of any facility undertaken after September 30, 1993, that:

(1) is required to have a permit because of applicability of a Section, other than Section .1100, in Subchapter 02D of this Chapter except for facilities whose emissions of toxic air pollutants result only from insignificant activities as defined in 15A NCAC 02Q .0103(20) or sources exempted under Rule .0102 of this Subchapter;

(2) has one or more sources subject to a MACT or GACT standard that has previously been promulgated under Section 112(d) of the federal Clean Air Act or established under Section 112(e) or 112(j) of the Clean Air Act; or

(3) has a standard industrial classification code that has previously been called under Rule .0705 of this Section;

the owner or operator of the facility shall comply with Paragraphs (b) and (c) of this Rule.

(b) The owner or operator of the facility shall submit a permit application to comply with 15A NCAC 02D .1100 if the modification results in:

(1) a net increase in emissions or ambient concentration of any toxic air pollutant that the facility was emitting before the modification; or

(2) emissions of any toxic air pollutant that the facility was not emitting before the modification if such emissions exceed the levels contained in Rule .0711 of this Section.

(c) The permit application filed pursuant to this Rule shall include an evaluation for all toxic air pollutants covered under 15A NCAC 02D .1104 for which there is:

(1) a net increase in emissions of any toxic air pollutant that the facility was emitting before the modification; and

(2) emission of any toxic air pollutant that the facility was not emitting before the modification if such emissions exceed the levels contained in Rule .0711 of this Section.

All sources at the facility, excluding sources exempt from evaluation in Rule .0702 of this Section, emitting these toxic air pollutants shall be included in the evaluation. Notwithstanding 02Q .0702(a)(18), on and after July 10, 2010, an evaluation of a modification to a combustion source shall also include emissions from all permitted combustion sources as defined in 02Q .0703. A permit application filed pursuant to Subparagraph (b)(2) of this Rule shall include an evaluation for all toxic air pollutants identified by the Director as causing an acceptable ambient level in 15A NCAC 02D .1104 to be exceeded.

(d) If a source is included in an air toxic evaluation, but is not the source that is being added or modified at the facility, and if the emissions from this source must be reduced in order for the facility to comply with the rules in this Section and 15A NCAC 02D .1100, then the emissions from this source shall be reduced by the time that the new or modified source begins operating such that the facility shall be in compliance with the rules in this Section and 15A NCAC 02D .1100.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, C. 168, S. 45;*
Rule originally codified as part of 15A NCAC 2H .0610;
Eff. July 1, 1998;
Amended Eff. July 10, 2010; December 1, 2005; April 1, 2005.

15A NCAC 02Q .0707 PREVIOUSLY PERMITTED FACILITIES

Any facility with a permit that contains a restriction based on the evaluation of a source exempted under Rule .0702 of this Section may request a permit modification to adjust the restriction by removing from consideration the portion of emissions resulting from the exempt source unless the Director determines that the removal of the exempt source will result in an acceptable ambient level in 15A NCAC 2D .1104 being exceeded. The Director shall modify the permit to remove the applicability of the air toxic rules to the exempt source. No fee shall be charged solely for such permit modification.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 2H .0610;
Eff. July 1, 1998.

15A NCAC 02Q .0708 COMPLIANCE SCHEDULE FOR PREVIOUSLY UNKNOWN TOXIC AIR POLLUTANT EMISSIONS

(a) The owner or operator of a facility permitted to emit toxic air pollutants shall submit a permit application within six months after the owner or operator learns of an emission of a previously unknown toxic air pollutant from a permitted source that would have been included in the permit when it was issued. The application shall include the information required by Paragraph (b) of this Rule.

(b) When an application to revise a permit is submitted under this Rule, the owner or operator shall in addition to the application, submit to the Director:

(1) an evaluation for the pollutant according to this Section and 15 NCAC 2D .1100 that demonstrates compliance with the acceptable ambient level in 15A NCAC 2D .1104; or

(2) a compliance schedule containing the information required under Paragraph (c) of this Rule for the proposed modifications to the facility required to comply with the acceptable ambient level according to this Section and Section 15A NCAC 2Q .1100.

(c) The compliance schedule required under Subparagraph (b)(2) of this Rule shall contain the following increments of progress as applicable:

(1) a date by which contracts for emission control and process equipment shall be awarded or orders shall be issued for the purchase of component parts;

(2) a date by which on-site construction or installation of the emission control and process equipment shall begin;

(3) a date by which on-site construction or installation of the emission control and process equipment shall be completed; and

(4) the date by which final compliance shall be achieved.

(d) Final compliance shall be achieved no later than:

(1) six months after the permit modification or renewal is issued if construction or installation of emission control or process equipment is not required;

(2) one year after the permit modification or renewal is issued if construction or installation of emission control or process equipment is required; or

(3) the time that is normally required to construct a stack or install other dispersion enhancement modifications but not more than one year after the permit modification or renewal is issued.

(e) The owner or operator shall certify to the Director within 10 days after each applicable deadline for each increment of progress required under Paragraph (c) of this Rule whether the required increment of progress has been met.

History Note: *Authority G.S. 143-215.3(a)(1); 43-215.107(a)(3),(5); 143B-282; S.L. 1989, c. 168, s. 45; Eff. July 1, 1998.*

15A NCAC 02Q .0709 DEMONSTRATIONS

(a) Demonstrations. The owner or operator of a source who is applying for a permit or permit modification to emit toxic air pollutants shall:

(1) demonstrate to the satisfaction of the Director through dispersion modeling that the emissions of toxic air pollutants from the facility will not cause any acceptable ambient level listed in 15A NCAC 02D .1104 to be exceeded beyond the premises (adjacent property boundary); or

(2) demonstrate to the satisfaction of the Commission or its delegate that the ambient concentration beyond the premises (adjacent property boundary) for the subject toxic air pollutant shall not adversely affect human health (e.g., a risk assessment specific to the facility) though the concentration is higher than the acceptable ambient level in 15A NCAC 02D .1104 by providing one of the following demonstrations:

(A) the area where the ambient concentrations are expected to exceed the acceptable ambient levels in 15A NCAC 02D .1104 is not inhabitable or occupied for the duration of the averaging time of the pollutant of concern, or

(B) new toxicological data that show that the acceptable ambient level in 15A NCAC 02D .1104 for the pollutant of concern is too low and the facility's ambient impact is below the level indicated by the new toxicological data.

(b) Technical Infeasibility and Economic Hardship. This Paragraph shall not apply to any incinerator covered under 15A NCAC 02D .1200. The owner or operator of any source constructed before May 1, 1990, or a perchloroethylene dry cleaning facility subject to a GACT standard under 40 CFR 63.320 through 63.325, or a combustion source as defined in Rule .0703 of this Section permitted before July 10, 2010, who cannot supply a demonstration described in Paragraph (a) of this Rule shall:

(1) demonstrate to the satisfaction of the Commission or its delegate that complying with the guidelines in 15A NCAC 02D .1104 is technically infeasible (the technology necessary to reduce emissions to a level to prevent the acceptable ambient levels in 15A NCAC 02D .1104 from being exceeded does not exist); or

(2) demonstrate to the satisfaction of the Commission or its delegate that complying with the guidelines in 15A NCAC 02D .1104 would result in serious economic hardship. (In deciding if a serious economic hardship exists, the Commission or its delegate shall consider market impact; impacts on local, regional and state economy; risk of closure; capital cost of compliance; annual incremental compliance cost; and environmental and health impacts.)

If the owner or operator makes a demonstration to the satisfaction of the Commission or its delegate pursuant to Subparagraphs (1) or (2) of this Paragraph, the Director shall require the owner or operator of the source to apply maximum feasible control. Maximum feasible control shall be in place and operating within three years from the date that the permit is issued for the maximum feasible control.

(c) Pollution Prevention Plan. The owner or operator of any facility using the provisions of Part (a)(2)(A) or Paragraph (b) of this Rule shall develop and implement a pollution prevention plan consisting of the following minimum elements:

(1) statement of corporate and facility commitment to pollution prevention;

(2) identification of current and past pollution prevention activities;

(3) timeline and strategy for implementation;

(4) description of ongoing and planned employee education efforts;

(5) identification of internal pollution prevention goal selected by the facility and expressed in either qualitative or quantitative terms.

The facility shall submit along with the permit application the pollution prevention plan. The pollution prevention plan shall be maintained on site. A progress report on implementation of the plan shall be prepared by the facility annually and be made available to Division personnel for review upon request.

(d) Modeling Demonstration. If the owner or operator of a facility demonstrates by modeling that no toxic air pollutant emitted from the facility exceeds the acceptable ambient level values given in 15A NCAC 02D .1104 beyond the facility's premises, further modeling demonstration is not required with the permit application. However, the Commission may still require more stringent emission levels according to its analysis under 15A NCAC 02D .1107.

(e) Change in Acceptable Ambient Level. When an acceptable ambient level for a toxic air pollutant in 15A NCAC 02D .1104 is changed, any condition that has previously been put in a permit to protect the previous acceptable ambient level for that toxic air pollutant shall not be changed until:

(1) The permit is renewed, at which time the owner or operator of the facility shall submit an air toxic evaluation showing that the new acceptable ambient level will not be exceeded (If additional time is

needed to bring the facility into compliance with the new acceptable ambient level, the owner or operator shall negotiate a compliance schedule with the Director. The compliance schedule shall be written into the facility's permit and final compliance shall not exceed two years from the effective date of the change in the acceptable ambient level.): or

(2) The owner or operator of the facility requests that the condition be changed and submits along with that request an air toxic evaluation showing that the new acceptable ambient level shall not be exceeded.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 2H .0610;
Eff. July 1, 1998;
Amended Eff. July 10, 2010; February 1, 2005.

15A NCAC 02Q .0710 PUBLIC NOTICE AND OPPORTUNITY FOR PUBLIC HEARING

(a) If the owner or operator of a facility chooses to make a demonstration pursuant to Rule .0709 (a)(2) or (b) of this Section, the Commission or its delegate shall approve or disapprove the permit after a public notice with an opportunity for a public hearing.

(b) The public notice shall be given by publication in a newspaper of general circulation in the area where the facility is located and shall be mailed to persons who are on the Division's mailing list for air quality permit notices.

(c) The public notice shall identify:

(1) the affected facility;

(2) the name and address of the permittee;

(3) the name and address of the person to whom to send comments and requests for public hearing;

(4) the name, address, and telephone number of a Divisional staff person from whom interested persons may obtain additional information, including copies of the draft permit, the application, compliance plan, pollution prevention plan, monitoring and compliance reports, all other relevant supporting materials, and all other materials available to the Division that are relevant to the permit decision;

(5) the activity or activities involved in the permit action;

(6) any emissions change involved in any permit modification;

(7) a brief description of the public comment procedures;

(8) the procedures to follow to request a public hearing unless a public hearing has already been scheduled; and

(9) the time and place of any hearing that has already been scheduled.

(d) The notice shall allow at least 30 days for public comments.

(e) If the Director determines that significant public interest exists or that the public interest will be served, the Director shall require a pubic hearing to be held on a draft permit. Notice of a public hearing shall be given at least 30 days before the public hearing.

(f) The Director shall make available for public inspection in at least one location in the region affected, the information submitted by the permit applicant and the Division=s analysis of that application.

(g) Any persons requesting copies of material identified in Subparagraph (b)(4) of this Rule shall pay ten cents ($0.10) a page for each page copied. Confidential material shall be handled in accordance with Rule .0107 of this Subchapter.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 2H .0610;
Eff. July 1, 1998.

15A NCAC 02Q .0711 EMISSION RATES REQUIRING A PERMIT

(a) A permit to emit toxic air pollutants is required for any facility whose actual (or permitted if higher) rate of emissions from all sources are greater than any one of the following toxic air pollutant permitting emissions rates:

Pollutant (CAS Number)	Carcinogens lb/yr	Chronic Toxicants lb/day	Acute Systemic Toxicants lb/hr	Acute Irritants lb/hr
acetaldehyde (75-07-0)				6.8
acetic acid (64-19-7)				0.96
acrolein (107-02-8)				0.02
acrylonitrile (107-13-1)		0.4	0.22	
ammonia (7664-41-7)				0.68
aniline (62-53-3)			0.25	
arsenic and inorganic arsenic compounds	0.016			
asbestos (1332-21-4)	1.9×10^{-6}			
aziridine (151-56-4)		0.13		
benzene (71-43-2)	8.1			
benzidine and salts (92-87-5)	0.0010			
benzo(a)pyrene (50-32-8)	2.2			
benzyl chloride (100-44-7)			0.13	
beryllium (7440-41-7)	0.28			
beryllium chloride (7787-47-5)	0.28			
beryllium fluoride (7787-49-7)	0.28			
beryllium nitrate (13597-99-4)	0.28			
bioavailable chromate pigments, as chromium (VI) equivalent	0.0056			
bis-chloromethyl ether (542-88-1)	0.025			
bromine (7726-95-6)				0.052
1,3-butadiene (106-99-0)	11			
cadmium (7440-43-9)	0.37			
cadmium acetate (543-90-8)	0.37			
cadmium bromide (7789-42-6)	0.37			
carbon disulfide (75-15-0)		3.9		
carbon tetrachloride (56-23-5)	460			
chlorine (7782-50-5)		0.79		0.23
chlorobenzene (108-90-7)		46		
chloroform (67-66-3)	290			
chloroprene (126-99-8)		9.2	0.89	
cresol (1319-77-3)			0.56	
p-dichlorobenzene (106-46-7)				16.8
dichlorodifluoromethane (75-71-8)		5200		
dichlorofluoromethane (75-43-4)		10		
di(2-ethylhexyl)phthalate (117-81-7)		0.63		
dimethyl sulfate (77-78-1)		0.063		
1,4-dioxane (123-91-1)		12		
epichlorohydrin (106-89-8)	5600			
ethyl acetate (141-78-6)			36	
ethylenediamine (107-15-3)		6.3	0.64	
ethylene dibromide (106-93-4)	27			
ethylene dichloride (107-06-2)	260			
ethylene glycol monoethyl ether (110-80-5)		2.5	0.48	

ethylene oxide (75-21-8)	1.8			
ethyl mercaptan (75-08-1)			0.025	
fluorides		0.34	0.064	
formaldehyde (50-00-0)				0.04
hexachlorocyclopentadiene (77-47-4)		0.013	0.0025	
hexachlorodibenzo-p-dioxin (57653- 85-7)	0.0051			
n-hexane (110-54-3)		23		
hexane isomers except n-hexane				92
hydrazine (302-01-2)		0.013		
hydrogen chloride (7647-01-0)				0.18
hydrogen cyanide (74-90-8)		2.9	0.28	
hydrogen fluoride (7664-39-3)		0.63		0.064
hydrogen sulfide (7783-06-4)		1.7		
maleic anhydride (108-31-6)		0.25	0.025	
manganese and compounds		0.63		
manganese cyclopentadienyl tricarbonyl (12079-65-1)		0.013		
manganese tetroxide (1317-35-7)		0.13		
mercury, alkyl		0.0013		
mercury, aryl and inorganic compounds		0.013		
mercury, vapor (7439-97-6)		0.013		
methyl chloroform (71-55-6)		250		64
methylene chloride (75-09-2)	1600		0.39	
methyl ethyl ketone (78-93-3)		78		22.4
methyl isobutyl ketone (108-10-1)		52		7.6
methyl mercaptan (74-93-1)			0.013	
nickel carbonyl (13463-39-3)		0.013		
nickel metal (7440-02-0)		0.13		
nickel, soluble compounds, as nickel		0.013		
nickel subsulfide (12035-72-2)	0.14			
nitric acid (7697-37-2)				0.256
nitrobenzene (98-95-3)		1.3	0.13	
n-nitrosodimethylamine (62-75-9)	3.4			
non-specific chromium (VI) compounds, as chromium (VI) equivalent	0.0056			
pentachlorophenol (87-86-5)		0.063	0.0064	
perchloroethylene (127-18-4)	13000			
phenol (108-95-2)			0.24	
phosgene (75-44-5)		0.052		
phosphine (7803-51-2)				0.032
polychlorinated biphenyls (1336-36- 3)	5.6			
soluble chromate compounds, as chromium (VI) equivalent		0.013		
styrene (100-42-5)			2.7	
sulfuric acid (7664-93-9)		0.25	0.025	
tetrachlorodibenzo-p-dioxin (1746- 01-6)	0.00020			
1,1,1,2-tetrachloro-2,2,- difluoroethane (76-11-9)		1100		
1,1,2,2-tetrachloro-1,2- difluoroethane (76-12-0)		1100		
1,1,2,2-tetrachloroethane (79-34-5)	430			
toluene (108-88-3)		98		14.4

toluene diisocyanate,2,4-(584-84-9) and 2,6- (91-08-7) isomers		0.003		
trichloroethylene (79-01-6)	4000			
trichlorofluoromethane (75-69-4)			140	
1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)				240
vinyl chloride (75-01-4)	26			
vinylidene chloride (75-35-4)		2.5		
xylene (1330-20-7)		57		16.4

(b) For the following pollutants, the highest emissions occurring for any 15-minute period shall be multiplied by four and the product shall be compared to the value in Paragraph (a). These pollutants are:

(1) acetaldehyde (75-07-0);
(2) acetic acid (64-19-7);
(3) acrolein (107-02-8);
(4) ammonia (7664-41-7);
(5) bromine (7726-95-6);
(6) chlorine (7782-50-5);
(7) formaldehyde (50-00-0);
(8) hydrogen chloride (7647-01-0);
(9) hydrogen fluoride (7664-39-3); and
(10) nitric acid (7697-37-2).

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 02H .0610;
Eff. July 1, 1998;
Amended Eff. January 1, 2010; June 1, 2008; April 1, 2005; February 1, 2005; April 1, 2001.

15A NCAC 02Q .0712 CALLS BY THE DIRECTOR

Notwithstanding any other provision of this Section or 15A NCAC 2D .1104, upon a written finding that a source or facility emitting toxic air pollutants presents an unacceptable risk to human health based on the acceptable ambient levels in 15A NCAC 2D .1104 or epidemiology studies, the Director may require the owner or operator of the source or facility to submit a permit application to comply with 15A NCAC 2D .1100 for any or all of the toxic air pollutants emitted from the facility.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*
Rule originally codified as part of 15A NCAC 2H .0610;
Eff. July 1, 1998.

15A NCAC 02Q .0713 POLLUTANTS WITH OTHERWISE APPLICABLE FEDERAL STANDARDS OR REQUIREMENTS

(a) This Rule applies to the establishment of emission limitations or any other requirements pursuant to the requirements of this Section or 15A NCAC 2D .1100 for which a standard or requirement has been promulgated under Section 112 of the federal Clean Air Act including those contained in 15A NCAC 2D .1110 and .1111.

(b) For each facility subject to emission standards or requirements under Section 112 of the federal Clean Air Act, permits issued or revised according to Section .0500 of this Subchapter shall contain specific conditions that:

(1) reflect applicability criteria no less stringent than those in the otherwise applicable federal standards or requirements;

(2) require levels of control for each affected facility and source no less stringent than those contained in the otherwise applicable federal standards or requirements;

(3) require compliance and enforcement measures for each facility and source no less stringent than those in the otherwise applicable federal standards or requirements;

(4) express levels of control, compliance, and enforcement measures in the same form and units of measure as the otherwise applicable federal standards or requirements; and

(5) assure compliance by each affected facility no later than would be required by the otherwise applicable federal standard or requirement.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45; Eff. July 1, 1998.*

15A NCAC 02Q .0714 WASTEWATER TREATMENT SYSTEMS AT PULP AND PAPER MILLS

(a) This Rule applies to wastewater collection and treatment systems at pulp and paper mills that are exempted under Rule .0702 of this Section.

(b) Except for facilities that employ activated sludge type wastewater treatment systems, the owner or operator of a wastewater collection and treatment system covered under this Rule shall:

(1) submit to the Director estimates of hydrogen sulfide, total reduced sulfur, and methyl mercaptan emissions from wastewater collection and treatment systems and components using estimation methods or factors developed through industry testing and analytical studies and approved by the Director by November 1, 2005. In deciding approval of the estimation methods and factors, the Director shall consider field validation procedures including the number of valid samples taken, when measurements are made, laboratory and field measurement quality assurance procedures, and other information necessary in producing accurate and precise measurements. The Director shall report to the Environmental Management Commission the information submitted under this Subparagraph by January 1, 2006;

(2) using the emission estimates developed under Subparagraph (b)(1), perform air dispersion modeling of all hydrogen sulfide emission sources, including all emissions associated with the wastewater collection and treatment system, as described in 15A NCAC 02D .1106 (a) through (i). If the modeling analysis demonstrates that predicted concentrations of hydrogen sulfide are below the acceptable ambient levels outlined in 15A NCAC 02D .1104, no further plan development, measurement or monitoring action is required to maintain the exemption provided by this Rule. The results of the favorable modeling demonstration must be submitted to the Director by July 1, 2006. The Director shall report to the Environmental Management Commission the information submitted under this Subparagraph by September 1, 2006;

(3) if the dispersion modeling performed under Subparagraph (b)(2) of this rule shows that the acceptable ambient level for hydrogen sulfide is exceeded, submit to the Director, on or before September 30, 2006, for approval by the Director, an ambient air quality monitoring plan designed to assess actual ambient levels of hydrogen sulfide typical of pulp and paper mill operations. The monitoring plan may be undertaken at each of the individual mill sites or, at the option of the affected mill sites, it may be undertaken at a single North Carolina mill site that the Director determines to be representative of the industry. The Director shall complete review and make the decision regarding approval of the monitoring plan by December 31, 2006;

(4) by June 30, 2007, implement the ambient monitoring study plan required in Subparagraph (b)(3) to determine the actual ambient levels of hydrogen sulfide near pulp and paper mills;

(5) complete the ambient hydrogen sulfide monitoring plan and report the results to the Director and to the Chairperson of the Environmental Management Commission by December 31, 2008 and the Director shall report to the Environmental Management Commission the information submitted under this Subparagraph by February 28, 2009 for further consideration.

(c) To perform ambient monitoring for hydrogen sulfide under Subparagraph (b)(3) of this Rule, the owner or operator shall use monitoring methods and procedures approved by the Director. The Director shall approve the monitoring methods and procedures if he determines that they are an appropriate measure of ambient air concentrations of hydrogen sulfide.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143B-282;*
Eff. April 1, 2005.

Commenter	Summary of Comment
Jody Higgins	Concern about fumes and odors from a specific asphalt plant.
Laura Kranchalk	Concern about family's health and quality of life nearby a proposed cement plant.
Rachel Cole	Keep regulations for toxics not covered by federal regulations.
Ellen Hunter	Concern about air pollution and quality of life nearby a proposed cement plant.
Cindi Hamilton	Encourages tougher regulations on open burning.
Deb Arnason	Concerns about reducing air quality standards.
Juan Beerios	Encourages protecting the health of their community.
Megan McLaurin	Concern about lowering standards for toxic air pollutants. Suggests maintaining standards or making them stronger.
Lynn Hale	Concern about eliminating NC regulations. Suggests maintaining standards or making them stronger.
Duke Energy	Strongly support an exemption for natural gas and propane combustion units, and emergency engines. Recommend exemptions for portable/non-stationary reciprocating internal combustion engines (RICE) subject to 40 CFR Parts 89, 90 or 1054 and RICE subject to NSPS Subpart IIII or JJJJ.
David Ross	Concerned about regulations being considered a burden. Consider explaining the need for demonstrations to protect public health.
Manufacturers and Chemical Industry Council of North Carolina (MCIC)	Supports all seven (7) of the changes discussed at the September 25, 2012, DAQ stakeholders meeting. Recommends the development of matrices to help determine whether a more detailed review and analysis of air toxics emissions is necessary. Recommends deleting the definition of "unadulterated wood" or alternatively, revise the definition to be consistent with how EPA defines biomass in the Boiler MACT. Also, notes the importance of DAQ and the Environmental Management Commission moving forward on the revision of the AAL for arsenic.
Nucor Steel	Supports all seven (7) of the changes discussed at the September 25, 2012, DAQ stakeholders meeting, as well as any additional options that reduce the regulatory burden. Additionally, recommends repeal of the State Air Toxics Program be considered, with possibly retaining some authority for the Director to address unique situations.
Southern Environmental Law Center (SELC)	DAQ's implementation of Section 1 is premature

	and unauthorized. DAQ must: • Define unacceptable risk. • Collect sufficient data from a facility to determine risks. • Specify models and averaging times. • Clarify that facilities with non-exempt sources must still comply with the air toxics program. • Provide procedures for determining when an existing MACT-regulated facility presents an unacceptable risk. • Evaluate sources near vulnerable populations. It would be imprudent to make sweeping changes to the air toxics program under Section 3 at this time. DAQ cannot raise the TPERs and maintain protection of public health. DAQ should not provide a blanket exemption for natural gas combustion units. Alternatively, if DAQ pursues this exemption, craft it such that only smaller sources will be eligible. DAQ should not exempt emergency engines. Alternatively, simplify the process for emergency engines rather than completely exempting them. Registering, rather than permitting, small sources would not increase efficiency or protect public health. Do not dispose of the SIC Call. Do not allow facilities subject to MACT to simply comply with maximum feasible control. DAQ should not use a facility's projected actual emissions to determine whether the facility is subject to and in compliance with the air toxics program.
Blue Ridge Environmental Defense League (BREDL)	Concern about public's health. DAQ has a difficult task considering monetary and staff cuts. See attached document submitted by BREDL for additional detailed comments.
Mecklenburg County Land Use and Environmental Services Agency – Air Quality	NC air toxics regulations are a critical part of the protection of public health and should only be revised in such a manner as to preserve this most important of the three factors being considered. Supports: • Re-evaluating toxic permitting emission rates (TPERs). • Exempt emergency engines. • Exempt natural gas and propane combustion units. • Register rather than permit sources less than certain emissions thresholds. • Do not retain SIC call. Mecklenburg County does not support a broad

	application of MACT = Maximum Feasible Control because it does not maintain protection of public health. An alternative is to allow any facility to demonstrate technical infeasibility or economic hardship. The evaluation of projected actual emissions does not appear to constitute a change in the current requirements.
Jackson Paper	Strongly urges DAQ to proceed with the arsenic AAL rulemaking and suggests that it be included in the report to the ERC. Supports all seven (7) of the changes discussed at the September 25, 2012, DAQ stakeholders meeting.
American Home Furnishings Alliance (AHFA)	Supports all seven (7) of the changes discussed at the September 25, 2012, DAQ stakeholders meeting. Suggests the definition of "unadulterated wood" is no longer needed. Alternatively, if the term "unadulterated wood" cannot be removed, revise the definition to be consistent with how EPA defines biomass in the Boiler MACT. Suggested the following text for the new definition in 02Q .0703: "Unadulterated wood" means any wood-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue and wood products (e.g., trees, stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings and shavings).

Duke Energy Corporation
P. O. Box 1551
Raleigh, NC 27602

October 09, 2012

Sent Via E-mail (daq.publiccomments@ncdenr.gov)
Ms. Sheila Holman, Director
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

Re: Review of NC Toxic Air Pollutant Rules

Dear Ms. Holman:

Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., and Duke Energy Carolinas (hereafter referred to as the Companies) are regulated electric utilities operating in North Carolina and South Carolina that serve approximately 3.9 million homes, businesses and industries. The Companies are subsidiaries of Duke Energy Business Services LLC, which is the largest electric holding company in the United States, supplying and delivering energy to approximately 7.1 million electric customers located in six states in the Southeast and Midwest. It owns a diverse mix of approximately 58,200 megawatts of electric generating capacity in the U.S. that includes coal, nuclear, natural gas, oil, and renewable resources.

The Companies received a letter from the Division of Air Quality (DAQ) dated September 5, 2012 announcing a review the state's air toxics rules and a public meeting to be held on September 25, 2012 for the purpose of gathering addition ideas from others outside of the agency. In response, the Companies evaluated the rules, their experiences with rule implementation and the "options" presented at the public meeting by DAQ staff. After much thought and consideration, the Companies offer the following comments:

- The Companies strongly support an exemption for natural gas and propane combustion units, including engines.
- The Companies strongly support an exemption for emergency engines.
- The Companies also recommend exemptions for portable/non-stationary reciprocating internal combustion engines (RICE) subject to 40 CFR Parts 89, 90 or 1054 and stationary RICE subject to NSPS Subpart IIII or JJJJ.

The Companies appreciate the effort DAQ is making to assess its rules and the opportunity to provide comments. Please do not hesitate to contact me at 919-564-5438 if you have any questions.

Sincerely,

Mick Greeson

Mick Greeson
Director, Environmental Affairs – North Carolina

Appendix E

From: S David Ross [sdavidross@juno.com]
Sent: Tuesday, October 09, 2012 12:54 PM
To: SVC_DENR.DAQ.publiccomments; Holman, Sheila; Cherry, Lori
Cc: Chuck.Greco@MecklenburgCountyNC.gov
Subject: Comment on DAQ RfC on the Air Toxics Program

I'm sorry to read in your announcement (http://daq.state.nc.us/news/pr/2012/toxics_09072012.shtml) that the management and staff of North Carolina's Division of Air Quality have informed the politicians that the Air Toxics regulations are a "burden." Having worked with Air Toxic regulations in the States of Maryland and North Carolina, including work with the Federal regulations – National Emission Standard for Hazardous Air Pollutants ("NESHAPs") found in both 40 CFR 61 and 40 CFR 63 (the referenced MACT rules), for more than twenty years, I have a unique insight into the work involved with the regulations.

Both the States of Maryland and North Carolina followed the EPA's guidelines for establishing Air Toxics regulations in the 1980's. As well described by George "Tad" Aburn, who developed Maryland's Air Toxics regulations, these regulations are a return to the direct protection of public health from individual air pollutants. Mr. Aburn also explained that regulating individual pollutants also would force technology (manufacturing and operational procedures) and reduce emissions of ozone-producing volatile organic compounds ("VOCs"). For evidence of this, look at the Mobile Source Air Toxics regulation which effected a change in gasoline formulation.

Your notice indicates that the MACT rules are technology-forcing. This is a true statement about phase I of the rules; however, you omitted to mention phase II of the MACT rules, which were implemented for coal-fired boilers regarding hydrogen chloride and chlorine. Phase II of the MACT rules, like EPA's Prevention of Significant Deterioration ("PSD") rules, require Gaussian dispersion modeling to determine the impact of pollutants coming from emission sources not on the site of the emission source. The latter describes North Carolina's Air Toxics regulations found in section .1100.

As a public health engineer ("air quality regulator"), I enforced the Air Toxics regulations making applicants demonstrate that they will not harm their neighbors due to their emissions. I also was the environmental modeler who calculated/confirmed that there would be no locations off the emitters property that exceeded the standards ("AAL's" for the North Carolina Air Toxics regulations). Having also served as a design mechanical engineer, I've been able to advise people how to design emission sources that would reduce emissions and conserve energy. Engineering environmental control into the design of processes is much easier and cost effective than adding control equipment onto processes.

Regarding the exemption of pollution sources from the State Air Toxics regulations because they are compliant with MACT, I would agree with that only if the MACT has progressed to phase II, and regulates the same pollutants that would be regulated by the North Carolina Air Toxics regulations. Exempting sources because they comply with phase I of a MACT regulation is comparable to exempting a car from the emissions inspection because they comply with the safety inspection.

Regarding the increasing of the efficiency of DAQ resources, the only way to do that is by an attitude adjustment. By explaining the need for the compliance demonstration to protect the health of their neighbors, applicants will be less likely to complain about having the work done (unless they hire consultants who gauge them with high costs). Not having complaining applicants reduces a great deal of burden on the staff. If the staff feels that protection of public health from toxic air pollutants is a burden, maybe they should find less burdensom jobs so they can be replaced by people who do not consider this a “burden.”

S. David Ross
139 Sandymead Road
Matthews, North Carolina 28105-2595

MCIC
MANUFACTURERS AND CHEMICAL INDUSTRY COUNCIL
OF NORTH CAROLINA

October 9, 2012

VIA ELECTRONIC MAIL

Ms. Sheila Holman, Director
Division of Air Quality
North Carolina Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

Subject: Recommended Reforms to North Carolina's Air Toxics Program

Dear Director Holman:

Thank you for the opportunity to submit the following comments in follow-up to the air toxics stakeholders meeting that the Division hosted on September 25, 2012. These comments are presented on behalf of the members of the Manufacturers and Chemical Industry Council of North Carolina (MCIC or the Council). As you know, many of our member companies are directly affected by the air toxics regulatory program.

At the stakeholders meeting on September 25, Deputy Director Abraczinskas reviewed seven (7) specific changes that the Division is considering:

- Re-evaluate toxic permitting emission rates (TPERs)
- Exempt natural gas and propane combustion units
- Exempt emergency engines
- Do not retain SIC call
- Maximum Feasible Control = Maximum Achievable Control
- Evaluate projected actual emissions

You will recall from your meeting with MCIC's Science and Technology Committee on July 20, 2012, that several of the changes outlined by Mr. Abraczinskas were also recommended by our Committee members.

The Council believes that all seven (7) of the changes discussed at the stakeholders meeting have merit, and should be recommended to the Environmental Review Commission and to the Environmental Management Commission.

In addition to the reforms presented at the stakeholders meeting, the Council continues to believe that the agency's administration of the air toxics program, as well as the regulated community's ability to predict or anticipate the agency's actions with respect to a specific permit application, would be further enhanced through the development and use of a matrix (or matrices).

The Council believes that a matrix (or matrices) could be developed in a way that would allow both the agency and a regulated entity to fairly accurately predict whether or not the air toxics emissions from a particular source or a group of sources would be sufficiently high enough to warrant a more detailed review and analysis. We believe that such a tool would certainly "increase the efficient use of DAQ resources" as prescribed by this year's air toxics reform legislation, and it would also afford a much higher level of regulatory predictability for the regulated community.

The Council also believes that the current definition of "unadulterated wood" in the air toxics rules creates an unnecessary and erroneous distinction between various wood fuels, is no longer needed, and should be deleted. Alternatively, if the term "unadulterated wood" is not deleted from the air toxics rules, then, at a minimum, the definition should be revised to make it consistent with the manner in which EPA has classified wood fuel as biomass in the major source Boiler MACT rule.

Finally, the Council believes that it is important for the DAQ and the Environmental Management Commission to move expeditiously to revise the AAL for arsenic as unanimously recommended by the NC Science Advisory Board for Air Toxics (NCSAB) in January 2012.

Thank you for organizing the stakeholders meeting on September 25 and for your continuing dialog with the Council on these issues. The Council certainly appreciates the opportunity to meet with you and your staff, as well as other stakeholders and interested parties, to reform the air toxics program in ways that reduce the regulatory burden to our members and provide for reasonable certainty that the public's health is protected.

If you have any questions, or if you need additional information or clarification concerning any of our comments, please contact me at telephone number 919-834-9459, extension 31.

Sincerely,

A. Preston Howard, Jr., P.E.
President

NUCOR
PLATE MILL

October 9, 2012

Sheila Holman, Director
NC DENR DAQ
1601 Mail Service Center
Raleigh NC 27699-1601

Re: Review of State Air Toxics Rules

Dear Director Holman;

Nucor appreciates the time the Division of Air Quality (DAQ) has spent reviewing the State Air Toxics Program pursuant to Session Law 2012-91. The options provided during the September 25th Stakeholders Meeting provide a range of changes that would reduce unnecessary regulatory burdens and increase the efficient use of DAQ and business community resources. Nucor recommends that you include all seven options in your December 1 report to the Environmental Review Commission (ERC).

Following submission of the report to the ERC, we recommend that DAQ proceed to rulemaking and submit all seven options, as well as any additional options that reduce the regulatory burden, to the Environmental Management Commission for adoption.

In addition, we recommend that DAQ fully consider repeal of the State Air Toxics Program entirely. As described at the Stakeholders meeting, even with the changes already implemented under the new statute substantial DAQ resources are still consumed in the risk review process. With the exception of the Trinity Foam situation, we are not aware on any significant risk situation that has been identified or corrected by the State program. Consequently, the question is what value is added by this program for all of the DAQ time and resources, as well as permittee time and resources, expended? We believe that DAQ should seriously consider whether the program should be continued, with the substantial emissions reductions under the Federal hazardous air pollutant program, NAAQS requirements, and the Federal mobile source program. Unless DAQ can justify its continued existence with real air toxics health threats, the State program should be eliminated, other than possibly retaining some authority for the Director to address a unique situation like Trinity.

Please let us know if we can provide any additional information to assist your review.

Very truly yours,

Terry Hairston
Environmental Manager

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SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450 601 WEST ROSEMARY STREET, SUITE 220 CHAPEL HILL, NC 27516-2356 Facsimile 919-929-9421

October 9, 2012

Sheila Holman
Division of Air Quality
1641 Mail Service Center
Raleigh, North Carolina 27699-1641

VIA ELECTRONIC MAIL (daq.publiccomments@ncdenr.gov)

Re: Comments on Potential Amendments to the Air Toxics Rules Pursuant to Section 1 and Section 3 of Session Law 2012-91

Dear Ms. Holman:

The Southern Environmental Law Center, on behalf of itself, Clean Air Carolina, and Medical Advocates for Healthy Air, respectfully submits the following comments on potential changes to the North Carolina air toxics program. On September 5, 2012, the Division of Air Quality ("DAQ") published notice of its review of the air toxics rules pursuant to Section 3 of Session Law 2012-91. DAQ also stated its intention to consider potential amendments to the air toxics rules pursuant to Section 1 of Session Law 2012-91 at this time. On September 25, 2012, DAQ held a stakeholder meeting and presented an overview of possible changes to the air toxics rules.

In the public notice, DAQ stated that it would accept written comments through October 9, 2012. These comments are therefore timely. DAQ also declared that it would accept supplemental comments during the pendency of its review process. The Southern Environmental Law Center therefore reserves the right to provide additional comments.

Background

The air toxics program was established in 1990 "to protect public health."[1] The program fills gaps left by the federal hazardous air pollution program. As the North Carolina Department of Energy and Natural Resources ("DENR") explains, "[f]ederal programs [were] not intended to comprehensively address all air toxics emissions", but were instead "designed in anticipation that state and local air toxics programs would address local issues and federal program limitations."[2]

[1] *See* Control of Toxic Air Pollutants, 15A N.C.A.C. 2D .1101 (2012).

[2] Control of Toxic Air Pollutants in North Carolina, DENR, Division of Air Quality, Environmental Review Commission Meeting at 12 (Sept. 28, 2011), *available at* http://www.wral.com/asset/news/state/nccapitol/2011/09/28/10196478/Holman_presentation.PDF, Attachment A.

The air toxics program supplements the federal hazardous air pollution regulations in a number of key respects. First, the air toxics program covers 21 pollutants that are not subject to federal hazardous air pollutant regulations.[3] These pollutants include acetic acid, ammonia, bromine, fluoride, hydrogen sulfide, and nitric acid.[4] The air toxics program is the only source of protection against emissions of these air pollutants for the people of North Carolina. Second, while the federal program imposes technology-based standards, the state program institutes health-based standards to ensure that levels of pollution in the ambient air are safe. This protects the public in situations where a facility uses state-of-the-art pollution controls, but still contributes to unacceptable concentrations of ambient pollutants. Finally, the federal program applies on a source-by-source basis, so that some sources at a facility may not be subject to any limits. The air toxics program, on the other hand, applies to all sources at a regulated facility. In sum, the air toxics program safeguards public health where the federal program falls short.

Even so, only 75% of toxic air pollution is currently regulated under the state and federal rules combined.[5] North Carolina is home to more hazardous air pollutant emissions than almost any other state, and ranks fourth in the nation according to the Toxics Release Inventory.[6] Any attempts to weaken the North Carolina air toxics program would exacerbate this situation and the adverse health effects of toxic pollutants.

On June 28, 2012, the North Carolina legislature enacted amendments to the air toxics program.[7] Section 1 of the amendments directs DENR to implement rules that exempt sources subject to federal hazardous air pollutant regulations from air toxics rules. But if an exempt source presents an "unacceptable risk to human health," DENR must require the facility to eliminate this unacceptable risk. DENR must make a written finding of unacceptable risk, which can be based on modeling, epidemiological studies, monitoring data, or other information. Section 3 of the amendments requires DAQ to review the air toxics rules "to determine whether changes could be made to the rules or their implementation to reduce unnecessary regulatory burden and increase the efficient use of Division resources while maintaining protection of public health." The amendments direct DAQ to "report the results of its review, including recommendations, if any, to the Environmental Review Commission".

DAQ must take this opportunity to ensure that the new law is implemented in a way that promotes the overarching purpose of the act: the protection of public health.

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[3] *See* Toxic Air Pollutants Regulated by North Carolina, EPA and South Carolina 57-64, *available at* http://www.ncleg.net/documentsites/committees/ERC/2011-2012%20ERC%20Documents/2%20-%20October%2012,%202011/Handouts%20and%20Presentations/2011-1012%20ERC%20Submittal%20-%20Attachments.pdf, Attachment B.

[4] *Id.*

[5] Control of Toxic Air Pollutants in North Carolina, *supra* note 3, at 6.

[6] *Id.* at 8.

[7] *See* An Act to Exempt from State Air Toxics Emissions Controls Those Sources of Emissions That Are Subject to Certain Federal Emissions Requirements, 2012 N.C. Sess. Laws 91 (2012).

Section 1

1. DAQ's implementation of Section 1 is premature and unauthorized.

DAQ states that it has been implementing the session law since its effective date of June 28, 2012. As such, DAQ is currently exempting sources subject to the federal rules listed in section 1(a)(5)a, unless the agency determines that they present an unacceptable risk to human health.[8]

But DAQ's actions violate the plain language of the session law. If a statute is unambiguous, North Carolina courts will not defer to the interpretation of the agency charged with implementing the statute.[9] Instead, the agency must apply the statute as written. Section 1(a)(5) states that the Department "shall implement ***rules*** adopted pursuant to this subsection as follows . . ." (emphasis added). DAQ has not adopted rules to exempt facilities that are subject to federal hazardous air pollutant regulations, and therefore it is prematurely granting exemptions without the regulatory framework mandated by the session law. This violates the plain language of the statute, and DAQ must cease implementing section 1(a)(5)a-b until it has adopted the legally required rules. Any exemptions that have been granted by DAQ so far are unauthorized and unlawful.

2. DAQ must define "unacceptable risk to human health."

Under the amendments to the air toxics program, the Department must determine whether increased toxic emissions from a new facility or a modification of a facility present an "unacceptable risk to human health."[10] But "unacceptable risk" is not defined in the statute or in DAQ's regulations.

DAQ must provide a concrete, regulatory definition of "unacceptable risk" that protects the public from harmful levels of toxic air pollutants. This definition must be "commensurate with established air quality standards."[11] At the very least, any emission that causes or contributes to an exceedance of acceptable ambient levels ("AALs") should be defined as an "unacceptable risk." DAQ has indicated that an exceedance of an AAL would be considered an unacceptable risk, but it should codify this understanding to provide reassurance to the public and ensure that this interpretation is not abandoned in the future. Moreover, any exceedance of an AAL would endanger public health and contravene the purpose of the air toxics program. DAQ therefore cannot consider any AAL exceedance to be an acceptable risk. As explained in the following paragraphs, the regulations should also require DAQ to consider all potential exposure routes, impacts of multiple facilities and combinations of pollutants, and background pollution levels.

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[8] *See* 2012 N.C. Sess. Laws 91 § 1(a)(5)a.
[9] *See Charlotte-Mecklenburg Hosp. Auth. v. N.C. HHS*, 201 N.C. App. 70, 72-73 (N.C. Ct. App. 2009).
[10] 2012 N.C. Sess. Laws 91 § 1(a)(5)b.
[11] *Id.* § 1(a)(5).

"Unacceptable risk" must be defined based on all relevant transmission pathways, not just inhalation. Human exposure to air pollutants occurs through multiple pathways, including water, soil, ingestion, and inhalation. For example, mercury that is emitted into the air eventually deposits into water bodies, where microbial action converts it into methylmercury. People are primarily exposed to methylmercury by eating fish[12] in which methylmercury accumulates and concentrates, rather than through inhalation of mercury.[13] Mercury levels in the kinds of fish people eat can be hundreds of thousands to millions of times more concentrated than the water in which they swim.[14] Mercury concerns are particularly salient in North Carolina, where all 13,123 water bodies in the state are listed as impaired for mercury.[15] DAQ must therefore consider all exposure pathways to determine whether a facility's emissions pose an unacceptable risk.

The current AALs fail to account for numerous exposure pathways, and therefore cannot alone be used to ensure that there is no unacceptable risk to human health. DENR relies on the North Carolina Scientific Advisory Board ("SAB") to formulate recommendations for acceptable ambient concentrations for toxic air pollutants.[16] The SAB conducts a number of assessments to determine the AALs, including an exposure assessment.[17] According to SAB guidelines, exposure assessments "generally take into account potential inhalation exposures only."[18] The SAB *may* also consider dermal exposure and exposure due to deposition of airborne pollutants onto soil or water.[19] But the SAB has not always done so when proposing AALs. For example, when the SAB conducted its latest review of mercury, it concluded that it was "unable to fulfill the request to develop an AAL based on indirect [i.e., non-inhalation] routes of exposure."[20] The SAB explained that it lacked critical information on North Carolina freshwater systems, emission factors, and appropriate atmospheric models at that time.[21] The current AALs therefore do not consider environmental fate and transport or likely routes of environmental exposure to mercury.[22] DAQ must ensure that all exposure pathways are taken into account when determining whether the emission of any toxic air pollutant presents an unacceptable risk to human health, and cannot rely solely on AALs.

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[12] EPA, Mercury Study Report to Congress, EPA-452/R-97-005 (Dec. 1997) ("Mercury Study"), Vol. 1,0-2.

[13] *Id.* at 2-5.

[14] Environmental Protection Agency, Mercury, Human Exposure, http://www.epa.gov/hg/exposure.htm#3 (last visited Oct. 9, 2012).

[15] *See* North Carolina Mercury Total Maximum Daily Load ("TMDL") at 4 (July 5, 2012).

[16] Secretary's Science Advisory Board on Toxic Air Pollutants, Internal Guidelines for Toxicological Evaluation of Chemicals Released to the Air, http://daq.state.nc.us/toxics/risk/sab/sabtoxra.shtml.

[17] *Id.*

[18] *Id.*

[19] *Id.*

[20] North Carolina Science Advisory Board, Mercury in the Environment at 3, 68 (Dec. 5, 2000), *available at* http://daq.state.nc.us/toxics/risk/sab/, Attachment C.

[21] *Id.* at 3.

[22] *Id.* at 14.

DAQ must also take into account other sources of emissions and background levels of pollutants in its unacceptable risk analysis. If emissions of multiple facilities exceed the AALs, the air toxics program requires the facilities to "apply additional controls or to otherwise reduce emissions."[23] DAQ should clarify that the same principle applies when multiple facilities emit toxic pollutants that present an unacceptable risk. The purpose of the air toxics program is to protect public health, and DAQ cannot achieve this goal if it allows unacceptable risks to occur simply because multiple facilities contribute to the problem. Similarly, DAQ must also consider background levels of pollutants in its analysis. Otherwise it cannot ensure that a facility's emissions will not further exacerbate existing pollutant levels to the point that they present an unacceptable risk of harm. The regulations should therefore explain that DAQ will consider these aggravating factors in its risk analysis.

DAQ must also consider the cumulative impact of multiple pollutants. The current air toxics regulations acknowledge that the effects of multiple pollutants may be additive.[24] The regulations should clarify that DAQ will take this into account when considering whether a facility poses an unacceptable risk.

Finally, DAQ should not create an exemption for facilities that are located in remote areas. Under the current air toxics program, facilities do not have to show that their emissions are below acceptable ambient levels, as long as they are located in areas that are unoccupied or uninhabitable.[25] But "uninhabitable" and "unoccupied" are vague, undefined terms in the regulations. For example, a facility could emit dangerous levels of toxic pollutants, thereby making it unsafe for anyone to live in the surrounding area. Such an area might be considered "uninhabitable," but it would be absurd to allow a facility to create its own loophole in this manner. Similarly, a facility could emit toxic levels of pollutants in a habitable but unoccupied area, thereby effectively prohibiting people from moving into the vicinity. Moreover, pollutants with acute health effects may harm people even in uninhabited locations. People may fish and recreate in these areas, and thereby be exposed to toxic pollutants. In sum, it would be contrary to the purpose of the air toxics program for DAQ to exempt facilities from the unacceptable risk analysis based on their location in an uninhabitable or unoccupied area.

3. The regulations must authorize DAQ to collect sufficient data from a facility to determine whether there is an unacceptable risk.

Section 1 requires DAQ to review a facility's application and determine whether its emissions present an unacceptable risk to human health.[26] But the law does not specify what information a facility must provide to allow DAQ to conduct its determination. DAQ should promulgate regulations that clarify what information a facility must give in its permit application. At a minimum, this information must include actual, potential, and permitted emission rates for toxic emissions from each source at an existing facility, and projected actual and potential

[23] 15A N.C.A.C. 2D .1107(a).
[24] *See id.* 2D .1108.
[25] Toxic Air Pollutant Procedures, 15A NCAC 2Q .0709(a)(2)(A) (2012).
[26] 2012 N.C. Sess. Laws 91 § 1(a)(5)b.

emission rates for each source at a new facility. Facilities must provide these emission rates using mass balancing analysis, source testing, or other methods approved by the Director that provide an equivalently accurate estimate of the emission rate.[27] Without this data, DAQ could do nothing more than guess whether a facility presents an unacceptable risk to human health.

4. DAQ must specify the models and averaging times that it will use in making its determination.

DAQ must create regulations that identify the models it will rely on when determining whether a facility presents an unacceptable risk. Regulations currently prescribe standards for the models that DAQ may use to see whether a facility will exceed AALs.[28] DAQ should follow this approach and use models that are at least as rigorous and accurate as the model described in 40 C.F.R. 51.166(l) or its equivalent.

In addition, DAQ must specify what time period it will use to evaluate a facility's impact on human health (i.e., a one-hour or 24-hour averaging period for emissions). DAQ should conduct its analysis and set emission limits based on averaging times that correspond to the health risks for each pollutant. Thus, for pollutants that that present risks to people from short-term, higher-level exposures, DAQ should evaluate a facility's emissions and set limits for short-term peak emissions. Where chronic exposure to low-levels of pollutants pose a risk to people's health and welfare, DAQ should evaluate emissions and set limits on that basis. Notably, some pollutants may present risks at short-term, peak concentrations as well as from chronic exposure to lower concentrations. In such cases, the evaluation and resulting emission limits must address the full range of health risk scenarios.

5. DAQ should clarify that facilities with non-exempt sources must still comply with the air toxics program.

Under the amendments to the air toxics program, a source subject to federal hazardous air pollution regulations is no longer subject to the air toxics rules. But 15A N.C.A.C. 2Q .0711 states that an air toxic permit is required for any facility whose emissions from "all sources" are greater than any TPERS. Therefore, if a facility contains some non-exempt sources, DAQ must assess the facility's emission rates from all sources to see whether they exceed TPERs. If so, the facility must submit plant-wide modeling to show that it will not violate the air toxics rules by exceeding AALs. DAQ should clarify and emphasize this point in the Air Toxics regulations.

6. The regulations must provide procedures for determining when an existing MACT-regulated facility presents an unacceptable risk to human health.

The amendments state that "[u]pon making a written finding that a source or facility presents…an unacceptable risk to human health," DENR must require the facility to eliminate

[27] *See* 15A NCAC 2D .1106(g).
[28] *Id.* 2D .1106(e).

the risk. For new or modified sources, the Department can issue this finding after reviewing a permit application submitted by the source. But the law does not specify what might trigger DAQ's evaluation for an existing source that is not modified. Importantly, the law does not limit the situations under which DAQ can make a written finding, and therefore does not preclude DAQ from considering whether existing sources may present an unacceptable risk.

DAQ must clarify the circumstances under which it will review existing source emissions. This should include instances where DAQ lowers an AAL based on new evidence of a pollutant's impact on human health. If an existing facility exceeds the new AAL but did not exceed the previous AAL, DAQ must issue a written finding requiring the facility to eliminate this unacceptable risk. In addition, DAQ should review existing source emissions when a facility becomes subject to federal HAP regulations for the first time, but is not yet subject to TAPs regulations. DAQ should review the federal HAP permit application to determine whether the facility presents an unacceptable risk. Finally, an existing facility may also present an unacceptable risk if there is a change in weather patterns or any other change that influences the facility's emission, but would not be considered a "modification." DAQ should review all of these circumstances to determine whether existing facilities present an unacceptable risk.

7. DAQ should evaluate sources located near vulnerable populations with particular care.

The AALs are designed to protect sensitive sub-populations in North Carolina. To make certain that the program achieves this goal, DAQ should require facilities located in proximity to these groups to provide additional assurances that their emissions will not endanger public health. These vulnerable groups include children, senior citizens, pregnant women, and sick people. Therefore facilities located near schools, hospitals, nursing homes, and daycare facilities must take extra measures to prove that their emissions will not harm individuals that live or spend time in the area.

The USA Today newspaper published a study that compares health risks from exposure to toxic air pollutants outside schools across the country.[29] The study used a Risk Screening Environmental Indicators computer model, developed by the U.S. Environmental Protection Agency, to relatively rank 127,800 schools based on exposure to toxic chemicals. The report revealed that seven North Carolina schools were in the first percentile of schools in areas of highest modeled levels of toxic chemicals. These schools are located in Canton, Gastonia, Maxton, and Raleigh, and are exposed to dangerous levels of sulfuric acid, diisocyanates, aniline, and nitrobenzene, among other pollutants. As noted above, the air toxics program is the only set of regulations that even purports to protect the public from dangerous ambient concentrations of these pollutants. DAQ must subject facilities in these areas to heightened analysis, and ensure that these facilities are not granted a blanket exemption from the air toxics program.

[29] The Somekstack Effect – Toxic Air and America's Schools, USA TODAY (Dec. 8, 2008), *available at* http://content.usatoday.com/news/nation/environment/smokestack/index.

Section 3

8. It would be imprudent for DAQ to make sweeping changes to the air toxics program under Section 3 at this time.

DAQ is not required to make any additional changes to the air toxics regulations at this time beyond those required by Section 1(a)(5) of the amendments. Section 3 of the session law requires DAQ to determine whether changes could be made to the air toxics rules or their implementation to "reduce unnecessary regulatory burden and increase the efficient use of Division resources while maintaining protection of public health." DAQ must "report the results of its review, including recommendations, if any, to the Environmental Review Commission."

But DAQ cannot ensure that additional alterations under Section 3 would maintain protection of the public health, especially when the full impacts of the exemptions in Section 1 are unknown. As described above, many of the requirements in Section 1 remain undefined and unexplored, much less tested in practice. DAQ should not rush changes under Section 3 until after it has implemented Section 1 of the law and evaluated the effects of those changes on the efficacy of the program. Doing so would result in redundancies, as DAQ would likely have to revise the regulations again after the effects of the Section 1 changes become clear. This would violate one of the commandments of Section 3 by inefficiently wasting DAQ resources. Most importantly, DAQ would not be able to guarantee protection of public health if it further weakened the air toxics rules at this time. DAQ should therefore report to the ERC that it has no recommended changes at this time.

9. DAQ cannot raise the TPER thresholds and still maintain protection of public health. (Option 1)

As a preliminary matter, DAQ should make the current guidelines for setting toxic air pollutant permitting emission rates ("TPERs") and the models used to develop TPERs available and easily accessible to the public. Only then will stakeholders be able to determine the full impact of the regulatory changes that DAQ is considering.

a. DAQ must set TPERs at the lowest level necessary to ensure that facilities will not violate AALs.

DAQ must ensure that no facility or combination of facilities exceed the AALs for any toxic pollutant.[30] To do so, DAQ first determines the minimum emissions level – called a TPER – at which a facility could possibly exceed an AAL.[31] If a facility's emission rates are above the TPER for one or more pollutants, the facility must demonstrate that it will not cause or

[30] 15A N.C.A.C. 2D .1104 ("A facility shall not emit any of the following toxic air pollutants in such quantities that may cause or contribute beyond the premises (adjacent property boundary) to any significant ambient air concentration that may adversely affect human health."); *Id.* 2D .1107.

[31] *Id.* 2Q .0711.

contribute to an exceedance of an AAL.[32] If a facility's emission rates are below the TPER, no further effort is made to determine whether the emissions will violate an AAL. Because DAQ does not investigate facilities with emissions below the TPERs, DAQ must set the TPERs so low that it is impossible for any facility to exceed the AALs at those emission rates. This means DAQ must consider reasonable worst-case scenarios when setting TPERs. Here, the term "reasonable worst-case scenario" means the lowest emission level at which a facility could still, under certain circumstances, cause or contribute to an exceedance of an AAL.

To determine the worst-case scenario, DAQ must consider 1) the geographic and meteorological characteristics of the area surrounding the facility; 2) characteristics of the facility itself, such as the height of emission stacks or other release points, the exit temperature of the exhaust gases, and the exit velocity of pollutants, and 3) cumulative effects from multiple facilities or background levels of a pollutant. All of these factors affect a facility's potential to cause an exceedance of an AAL. DAQ must evaluate the greatest ambient concentration that a facility could produce taking into account all of these factors, plus a margin of safety, as discussed below.

i. TPERs must be low enough to account for weather conditions that result in the highest local concentrations of pollutants emitted by a facility.

Meteorological and topographic conditions affect how pollutants from a facility will be distributed in the air and deposited. DAQ must therefore develop TPERs based on the meteorological conditions that will result in the greatest local concentrations of pollutants. The weather conditions that will satisfy this standard may differ based on the particular characteristics of each toxic pollutant. DAQ must use weather data that correspond to the health-risk averaging times for each pollutant. Thus, for instance, DAQ should use hourly weather data rather than monthly or yearly averages for pollutants that pose health risks based on peak short-term exposures. Moreover, DAQ must tailor its analysis for areas of the state with different weather patterns and topography.

ii. DAQ should consider facility characteristics that would result in the highest impact on ambient levels of pollution, rather than rely on assumptions that are favorable to facility owners.

Many facility parameters affect pollutant dispersion, including 1) stack or release height, 2) exit velocity, 3) exit temperature, 4) stack diameter, and 5) proximity of the emission source to the property boundary.

DAQ proposes to raise the existing TPERs by using "conservative assumptions" about emission rates and facility parameters. But conservative assumptions may be less protective than

[32] *Id.* 2Q .0709, .0711.

reasonable worst-case scenario assumptions. As a result, a substantial number of facilities may exceed AALs, even though their emissions are below TPERs that are based on conservative assumptions. DAQ must ensure that its assumptions fully protect public health with a margin of error, and to do so it must set TPERs based on a reasonable worst-case scenario. In other words, the TPER should be the lowest emission rate that a facility can produce and still cause or contribute to an exceedance of AALs. This may include, for example, an assumption of ground level emissions and a low exit velocity, and an assumption that emission sources abut a facility's property boundary. DAQ should not use assumptions that distort the impact of emission rates on AALs in favor of polluters.

iii. DAQ must set TPERs low enough to account for the potential effects of multiple facilities and background pollutant levels.

Even if a facility could not exceed AALs in isolation, it may do so when its emissions combine with those from other facilities in the same area. DAQ must determine whether the impacts of two or more facilities contribute collectively to the exceedance of an AAL.[33] If so, the facilities must apply additional controls or "otherwise reduce emissions."[34] TPERs must therefore be set at the lowest level necessary to capture cumulative effects from other facilities. If TPERs are set too high, DAQ and the public may never even be aware of situations in which many low-emitting facilities collectively cause a public health problem.

To determine which facilities may have additive impacts, DAQ must have access to adequate mapping of emission sources. The official air toxics program website currently displays a map of toxic air pollutant sources that does not appear to have been updated since 1993.[35] This map shows how many toxic air pollution facilities are located in each county, but does not provide any greater specificity. DAQ must utilize a more detailed, frequently updated map that shows the actual location of facilities and the pollutants emitted by each facility. If two or more facilities that emit the same pollutant are located in close enough proximity to each other to cause cumulative impacts, DAQ must require a modeling demonstration.

Furthermore, DAQ does not currently consider background levels of pollution when setting TPERs.[36] This raises the risk that a facility will exceed AALs, even if its emission rates are too low to cause an exceedance of an AAL independently. A comprehensive assessment of the background levels of toxic air pollution in North Carolina must be conducted in order to

[33] *Id.* 2D .1107(a), (c).

[34] *Id.* 2D .1107(a).

[35] *See* Division of Air Quality, Hazardous and Toxic Air Pollutants, *Number of Facilities, Number of Toxic Air Pollutants, and Pounds Emitted by County for 1993*, *available at* http://daq.state.nc.us/toxics/hap/, Attachment D.

[36] *See* Air Toxics Program, Acceptable Ambient Levels (AALs), daq.state.nc.us/toxics/aaldisc.pdf ("Since there is not enough monitoring information to be able to know the general ambient concentrations for each of the 97 TAPs, the North Carolina program focuses on what a facility adds to the existing environment.")

allow facilities and DAQ to analyze the emissions that each facility adds to these background levels. Until then, DAQ should set TPERs low with a wide margin of safety to ensure that a facility's emissions do not combine with background levels of a pollutant and exceed public health standards.

The factors in the paragraphs above show that in reality, two facilities with the same emission rates can result in very different ambient levels of a pollutant. DAQ proposes to raise TPERs based on its observation that many facilities that exceed TPERs do not come close to exceeding AALs. But this reasoning defies logic and the requirements of the air toxics program, which prohibit *any* facility from exceeding AALs. Due to the factors listed above, one facility might exceed the AALs, even if other facilities with the same emission rate do not. Therefore DAQ must base TPERs on a worst-case scenario to ensure that all facilities remain below AALs. DAQ's approach also ignores the purpose of a screening level review, which is to identify sources for more detailed study. It is natural and expected that many of the sources that trigger the requirement for a more comprehensive modeling demonstration would not violate the health-based standard. Moreover, DAQ's statement that many permitted facilities do not come close to exceeding AALs may be based on faulty modeling, as discussed below.

In sum, if DAQ uses anything other than reasonable worst-case scenarios, the modeling would not depict maximum pollutant concentrations that might result over time and from a full range of operating and meteorological conditions. As a result, one or more facilities may exceed AALs and endanger public health. Moreover, as noted above, facilities that are below TPER thresholds do not have to submit a permit application or model their emissions. As a result, DAQ and the public cannot readily determine whether a particular facility that is below the TPER threshold is contributing to an exceedance of AALs. Violations of AALs in these circumstances would go unchecked. DAQ must prevent this from occurring by setting TPERs based on a reasonable worst-case scenario with a margin of safety. It cannot allow a facility to evade permit and modeling requirements unless there is absolutely no reasonable chance that the facility, alone or in combination with other facilities, could exceed the AALs.

b. DAQ's observation that many facilities that exceed TPERs do not exceed AALs may be based on faulty modeling.

DAQ is considering raising TPERs because the agency observes many instances where a facility that exceeds TPERs does not come close to exceeding AALs. But evidence suggests that this observation is based on faulty modeling. The modeling and limits for the PCS Phosphate permit illustrate this point.[37] PCS Phosphate is the largest emitter of toxic air pollutants in the state. Yet DAQ concluded that the facility can emit 5,199 pounds of mercury each day and stay below the AAL for mercury. These permitted emissions amount to roughly 949 tons of mercury per year – over six times the amount of mercury that is emitted each year by all U.S.

[37] *See* Southern Environmental Law Center Comments on PCS Phosphate Title V Permit Renewal, Attachment E.

anthropogenic sources.[38] These levels of mercury, a potent neurotoxin, cannot be protective of public health, and call into question DAQ's impression that many facilities do not exceed human health standards.

In addition, many of the modeling inputs for PCS phosphate are outdated; others are estimates rather than measurements.[39] DAQ cannot base its conclusions about facilities' contributions to AALs on such inadequate modeling data.

10. Exempting natural gas and propane combustion units would do little to increase efficiency, but may pose great risks to public health. (Option 2)

DAQ should not provide a blanket exemption for natural gas combustion units. If, as DAQ presumes, most of these units do not emit potentially dangerous levels of toxic air pollutants, then they will be below TPER thresholds and exempt from permitting requirements. If any of these units are above the TPER threshold, then they may potentially emit toxic pollutants at levels that harm human health, either alone or in combination with other facilities.

In the alternative, if DAQ pursues this as a possible exemption, DAQ must craft the exemption so that only smaller sources will be eligible. Sources with the potential to emit above a certain threshold, such as the proposed Sutton plant, must not be exempted.

11. DAQ should not exempt emergency engines. (Option 3)

Emergency engines may be small and numerous, but they are also dirty and inefficient. They often emit a lot of pollution in a very condensed timeframe. These types of units emit formaldehyde, acetaldehyde, methanol, benzene, toluene, 1,3-butadiene, 2,2,4-trimethylpentane, hexane, xylene, naphthalene, PAH, methylene chloride, and ethylbenzene and should not be completely unregulated. Moreover, although these units are expected to be used only in emergencies, facilities may rely on them more frequently if they are unregulated. Industries that cannot shut down for even short time periods, such as internet server facilities, may rely on large emergency generators more regularly.[40]

DAQ must review emergency engines at a facility under the air toxics program. If the facility's combined emission exceed TPERs, DAQ must quantify and impose restrictions on the toxic air pollutants from these sources. In the alternative, DAQ must simplify the process for emergency generators, rather than completely exempting or ignoring them.

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[38] Mercury Study, *surpa* note 14, at Vol. I, 0-1.

[39] *See* Comments on PCS Phosphate, *supra* note 39.

[40] James Glanz, *Power, Pollution and the Internet*, N.Y. TIMES (Sept. 22, 2012), *available at* http://www.nytimes.com/2012/09/23/technology/data-centers-waste-vast-amounts-of-energy-belying-industry-image.html?pagewanted=all&_r=0.

12. Registering, rather than permitting, small sources would not increase efficiency or protect public health. (Option 4)

North Carolina's permitting process provides for full notice and comment by the public, including public hearings. This process is very important for the citizens of North Carolina, and should not be eliminated. With regard to the air toxics program specifically, a permit application and the attendant public process helps inform DAQ of other sources of TAPs emissions in the same geographic area, which is an important factor in the permitting of new or additional sources, no matter how small or seemingly insignificant.

While the "registration" process has not been fully described, it is likely that important information regarding air pollution could be overlooked if facilities only have to register and not apply for a permit. Neither the agency nor the people of North Carolina will be given adequate details of pollutants emitted, emission rates, hours of operation, and other information of great importance to the public such as: whether there are multiple sources of the same pollutant in close proximity to the new source; what types of other centers of human activity are nearby, such as hospitals, schools, parks and residential areas; and other information that would assist DAQ in determining on a case by case basis if a source creates an unacceptable risk to human health.

This would be a very dramatic change to the Air Toxics Program. Hundreds of sources are already being exempt from the program as a result of Session Law 2012-91. This is certainly not the time to reduce even further the amount of information regarding toxic air pollution that will be available to DAQ and the citizens of North Carolina. Emitters in North Carolina reported in the 2010 Toxic Release Inventory over 34 million pounds of toxics and 1.5 million pounds of carcinogens. Reducing "regulatory burden" and ensuring "efficient use of division resources" cannot override the ultimate purpose of the air toxics program which is the protection of public health. DAQ therefore cannot register small sources at this time.

13. DAQ should not dispose of SIC Calls, which allow the agency to gather industry-wide information. (Option 5)

a. Removing SIC Calls would not reduce any burden on facilities, or increase efficient use of Division resources. In fact, it would reduce efficiency because DAQ would have to reach out to each source individually.

DAQ proposes to delete regulations that allow the Director to require all facilities under the same four-digit Standard Industrial Classification ("SIC") to submit an application at one time to comply with the air toxics rules. Currently, the Director can make this call for any facilities in industry groups that are not subject to MACT or GACT, or are only subject to MACT or GACT for unadulterated fuel combustion.[41] A facility subject to a SIC Call must submit an air toxics application for all of its sources, even if they are not in the same industrial

[41] 15A N.C.A.C. 2Q .0705(c).

classification.[42] Facilities that do not exceed TPERs for any sources do not have to file a permit application, even if they would otherwise be subject to a SIC Call.[43] In short, the SIC Call provides an efficient, streamlined way for DAQ to require applications from a potentially large number of facilities that may be emitting hazardous concentrations of toxic air pollutants.

DAQ has used the SIC Call provisions effectively in the past. For example, DAQ issued a SIC Call for decorative chrome platers after conducting a risk assessment for that class of sources.

Removing this useful regulatory tool would not promote any of the criteria in Section 3. First, it would not reduce any burden on facilities. Facilities would still have to provide the same required information – the only difference is that they would provide the information pursuant to a Director's Call rather than a SIC Call. Second, removing the SIC Call option would not increase efficient use of Division resources. In fact, it would do the opposite. The Division would no longer be able to swiftly gather applications from all sources in an industry; instead, it would have to make risk determinations and request applications for each individual facility. Finally, eliminating the SIC Call would not protect human health and could unnecessarily delay implementing health protection standards for numerous facilities within a source category. It would only delay DAQ's implementation of calls for applications that become necessary across an entire industry group.

b. The Director's Call is not an adequate substitute.

DAQ reasons that the Director's Call provides adequate protection in the absence of a SIC Call option. But the Director's Call is less efficient in some situations, as described above, and insufficient for other reasons as well. Under the current regulations, DAQ can issue a SIC Call when it requires applications from many facilities in the same industry, and a Director's Call when it needs more targeted information from a single facility. The Director's Call forces DAQ to issue calls for one facility at a time, and is therefore not a good substitute. The proposed change also curtails the Director's flexibility in requesting permit applications. DAQ can only issue a Director's Call if a facility's emissions present an unacceptable risk to human health based on the AALs or epidemiology studies. There are no such restrictions on DAQ's ability to issue a SIC Call.[44] For example, DAQ could issue a SIC Call based on studies other than epidemiology studies, such as workplace studies, controlled human studies, laboratory animal bioassays or other laboratory studies.[45]

[42] *Id.*
[43] *Id.*
[44] *Id.*
[45] Secretary's Science Advisory Board on Toxic Air Pollutants, Internal Guidelines for Toxicological Evaluation of Chemicals Released to the Air, http://daq.state.nc.us/toxics/risk/sab/sabtoxra.shtml.

14. DAQ cannot allow facilities subject to MACT to simply comply with maximum feasible control, rather than eliminate their risk to human health. (Option 6)

If a source can show that it would be technically infeasible or cause serious economic hardship to comply with AALs, the source does not have to demonstrate that its emissions will remain below AALs.[46] In this case, the Director shall require the source to apply "maximum feasible control" instead.[47] Sources that could potentially apply for this exemption are sources constructed before May 1, 1990, certain perchloroethylene dry cleaning facilities, and combustion sources[48] permitted before July 10, 2010.[49] Maximum feasible control is defined as the maximum degree of reduction using the best technology that is available taking into account, on a case-by-case basis, human health, energy, environmental, and economic impacts and other costs.[50]

Under DAQ's proposed change, if a source is subject to MACT, then maximum feasible control would be defined as whatever federal MACT requirements apply to the source. DAQ would not make a case-by-case determination to see whether a facility could feasibly implement further controls or emission reductions. But this change would violate Section 1 of SL 2012-91 and create a loophole for sources subject to MACT when protections are needed the most, as described below.

a. If a MACT-regulated facility presents an unacceptable risk by exceeding an AAL, the facility must *eliminate* this risk.

Section 1 exempts all sources subject to MACT from the air toxics program, unless the Director determines that these sources present an "unacceptable risk to human health." A facility that violates an AAL presents an unacceptable risk to human health.[51] If a facility presents an unacceptable risk, the Director must require the facility to submit a permit application that *eliminates* the unacceptable risk.[52] In other words, DAQ cannot simply require the facility to mitigate its violation of an AAL. The statutory requirement to eliminate the risk is absolute, and therefore a MACT-regulated source cannot evade this requirement in cases of technical infeasibility or economic hardship. There is no situation, then, where a MACT-regulated source would be able to apply maximum feasible control rather than comply with AAL requirements. As a result, DAQ's proposal to set maximum feasible control equal to MACT is at best meaningless, and at worst contrary to the plain language of Section 1.

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[46] 15A N.C.A.C. 2Q.0709(b).

[47] *Id.*

[48] Combustion sources include "boilers, space heaters, process heaters, internal combustion engines, and combustion turbines" that burn wood or fossil fuel. 15A N.C.A.C. 2Q. 0703. The term does not include incinerators, waste combustors, kilns, dryers, or direct heat exchange industrial processes. *Id.*

[49] 15A N.C.A.C. 2Q.0709(b).

[50] *Id.* 2Q .0703(13).

[51] *See* discussion above in section 2.

[52] *See* 2012 Sess. Laws 91 §1(a)(5)b.

b. Setting maximum feasible control equal to MACT deprives the public of protection when it is most needed.

Even if DAQ could allow a MACT-regulated source to apply maximum feasible control, it should not allow the source to satisfy the maximum feasible control requirement by complying with its existing MACT requirements. Instead, DAQ should analyze the source critically to ensure that emission controls are as stringent as possible. A source could also switch fuels or raw materials, or change its hours or methods of operations to ensure that it does not pose a threat to the public. DAQ must apply all of these potential options rather than allow a facility to simply comply with MACT requirements. DAQ has already determined that such a source presents a danger to public health, and therefore this is exactly where a rigorous analysis of possible controls is most critical.

15. DAQ should not use a facility's projected actual emissions to determine whether the facility is subject to and in compliance with the air toxics program. (Option 7)

DAQ proposes to use projected actual emissions to determine whether a facility exceeds TPERs and complies with AALs. But projected actual emissions do not represent the facility's maximum ability to pollute the environment and harm public health. Instead, DAQ should use the permitted emission rate, or in some cases the potential emission rate, to determine whether a facility will contribute to an exceedance of the acceptable ambient level or trigger TPERs. The emission limit contained in a facility's permit is the amount of pollution that a facility is legally allowed to emit. DAQ must therefore use this figure to determine whether a facility presents a risk to public health. If a facility's actual or projected actual emissions are lower than its permit limit, then the permit limit should be lowered to more accurately track these emissions. Without lowering the permit limits, there is no guarantee that a facility will keep its emissions low enough to prevent adverse health effects. In addition, DAQ should not rely on projected actual emissions in lieu of the "actual rate of emissions" as defined in 15A N.C.A.C. 2Q .0703.

Conclusion

DAQ must cease the unlawful implementation of Section 1 of Session Law 2012-91 and implement regulations that safeguard the public. DAQ should not impose any changes under Section 3 at this time because all of the contemplated amendments would fail to maintain protection of human health.

Respectfully submitted,

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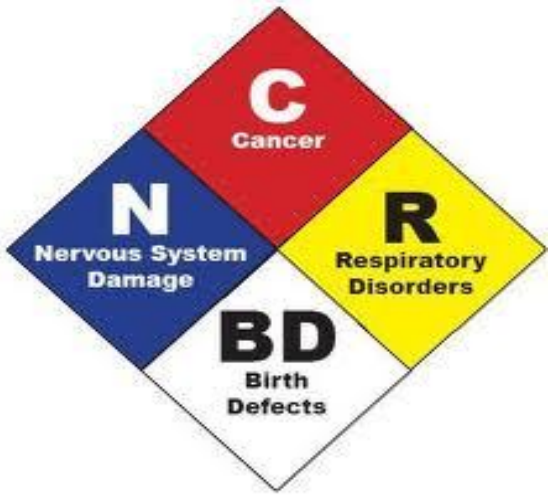
MB/lap

"First, they came for..."

The North Carolina Legislature's Assault on the Public ©

Blue Ridge Environmental Defense League



Lou Zeller
Therese Vick

January 2012

Introduction

German clergyman Martin Niemöller's famous quote[1] can be found in various versions and is hard to pin down; however his meaning is crystal clear: if we as a society refuse to address oppression of the "other", who will be left to speak for us when we become "other?" This has seldom been clearer than demonstrated by recent private meetings between the North Carolina Division of Air Quality, legislative staff, and industry. Although not all of the documents have been provided, what is clear is that deals are being made outside of public view, in order to benefit certain industries. Research has shown repeatedly that polluting industry locates in areas that are less affluent who have little political power. Thus, it stands to reason that the current deregulatory frenzy at the North Carolina State House will not affect those with uptown addresses. Communities of Color and the poor will continue to bear the costs of stripping regulations designed to protect public health.

[1] http://www.history.ucsb.edu/faculty/marcuse/niem.htm

The History of the North Carolina Air Toxics Program

Louis Zeller, Science Director

In the 1980's North Carolina established regulations for the reduction of toxic air pollutants—chemicals which are irritants, acute or chronic toxicants, or carcinogens. The change was prompted by rising levels of public concern about pollution and health. The NC Environmental Management Commission was empowered by state law and executive order to control toxic air pollution.[2] This authority flows from North Carolina policy which states that "water and air resources of the State belong to the people" and that "Standards of water and air purity shall be designed to protect human health, to prevent injury to plant and animal life, to prevent damage to public and private property, to insure the continued enjoyment of the natural attractions of the State, to encourage the expansion of employment opportunities, to provide a permanent foundation for healthy industrial development and to secure for the people of North Carolina, now and in the future, the beneficial uses of these great natural resources."[3]

In 1985, the NC Division of Environmental Management[4] began to develop a program to reduce toxic air pollutants. At the request of DEM, the NC Academy of Sciences developed a method

[2] NC General Statute § 143-215.107, Air quality standards and classifications

[3] Article 21, Water and Air Resources, Part 1. Organization and Powers Generally; Control of Pollution, § 143-211, Declaration of public policy

[4] The NC Division of Environmental Management was later reorganized to become the NC Department of Environment and Natural Resources with divisions for air quality, water quality, etc.

of establishing acceptable ambient levels of air toxins for the protection of public health. The North Carolina Air Toxics Program evolved from this study. The program's guidelines were based on the categorization of pollutants by toxicity at ambient levels; that is, the actual level in the air we breathe.

The principal requirement of the TAP regulation was that facilities "shall not emit any listed toxic air pollutant in such quantities that may cause or contribute beyond the premises (adjacent property boundary) to any significant ambient concentration that may adversely affect human health."[5] This law included a list of regulated pollutants and specific AALs, or acceptable ambient levels, for periods of 1-hour, 24-hour or annual averaging periods.

The NC Academy of Sciences recommended a combined technology and risk assessment based system for setting each toxic air pollutant level. For known carcinogens, the level was an additional risk of one-in-a-million, for probable carcinogens, one in 100 thousand. For irritants and toxicants, the level was no-observed-effects-levels.

In 1988, North Carolina commissioned a study of the economic impacts of state regulations limiting the emission of toxic air pollutants.[6] The study selected 325 of the 3000 permitted air pollution sources across the state and found that 26% emitted air toxics above trace amounts but that only 3% would experience significant economic impacts if required to meet the new limits.

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[5] NC regulation 15A NCAC 2D.1104, "Toxic Air Pollutant Guidelines." The current language is identical to that in the Radian Corporation report cited in footnote 2.

[6] *Assessment of the Economic Impacts of North Carolina's Proposed Air Toxics Regulation–Final Report*, Radian Corporation, Research Triangle Park, NC, April 27, 1988

The study was conservative and targeted the most likely sources of toxics for this study; in other words, a smaller percentage of emitters and significant economic impacts would be found overall.

In 1990, the Scientific Advisory Board on Toxic Air Pollutants (SAB) was established. The role of the SAB was to evaluate chemical toxins and recommend AALs based on its analysis of scientific, peer-reviewed health studies.

Under pressure from major industry groups, in 1995 the NC General Assembly directed the Environmental Review Commission, a legislative body, to reevaluate the existing TAP program and to eliminate possible overlap or duplication with the 1990 amendments to Title III of the Clean Air Act which regulates hazardous air pollutants. [7] The federal law sets maximum achievable control technology, or MACT, standards for 187 air toxins, a list which includes all but 21 NC TAPs. However, the toxins regulated by North Carolina but unregulated by the Clean Air Act include irritants, toxicants and carcinogens such as nitric acid, mercury vapor and hexachlorodibenzo-p-dioxin. The ERC's Air Toxics Working Group—with representatives from industry, government, law firms and environmental groups—investigated ways to "reduce the regulatory burden permittees face" in meeting the state standards. In short, industry representatives sought to eliminate state regulation of as many TAPs as possible, whether they were regulated by the federal Clean Air Act or not. But some members of the Working Group held firm, stating:

[7] NC General Assembly Studies Act of 1995, Part XVIII, Chapter 52, 1995 Session Laws–House Bill 898

"The AALs implemented by the North Carolina Air Toxics Program are specifically designed and established to protect human health. Federal MACT standards, in contrast, merely implement currently available technology in selected industries emitting large quantities of HAPs nationally. The MACT standards are not based upon a measurement of hazardous air pollutant concentration outside the premises of the permittee's facility, as the North Carolina AALs are."[8]

The Working Group did recommend altering the process by which AALs are evaluated, with DENR referring chemicals for study, the SAB providing risk assessment and the Environmental Management Commission responsible for risk management. Risk assessment is the measurement of hazard presented by a chemical or physical agent. Risk management is the decision making process for reducing risk to a given level. Over the years the original list of 116 TAPs has been reduced to 97, but the program remains largely intact.

North Carolina's health-based air toxics rules and the federal MACT are neither duplicative nor equivalent. The Environmental Protection Agency's method of setting maximum achievable control technologies to reduce toxins does not do what North Carolina's health-based AAL standards do. Federal regulations do not protect public health as well as North Carolina's because a pollution source 100 yards away from a community will have a vastly greater impact than the same pollution source 200 yards, 500 yards or 1000 yards away. For this reason, regulating pollution levels strictly by setting technology standards can never provide the same

[8] *Final Report to the North Carolina Environmental Management Commission*, Air Toxics Working Group, A Study Directed by the Environmental Review Commission Pursuant to the Studies Act of 1995

level of protection as controlling the actual amount of pollution in the air. North Carolina's acceptable ambient levels take into account the distance of smokestacks from property lines and from people's homes.

Fast Forward to 2012: A is for Arsenic

Therese Vick-Community Organizer

"If you poison us, do we not die?"

-Shylock, in William Shakespeare's *The Merchant of Venice*

Arsenic has been much in the news lately, recently found in eggs, chicken and apple juice. A quick search on Google news turns up dozens of results. However, the arsenic story of most concern to North Carolinians, an example of the assault on North Carolina's health-based air toxics regulations is not being told. To see a snapshot of what is ahead for North Carolina's air toxics standards, one has only to look at what has been occurring at the state level regarding this well-known poison and carcinogen; increasingly shown to have alarming endocrine disrupting effects.[9]

On Thursday, October 13 2011, the North Carolina Division of Air Quality (DAQ) published the North Carolina Science Advisory Board's (SAB) "Draft Risk Assessment for Arsenic and Inorganic Arsenic Compounds" to their website for public comment. The SAB recommends increasing North Carolina's current acceptable ambient level[10] (AAL) for arsenic "9-fold."[11] The

[9] Dartmouth Toxic Metals Superfund Research Project: Arsenic as an endocrine disruptor-Project leader Joshua W. Hamilton Ph.D. Senior Scientist

[10] Acceptable Ambient Level (AAL) is the ambient concentration of a toxic pollutant at the property boundary. http://daq.state.nc.us/rules/rules/Q0709.pdf

[11] Risk Assessment for Arsenic: Draft for Public Comment

North Carolina Science Advisory Board (SAB) on Toxic air Pollutants "was chartered by the Secretary of the Department of Environment and Natural Resources to make recommendations to the Environmental Management Commission (EMC) to ***minimize the potential health hazards resulting from toxic air pollution*** [emphasis added]." [12] The charter itself defines this responsibility further:

Section II. Functions

(2) The Board shall have the following duties:

(e) To recommend airborne concentrations of toxic air pollutants in a "range of risks" to the Director of the Division of Air Quality and to the Environmental Management Commission (EMC) for regulation that will ***minimize adverse health responses in the exposed citizenry*** *and to advise the EMC of the scientific basis of these recommendations* [emphasis added]...[13]

The SAB is comprised of six members, all with toxicological, epidemiological and/or medical backgrounds. The current members are:

Thomas B. Starr, Ph.D. Chair

Woodhall Stopford, MD, MSPH

[12] Science Advisory Board on Toxic Air Pollutants

[13] Science Advisory Board Charter

Elaina M. Kenyon, Ph.D., DABT

Ivan Rusyn, MD, Ph.D.

Helen Cunny, Ph.D., DABT

David Dorman, DVM, Ph.D., DABVT, DABT

BREDL submitted comments opposing the SAB's recommendation pointing out arsenic's toxic effects as well as asking the question, "What industry (or industries) are behind the impetus" (to change the acceptable ambient level of arsenic).[14] This recommendation was scheduled to be voted on by the Board November 30, 2011 at the 161st meeting, which was held by teleconference. Because of BREDL comments, it was decided to postpone the decision until the January 2012 meeting. During the public comment portion of the teleconference BREDL staff person Therese Vick asked where this request initially came from. Dr. Starr answered that the request had come from the North Carolina Division of Air Quality. It was explained that certain areas in North Carolina "routinely exceed the current AAL for arsenic."[15,16] The "2009 Annual Air Toxics Report" states that: "...median arsenic concentrations measured across the state in 2009 exceed the AAL for arsenic by 3–4 times." [17]

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[14] BREDL Comments Arsenic AAL

[15] From Therese Vick's notes of the 161st meeting of the Director's Science Advisory Board, November 30, 2011. The minutes from the meeting have not yet been published.

[16] One Hundred Fifty-Fourth Meeting of the Science Advisory Board on Toxic Air Pollutants-Proceedings of the October 27, 2010 Teleconference

[17] "2009 Annual Air Toxics Report" Division of Air Quality Toxics Protection Branch October 2010

This admission was shocking—DAQ was acknowledging that rather than investigating ways to bring these areas into compliance with the current, more protective standard, they were *proposing to change the standard instead*. Even members of the SAB pointed out that the lower bound of the proposed AAL was "coincidentally close to the measured concentrations at monitoring sites around NC."[18]

"Even the Cat's in on it!"

-Mortimer Brewster *Arsenic and Old Lace*

Because of these troubling admissions, BREDL staffer Therese Vick began investigating the history behind the reevaluation. After a review of DAQ documents and several web searches, it became clear that the impetus behind the requested change was likely coming from influences outside of NC DENR. For example, in the "PSD Preliminary Review – modification 300 construction/operation permit (Draft Revision 8, July 2011 – Assistant Secretary)" for Carolinas Cement Company LLC (aka Titan Cement) proposed to be located in Castle Hayne, North Carolina, the modeled arsenic levels are at 30% of the AAL— according to the company's own modeling and after pollution control. The amount of arsenic potentially emitted into the air of the surrounding community is significant and dangerous. In the Draft Revision, DAQ attempts to diminish the potential concern over these levels by saying "Finally, the Scientific[19] Advisory

[18] Comment by Dr. Ivan Rusyn, SAB member, One hundred Sixtieth Meeting of the Science Advisory Board on Toxic Air Pollutants-Proceedings of the October 11, 2011 Teleconference

[19] Historical Note: The "Science Advisory Board' was known as "The Scientific Advisory Board" prior to 2004.

Board is considering adjusting the Arsenic AAL."[20] As troubling as 30% is, it pales in comparison to the almost 48% of the AAL modeled in an earlier draft.[21]

Industry is certainly following this proposed change very closely, and their relationship with the DAQ is inappropriate at best. Industry admits that sources are having problems meeting the arsenic AAL. Trinity Consultants, a North Carolina environmental consulting firm posted this on their website:

> "For a variety of emission source(s), particularly combustion sources, the arsenic AAL has often been problematic in TAP air dispersion modeling. ***In some cases, affected facilities have had to improve pollution control systems, increase stack heights or place operational limits to demonstrate compliance with the arsenic AA(L)***[emphasis added]**.**"[22]

At the November 2010 meeting of the SAB, Brendan Davey, DAQ staff from the Asheville Regional Office, remarked that "there are a few combustion sources in the Asheville region that are having difficulty complying with the AAL for arsenic given current regulations",[23] and that

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[20] North Carolina Division of Air Quality: PSD Preliminary Review Draft Revision 8 July 2011

[21] "The air toxics modeling indicated that arsenic was at 47.83% of the Significant Ambient Air Concentration (SAAC) at some locations along the facility property line." North Carolina Division of Air Quality: PSD Preliminary Review Draft Revision 9 September 2009

[22] Trinity Consultants News: Increased AAL for Arsenic

[23] In a January 5, 2012 email to Therese Vick, Brendan Davey listed these three companies as exceeding thee arsenic AAL: **Blue Ridge Paper in Canton, Jackson Paper Manufacturing Company in Silva, and Zickgraf Hardwood Flooring Company in Franklin**

"the control technology for these emissions is insufficient..."[24]Mr. Davey was speaking of Blue Ridge Paper in Canton, Jackson Paper Manufacturing Company in Silva, and Zickgraf Hardwood Flooring Company in Franklin, NC (See footnote 23). At a later meeting, SAB member Dr. Woodhall Stopford ask why the arsenic AAL was being reviewed. He was told that "DAQ needs to have the arsenic AAL reviewed because ambient concentrations are above the AAL across the state and the DAQ has been tasked by the EMC (Environmental Management Commission) to do a combustion source evaluation because ***boilers have been exempt from Toxics regulations.***"[25] Operating facilities are not the only companies which have an interest in higher arsenic AAL's. The North Carolina Legislature requires that power companies generate a certain percentage of electricity from poultry manure. [26] Fibrowatt, a company that has been attempting to locate in Sampson County, and Poultry Power, who has proposed a facility in Montgomery County both stand to benefit from a higher limit of arsenic emissions.

The Division of Air Quality performed a "Toxics Emissions Evaluation from Poultry/Turkey Litter."[27] The modeling DAQ evaluated showed that:

> "*The model results provide that the arsenic emissions are the limiting pollutant with*

[24] One Hundred Fifty-Fifth Meeting of the Science Advisory Board on Toxic Air Pollutants- Proceedings of the November 17, 2010 Teleconference

[25] Dr. Reginald Jordan, DAQ Toxics Protection Branch One Hundred Fifty-Sixth Meeting of the Science Advisory Board on Toxic Air Pollutants- Proceedings of the January 26, 2011 Teleconference

[26] "NC poultry litter-fired generating plants under consideration"

[27] Agenda Item 13 March 2009

NC Toxics based on the estimated emissions. ***For the given plant characteristics, the arsenic emissions resulted in an ambient concentration that is 277% of the AAL*** [emphasis added]."

"Look, you can't do things like that! Now, I don't know how I can explain this to you. But, it's not only against the law, its wrong!"

-Mortimer Brewster *Arsenic and Old Lace*

At the November 16, 2011 meeting of the Air Quality Committee of the EMC, DAQ Director Sheila Holman remarked that directed by the Chairs of the Environmental Review Commission, DAQ was meeting with industry looking at the air toxics regulations. The revolving door must be spinning wildly. Meeting attendees included representatives from Duke Energy and the Manufacturers and Chemical Industry Council of North Carolina (MCIC). Former NC DENR employees; George Everett, currently with Duke Power (formerly with MCIC), was the Director of the North Carolina Division of Environmental Management, and Preston Howard, currently with MCIC, was the Director of the Division of Water Quality and a DENR employee for over 20 years.[28] Legislative staff facilitates these meetings. By statute, the meetings can be private, and some documents held confidential. However, information obtained by BREDL tells the tale. On October 26, 2011, DAQ Director Sheila Holman made note of this question:

"How many sources would have exceeded the AAL's- w/new As AAL?"[29]

[28] Preston Howard ,George Everett

[29] Notes provided to BREDL by the North Carolina Division of Air Quality

While the question is not attributed to any one person, it is indicative of the tone throughout meeting notes and emails; industry is rewriting the rules.

"I couldn't do that. Could you do that? Why can they do it? Who are those guys?"

-Butch Cassidy to the Sundance Kid

Science Advisory Board members are charged with protecting the public health of the people of North Carolina. However, conflicts of interest can occur, and some members of the current Board have their own skeletons. Dr. Thomas Starr is the NC SAB chairman. Dr. Starr has been a paid consultant for Philip Morris[30,31], a constant critic of the US Environmental Protection Agency's dioxin reassessment[32,33,34,35,36], and, as recently as 2010, a consultant to the American

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[30] Health Effects of Exposure to Environmental Tobacco Smoke Appendix B Summary of Public Comments and Responses on the February 1997 Draft- (California) Office of Environmental Health Hazard Assessment

[31] Legacy Tobacco Documents Library- Philip Morris Glossary of Names

[32] Letter to Dr. Kenneth Olden, Director, National Institute for Environmental Health Sciences, February 12, 1999

[33] Bo Walhjalt-"A Scientific Journal with Industrial Bias as its Specialty, December 2002"

[34] Thomas B. Starr Ph.D."Significant Shortcomings of the U.S. Environmental Protection Agency's Latest Draft Risk Characterization for Dioxin-Like Compounds" June 2001

[35] "Scientific Debate Continues on Dioxin Risk"

[36] External Peer Review of Recommended Toxicity Equivalency Factors (TEF's) for Human Health Risk Assessments of Dioxin and Dioxin-Like Compounds November 4, 2009

Forest and Paper Association.[37] The American Forest and Paper Association opposes US EPA's boiler regulations. [38] Dr. Starr has also opposed attempts to regulate particulate matter (PM) on behalf of the American Petroleum Institute in testimony before the United States Senate. Dr. Starr ended his testimony with this statement: "Implementation of the new standards could well make things worse rather than better." [39] Dr. Starr is not the only SAB member with interesting connections. Dr. Woodhall Stopford was retained by the Corn Refiners Association to examine claims that mercury was found in products that contained high fructose corn syrup. Dr. Stopford found no evidence of mercury.[40] Dr. Stopford's connection to the CRA was not disclosed at the time his report was released.[41]

[37] American Forest and Paper Association re: EPA's Reanalysis of Key Issues Related to Dioxin Toxicity and Response to NAS Comments July 7, 2010

[38] Conference call January 20, 2011 earthjustice.org

[39] Testimony of Thomas B Starr, Ph.D. Principal, ENVIRON Corporation, Raleigh NC before the Senate Subcommittee on Clean Air, Wetlands, Private Property, and Nuclear Safety

[40] "Assessment of Test Results for Mercury in High Fructose Corn Syrup"

[41] "In These Times, January 2011"

"Everything's Bigger in Texas"

- Unknown

To support their rationale, the NC SAB is relying heavily on the studies used in a draft report evaluating arsenic health risk by the Texas Commission on Environmental Quality (TCEQ). SAB Chair Dr. Thomas Starr made the recommendation.[42] The TCEQ has come under fire for refusing to allow climate change and human health effects language in a report on Galveston Bay,[43] is in a "to the death" battle with the US Environmental Protection Agency (EPA) over the State Implementation Plan (SIP), [44] and Texas facilities are high on EPA's national "Watch List" of high-priority polluters whose violations are not being enforced properly by state regulatory agencies.[45]

A controversial figure, TCEQ's chief toxicologist, Dr. Michael Honeycutt is listed as an author on the arsenic report.[46] Dr. Honeycutt has long been a critic of the US EPA, not because the federal agency isn't strict enough; indeed, Dr. Honeycutt believes just the opposite- that federal

[42] One Hundred Fifty-Seventh Meeting of the Science Advisory Board on Toxic Air Pollutants- Proceedings of the March 30, 2011 Teleconference

[43] Censored scientist John Anderson on how to restore sound policy-making to Texas and (maybe save the Texas coast

[44] Correspondence between EPA and TCEQ regarding Texas Air Permitting Program

[45] "Poisoned Places: Toxic Air, Neglected Communities"

[46] "TCEQ-At it Again"

standards are too stringent. Two glaring examples: Honeycutt testified against tougher ozone and particulate matter standards in 2011,[47] and discounts EPA's concern about the developmental effects of mercury, stating that, "On the contrary, the Japanese population consumes ten times more fish than the US population but only shows positive outcomes; they have lower rates of coronary heart disease and high IQ scores." [48]

"Arsenic is edible. Only once."

-Unknown

North Carolina's air toxics program is in danger, and forces outside of the public interest are pushing the NC Division of Air Quality to "decriminalize" arsenic poisoning. Communities that will be living with increased toxic pollution have not been given a seat at the table where their rights to clean air are being cut away. In order to bring industry into compliance and protect corporate profits, the Science Advisory Board was implicitly tasked with finding justification for a decision already made—to increase the acceptable ambient level for arsenic. We can no longer stomach this manipulation of science to benefit corporate greed.

[47] "Texas regulator critical of EPA"

[48] Comments by Michael Honeycutt, Ph.D., with the Texas Commission on Environmental Quality Regarding the Primary National Ambient Air Standards for Ozone and PM, and the Utility Mact

MECKLENBURG COUNTY
Land Use and Environmental Services Agency
- A I R Q U A L I T Y -

October 9, 2012

Sheila Holman, Director
Air Quality Division
North Carolina Department of Environment and Natural Resources
1641 Mail Service Center
Raleigh, NC 27699-1641

Re: Options for Revision of the NC Air Toxics Regulations
Mecklenburg County Air Quality Comments

Dear Ms. Holman:

Mecklenburg County Air Quality (MCAQ) appreciates the opportunity to participate in the process of reviewing the NC Air Toxics Regulations pursuant to Session Law 2012-91. As a certified local air pollution control program, MCAQ serves the businesses responsible for compliance with these regulations as well as the citizens of Mecklenburg County whom they are designed to protect.

Session Law 2012-91 states that NCDAQ shall review toxic air pollutant rules adopted pursuant to G.S. 143-215.107(a) and the implementation of those rules to determine whether changes could be made to the rules or their implementation to reduce unnecessary regulatory burden and increase the efficient use of Division resources while maintaining protection of public health.

Our agency appreciates the importance of reducing unnecessary regulatory burden and using staff resources efficiently. Our primary responsibility is enforcement of the Clean Air Act and protection of public health. To this end, MCAQ asserts that the NC Air Toxics Regulations are a critical part of the protection of public health and should only be revised in such a manner as to preserve this most important of the three factors being considered.

Mecklenburg County Air Quality (MCAQ) has reviewed the options for revision of the NC Air Toxics Regulations presented by the North Carolina Division of Air Quality (NCDAQ) at the September 25, 2012 stakeholders meeting and provides the comments below for consideration.

Summary of MCAQ Comments

1. MCAQ is supportive of the following proposed options which we believe will meet intent of the required regulatory review by reducing unnecessary regulatory burden, increasing efficient use of staff resources and maintaining protection of public health.
    - Re-evaluate toxic permitting emission rates (TPERs)
    - Exempt emergency engines
    - Exempt natural gas and propane combustion units
    - Register rather than permit sources less than certain emissions thresholds

- Do not retain SIC call

2. MCAQ does not support the option that would conclude that compliance with Maximum Achievable Control Technology requirements of 40 CFR Part 63- "National Emission Standards for Hazardous Air Pollutants for Source Categories" automatically constitutes Maximum Feasible Control, thereby exempting the source from NC Air Toxics Regulations. It is MCAQ's opinion that this does not meet the requirement in Session Law 2012-91 to maintain protection of public health.

3. MCAQ believes that evaluation of projected actual emissions (Option7) is the current prescribed method for evaluating new sources per 15A NCAC 02Q.0703 (1) (b) - Definition of Actual Rate of Emissions. Therefore, this option does not appear to constitute a change in current requirements.

MCAQ Analysis by Option
(includes comments and questions for consideration)

Option 1 – Re-evaluate toxic permitting emissions rates (TPERs):

- MCAQ believes that this option has the potential to most effectively address the three requirements of Session Law 2012-91. It is likely, however, to be the most time consuming as well.
- This option is based on the assumption that currently, for many facilities whose actual emissions exceed TPER, modeled actual emissions result in offsite concentrations significantly below the Allowable Ambient Limit (AAL).
- The simplicity of the option in practice makes it appealing, but there are several questions that make it difficult to judge at this time:
    - How many facilities fall into the category as described above (20% of those that exceed TPER, 50%, 80%)?
    - How does that number change with the degree of the exceedance?
    - What fraction of the AAL would the state target? Would/should it vary with toxic or toxic category?
    - Are there facilities/source types that are the exact opposite, small exceedances of TPER represent a significant fraction of the AAL?
    - Since the toxics limits (TPERs/AALs) are specific to a chemical, does facility/source type make a difference in whether an exceedance of TPER is significant? For example, chromium may be emitted by a steel mill, plating shop or concrete plan, toluene by a chemical manufacturing plant, coating process, or a coating manufacturer; does the same degree of TPER exceedance have the same impact at each of these.

Options 2 and Option 3 – Exempt natural gas and propane fired combustion units and emergency generators:

- These options are in line with the way these units are treated by the EPA and therefore would avoid the situation where the EPA exempts a source from toxics and the state does not. Additionally, toxics emissions from these sources are typically small, and in many cases not a significant part of a facility's total toxics emissions (though probably need to determine impact at facilities whose emission sources are primarily combustion sources such as institutions, e.g. universities and hospitals). MCAQ would likely support these options.
- Would probably want to consider threshold limitations for exemption (see option 4 below)
- The definition of a natural gas fired boiler should be consistent between the federal and state toxics rules. If a facility claims a duel-fired boiler (e.g. natural gas and fuel oil#2) to be a natural

gas boiler under the federal standard (only to fire fuel oil in times of gas curtailment, gas supply emergencies, or periodic testing), than the state should also define this unit as a natural gas boiler for toxics.

Option 4 – Register rather than permit sources less than certain emissions thresholds:

- This option would put in place 02Q .0102(c)(2) type exemptions for toxics (i.e. exempt because of size or production rate). This may be the most resource intensive of all the options for DAQ to put into place initially but, also, an effective way to achieve the three expressed goals of the review overall. MCAQ would likely support this option depending on the implementation.
- MCAQ would strongly recommend that, in addition to toxic emission rate, the operating characteristics of each source type, relative to the conservative modeling parameters use in determining the TPERs, be considered in the analysis for setting thresholds. For example, a higher than ambient stack temperatures of combustion sources, a higher than 0.01 m/s exit velocity for source types that typically have a forced air (fan/blower) collection/control system. In this way many of the benefits to be gained from Option 1 above could also be incorporated into the analysis.

Option 5 – Do not retain SIC call: The Directors Call provision provides similar powers/capabilities to those under SIC call provision and eliminating it would simplify the toxics rule language, therefore MCAQ would support this provision.

Option 6 – Maximum Feasible Control (MFC) = Maximum Achievable Control (MACT)

- Currently under 02Q.079 – "Demonstrations" the Director can require "Maximum Feasible Control" in lieu of submission of a compliant modeling demonstration based upon the facility demonstrating technical infeasibility or serious economic hardship.

  This option is currently available to any source constructed before May 1, 1990, or a perchloroethylene dry cleaning facility subject to a GACT standard under 40 CFR 63.320 through 63.325, or a combustion source as defined in Rule .0703 of this Section permitted before July 10, 2010, who cannot supply a demonstration *(i.e. compliant model)* described in Paragraph (a) of this Rule" [02Q .0709 DEMONSTRATIONS (b)].

  MCAQ recommends modifying the regulation to allow any facility to demonstrate technical infeasibility or serious economic hardship rather than the option proposed by NCDAQ. MCAQ does not support a broad application of the term "Maximum Feasible Control" to include all sources subject to a federal MCAT or GACT. MCAQ believes this is better left to be decided on a case by case basis.

Option 7 – Evaluate projected actual emissions

- If this is to be applied in the same way that projected actual emissions (PAE) are used in PSD, a source typically required to evaluate toxic emissions at potential, that is below TPER at PAE but above at potential, would avoid modeling, but would have to keep records to demonstrate they did not exceed the PAE in actual operation (or demonstrate each time they did exceed PAE they did not exceed any compliance limit), i.e. the PAE would become a permit limit. The facility could request a higher emission limit that still keeps them under TPER, i.e. a TPER avoidance limit, which gives them some breathing room and still avoids modeling. But a facility that exceeds TPER at potential now can request a TPER avoidance limit and avoid modeling, so there appears to be little benefit from this scenario.
- If a facility that is below TPER at PAE is to be treated the same as if they were below TPER at potential (i.e. no requirements at all for toxics) the potential for a significant and ongoing

exceedance of TPER, and therefore potential significant impact to public health with no regulatory oversight, exists. For that reason MCAQ would likely not support this scenario.

Conclusion

MCAQ believes that as the Director of the Division of Air Quality you value the input from local agencies and we look forward to continued involvement in this process. Several of the options, particularly the review of TPERS and addition of specific exemptions could streamline and improve upon the existing regulations by applying knowledge and expertise gained through years of implementation and enforcement.

I urge you to continue to place an emphasis on protection of public health throughout your review of the NC Air Toxics Regulations.

Sincerely,

Don R. Willard
Director, Mecklenburg County Air Quality

JACKSON PAPER
MANUFACTURING

October 9, 2012

VIA ELECTRONIC MAIL
Michael Abraczinskas
Deputy Director
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

Re: Review of Air Toxics Program

Dear Mr. Abraczinskas:

On behalf of Jackson Paper Manufacturing Company, I am submitting these comments regarding the ongoing review of the North Carolina air toxics program by the Division of Air Quality. Jackson Paper is located in Sylva, North Carolina and manufactures roll stock medium grade paper from recycled corrugated containers. The mill uses 100 percent recycled paper as its feed stock. The product of the Jackson Paper mill is typically used as the fluted corrugated medium for cardboard boxes.

Jackson Paper plays a significant role in contributing to the local economy in Jackson County by employing approximately 114 employees. In addition, the operation of the mill demonstrates Jackson Paper's commitment to protection of the environment and the sustainable use of resources. Its boiler produces energy by combusting renewable wood fuel that has been generated by other industrial facilities. Finally, all water used at Jackson Paper (with the exception of potable water) is recycled and reused, resulting in zero discharge from our facility.

Despite all of its environmentally beneficial business practices, Jackson Paper has been subjected to a Director's Call under the air toxics program based on arsenic emissions from the wood-fired boiler. The Director's Call has been placed on hold pending the ongoing review of the Science Advisory Board's recommendation to change the current acceptable ambient level (AAL) for arsenic to 2.1×10^{-6} mg/m^3.

Jackson Paper strongly urges DAQ to proceed with a rulemaking to adopt the AAL proposed by the SAB. While we understand that the rulemaking process is already underway, we believe that this issue should be included in DAQ's report to the Environmental Review Commission pursuant to Session Law 2012-91. The SAB has already conducted a thorough scientific review of the AAL. Their recommendation should be adopted as soon as possible.

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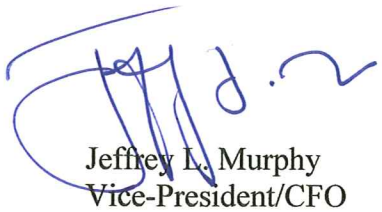
We also support DAQ's efforts to identify additional areas where improvements to the program can be made to the air toxics program, including the following seven recommendations that were discussed at recent stakeholder meeting on September 25:

- Re-evaluate toxic permitting emission rates (TPERs)
- Exempt natural gas and propane combustion units
- Exempt emergency engines
- Allow registration (rather than permitting) of sources whose emissions are less than certain thresholds
- Remove SIC call provision
- Define Maximum Feasible Control as equivalent to Maximum Achievable Control
- Evaluate air toxics impacts based on projected actual emissions

Thank you for your attention to this important issue. If you have any questions regarding these comments, please contact me at (828) 586-5534 or jmurphy@jacksonpaper.net.

Sincerely,



Jeffrey L. Murphy
Vice-President/CFO

October 9, 2012

VIA ELECTRONIC MAIL
Mr. Michael Abraczinskas
Deputy Director
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, North Carolina 27699-1641

Re: Review of Air Toxics Program

Dear Mr. Abraczinskas:

On behalf of the American Home Furnishings Alliance (AHFA), I am submitting these comments regarding the ongoing review of the North Carolina air toxics program by the Division of Air Quality (DAQ). AHFA is the world's largest and most influential trade organization serving the home furnishings industry. AHFA's member companies operate several wood furniture manufacturing facilities in North Carolina. These facilities employ approximately 33,000 people.

AHFA has been a strong advocate for reform of the air toxics program for many years. In particular, we were a key stakeholder during the recent drafting and adoption of Session Law 2012-91. We support DAQ's efforts to identify additional areas where improvements to the program can be made, including the following seven recommendations that were discussed at recent stakeholder meeting on September 25:

- Re-evaluate toxic permitting emission rates (TPERs)
- Exempt natural gas and propane combustion units
- Exempt emergency engines
- Allow registration (rather than permitting) of sources whose emissions are less than certain thresholds
- Remove SIC call provision
- Define Maximum Feasible Control as equivalent to Maximum Achievable Control
- Evaluate air toxics impacts based on projected actual emissions

In addition to the issues listed above, AHFA has identified another item that should be included in DAQ's review. In 15A NCAC 2Q .0703, the air toxics rules define "unadulterated wood" in a manner that creates an unnecessary and erroneous distinction between various wood fuels. The current definition is:

> "Unadulterated wood" means wood that is not painted, varnished, stained, oiled, waxed, or otherwise coated or treated with any chemical. Plywood, particle board, and resinated wood are not unadulterated wood.

AHFA believes that this definition is no longer needed in the air toxics rules and should be deleted. Other than the definitions rule, the term "unadulterated wood" appears in only two other provisions: in the definition of "combustion sources" in 15A NCAC 2Q .0703, and in the SIC Call provision in 15A NCAC 2Q .0705(c). It appears that the original purpose of those provisions is no longer relevant and the use of the term "unadulterated wood" in those contexts is no longer necessary. Therefore, those two references to "unadulterated wood" should be eliminated as well. Removal of these superfluous terms would reduce the uncertainty in the air toxics rules. It would also end the obsolete regulatory stigma against certain high-quality renewable biomass fuels such as resinated wood used in the furniture industry.

Alternatively, if the term "unadulterated wood" cannot be removed from the air toxics rules, then the definition should be revised to make it consistent with the manner in which EPA has classified wood fuel. In the major source Boiler MACT rule, EPA has established the following definition that encompasses solid wood fuel:

> Biomass or bio-based solid fuel means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.*, trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.*, almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

This definition is found at 40 CFR 63.7575, as promulgated in the final Boiler MACT rule at 76 Fed. Reg. 15608 (March 21, 2011). An identical definition is found in EPA's reconsideration Proposed Rule, 76 Fed. Reg. 80596 (December 23, 2011).

In its definition of biomass, EPA has developed a regulatory approach that generally parallels the DAQ's distinction between adulterated and unadulterated wood. However, EPA's approach to classification of wood fuel is based on its distinction between wood that is a non-waste fuel (the combustion of which occurs in a boiler) and a solid waste (the combustion of which is incineration). Under federal law, the classification of any combusted material (including wood) must be determined by applying the methodology in EPA's rule entitled "Identification of Non-Hazardous Secondary Materials That Are Solid Waste" (76 Fed. Reg. 15456; March 21, 2011). The NHSM rule, which is codified at 40 CFR Part 241, establishes a detailed protocol for evaluating each fuel to determine if it is a solid waste. The classification of

the fuel dictates the relevant emissions category for the combustion unit as a boiler or incinerator.

The NHSM rule provides for a rigorous review of combusted materials that essentially segregates fuels based on their use and physical/chemical characteristics. For example, resinated wood used in the furniture industry must meet the legitimacy criteria in 40 CFR 241.3(d). Among other things, a comparative constituent analysis of resinated wood must be performed in accordance with 40 CFR 241.3(d)(1)(iii):

> The non-hazardous secondary material must contain contaminants at levels comparable in concentration to or lower than those in traditional fuels which the combustion unit is designed to burn. Such comparison is to be based on a direct comparison of the contaminant levels in the nonhazardous secondary material to the traditional fuel itself.

Thus, the scrutiny required in the NHSM analysis provides abundant assurance that non-waste fuels will not result in any increased risk to human health or the environment when compared to other fuels such as fossil fuels or virgin biomass. In our view, this is the same type of classification that the definition of "unadulterated wood" is intended to accomplish.

Therefore, AHFA believes that the definition of "unadulterated wood" in 15A NCAC 2Q .0703 should be revised to make it consistent with EPA's definition of biomass. We propose the following text for the new definition:

> "Unadulterated wood" means any wood-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue and wood products (*e.g.*, trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings).

By adopting this new definition, DAQ would place the air toxics program in alignment with the overlapping federal MACT/GACT requirements. In addition, it would eliminate any unfavorable treatment at the State level of resinated wood and other wood products that can satisfy the rigorous NHSM legitimacy criteria. It is worth noting that EPA has issued a proposed amendment to the NHSM rule in which it has categorically determined that resinated wood is not a solid waste when combusted. 76 Fed. Reg. 80452 (December 23, 2011).

AHFA further believes that our proposed changes would meet the three criteria established in Section 3 of Session Law 2012-91. The proposed amendment would reduce unnecessary regulatory burden by removing uncertainty and promoting further alignment with the overarching federal regulatory program. It would increase the efficient use of DAQ resources by allowing DAQ to defer to the federal regulatory program, rather than continuing to implement its own duplicative program. And, finally, it would maintain protection of public

health by ensuring that the stringent legitimacy criteria in the federal rule would be applied to each fuel.

Thank you for your attention to this important matter. If you have any questions regarding these comments, please contact me at (336) 884-5000, ext. 1017 or bperdue@ahfa.us.

Sincerely,

Bill Perdue
Vice President of Regulatory Affairs

From: Jody Higgins <jody@yanceypaper.com>
Date: Friday, September 7, 2012 2:07 PM
To: Diana Kees <diana.kees@ncdenr.gov>
Subject: Re: Division of Air Quality Conducts Review of State Air Toxics Rules

I am sitting here inside my office in Burnsville breathing the fumes from the asphalt plant just outside the town limits that DENR Air Quality permitted. Even with the windows shut and air conditioning on, the fumes are burning my nose. I went to the doctor yesterday and for the second time since May with a pneumonia diagnosis in conjunction with an ongoing sinus infection that doesn't seem to go away with treatment. At my house up the street, if I leave my windows open (and I don't have air conditioning), I can't breathe at night because the plant is operating -- not to mention the noise that sounds like a jet engine from mid-evening to around 3 a.m. If I leave my windows open during the day, I have to change the sheets at night because they smell like asphalt. The Rogers Group applied to use shredded tires in the mixture but people had to drive to Asheville to comment on that, as if it would make a difference. I assume that has already been permitted. The smell seems heavier and stronger, and the smoke from the stack thicker. DENR is already short-staffed with cuts to the agency and has little authority it seems to do anything except look out for the interests of the corporate polluters. It makes perfect sense to get rid of regulations for these over-regulated asphalt plants and others that spew toxic air pollutants into our communities and destroy our health, property values and ability to live a peaceful life in pursuit of happiness as we are supposed to be guaranteed by our founding forefathers. That's my comment.
Jody Higgins, editor
Yancey Times Journal
P.O. Box 280
Burnsville, NC 28714

Appendix E

From: Laura Kranchalk [lkranchalk@caninesforservice.org]
Sent: Wednesday, September 12, 2012 8:22 AM
To: SVC_DENR.DAQ.publiccomments
Subject: Please give us clean air

I am writing to request that you do not ease the "regulatory burden" on industry by rolling back portions of the Air Toxics Program. I live in New Hanover County within 10 miles of the proposed Titan facility and I fear for my family's health and quality of life. You are supposed to protect the citizens. The evidence is clear. Do your job.

--
Sincerely,
Laura Kranchalk
Office Manager | Canines for Service | P.O. Box 12643 | Wilmington, NC 28405
Phone: 910-362-8181 | www.caninesforservice.org | www.walkforthosewhocant.org

From: Rachel Cole [relizabethcole@aol.com]
Sent: Wednesday, September 12, 2012 10:54 AM
To: SVC_DENR.DAQ.publiccomments
Subject: air quality rollback?

Dear Committee Members,

I am writing to express my concern about your upcoming review of state regulations of air toxics. I hope that you will keep regulations for toxics not covered by federal regulations strong. As a mother raising young children here air quality is very important to me.

Thank you for your time.

Sincerely,

Rachel Cole

509 Larchmont Dr.
Wilmington, NC 28403

From: Ellen Hunter [ellenelizhunter@att.net]
Sent: Wednesday, September 12, 2012 8:11 PM
To: SVC_DENR.DAQ.publiccomments
Subject: DO NOT LIFT RESTRICTIONS

DO NOT roll back any of the NC Air Toxics Program.

I am a resident of New Hanover County. Our county is dependent on income from tourists and from the film industry. We are about to get a Super VA Center. We are not dependent on the manufacture of cement which we already have plenty of.

If you allow our air to become polluted with cement dust and particulates you will choke off not only our breath but our livelihood and our income!

What family will want to bring their children to a place with polluted air? What big star will want to come here to make a movie? And why would the VA want to build a Super VA Center for sick veterans to breath in polluted air?

We DO NOT NEED need the handful of jobs promised by Titan Cement. We DO NEED the boost to our local businesses that tourism and movie making bring.

THINK! THINK! THINK! of the damage to our economy and our lives that you are about to do! This is not an American Company. It is a Greek Company. The economy of Greece is in trouble. If Titan is such a boon to the economy let them build a plant in Greece and help their own country.

Ellen Hunter
Wilmington NC

From: Cindi B. Hamilton [cindib@embarqmail.com]
Sent: Saturday, September 15, 2012 7:23 PM
To: SVC_DENR.DAQ.publiccomments
Subject: air quality review

I would like tougher regulations on open burning. I find it ludicrous that in today's time, the government allows people to burn. We are suppose to be a "greener" world and do everything we can to "clean up the air" and the environment. In one swift afternoon with people burning, all our efforts are wasted.

I have addressed these concerns numerous times with our county commissioners (Carteret County) and they just ignore the issue. I even had a proposal for a self-sustaining yard pick-up program and the commissioners still ignored it. They allow people in subdivisions (neighborhoods in the ETJ area) to burn anytime. I had to sell my new house and move due to the noxious and offensive smell that burning creates.

That is my recommendation that the Division of Air Quality tries to tackle.

Thank you.
Cindi B. Hamilton
Morehead City, NC
cindib@embarqmail.com
252-240-0751

From: DiamondtelDeb@aol.com
Sent: Tuesday, September 25, 2012 7:44 PM
To: SVC_DENR.DAQ.publiccomments
Subject: Re: Reducing air quality standards would be a crime!

I understand I have until Oct 7 to comment. I have it from the mouth of a DENR representative about a year ago that the air pollution and Code Orange Days from a combination of coal burning and automobiles blows mostly from west to east. He was on Charlotte Talks and confirmed what my husband KNOWS from hanging a string on our back porch here in farm country Wadesboro - when the wind is from Charlotte, he WILL have a "bad air day". My husband is missing a lung from cancer about 10 years ago and we are very careful.

Also, your expert mentioned that children who are affected will NEVER have the lung capacity of those who are not. Two of my precious grandchildren living in Marshville have asthma - the fifteen year old who struggles to play sports and heartbreakingly, the baby, Isaac (his dad nicknamed him "I-sick") struggles just to breathe!

How can you even think of reducing air quality standards, especially when this mostly Republican NC House and Senate have overridden Gov Perdue's veto of the extremely dirty practice of fracking for natural gas. Not only does it poison the water and farmland, animals and people, it emits horrendous amounts of gas into the air and requires 50 diesel trucks per frack well per day to import millions of gallons of hazardous chemicals to inject into our wells and water that will be forever polluted.

Did you know that the Republicans under Cheney and Bush Jr exempted Halliburton frackers from the Clean Water Act in 2004? Did you realize that each well is too small to be monitored by the EPA, but combined, they are worse than another coal plant? Did you see the movie documentary Gasland where the farmer lights his tap water, the animals and people are all sick and they are not allowed to sue because they signed contracts. No one can sell their land and move.

Why in God's name would you even consider reducing air quality standards in a time of climate change and heavy pollution instead of insisting on clean renewable solar, wind, geothermal energy? What is your job and who do you represent? If it is the people of NC, you must not do this! If you have children, neighbors or live in NC, how could you face them ever again if you allow more pollution?

Of course, not to mention the earthquakes as in Ohio in one county where 181 frack wells were drilled and they had earthquakes as a result?

Please, be considerate of all of us and the planet. Do not reduce air quality standards for NC!
Sincerely,

Deb Arnason
360 Webb Rd, Wadesboro NC 28170

704-851-3925 diamondteldeb@aol.com

Appendix E

From: Juan [beerios@aol.com]
Sent: Saturday, September 29, 2012 3:32 PM
To: SVC_DENR.DAQ.publiccomments
Subject: review of the state Air Toxics Program

As a resident of Wake co, I expect that our state legislators will not vote to move backwards on laws designed to protect the health of our community. Letting industry get away with minimal pollution controls directly impacts not only our health and our children's health, but the health of our economy as well. Can North Carolina continue to be a top vacation destination with a reputation as a pollution haven? Let's not find out! I will be closely monitoring the voting dealing with this issue. DO the right thing!

From: Megan McLaurin [meganmclaurin@vermontlaw.edu]
Sent: Wednesday, October 03, 2012 3:05 PM
To: SVC_DENR.DAQ.publiccomments
Subject: NC air toxics program

Members of the Division of Air Quality, fellow North Carolinians and concerned citizens:

As a resident of Wilmington, NC who is temporarily out of state studying law at Vermont Law School, I am deeply concerned by the prospect of our state lowering its standards for toxic air pollutant controls. North Carolina's air toxics program establishes a health-based method for regulating toxic pollutants and protecting our state's air quality, and in doing so regulates an additional 21 compounds to those requiring mandated regulation under the federal standards. Maintaining a higher standard of air quality, and thus air quality protection and toxic pollutant emission regulation, is critical to assuring our state remains a wonderful place to live and a tourist destination to which people all over America and the world love to travel.

It is common knowledge to those in the legal community, as well as those in the scientific, medical, and public health communities, that our federal environmental legislation, including our air protection legislation is grossly outdated and does not adequately serve to protect current public health. This is largely the result of continuously growing industry and continuously advancing science allowing us to understand the connections between public health and environmental risks, while the law is unfortunately slow to catch up to society's knowledge because of the burdensome legislative process. North Carolina has already recognized the inadequacy of the federal standards, taking a leadership role in protecting its own air quality, while the federal agencies have failed to pay such quick attention, and in fact are unable to address each state's unique needs. The science is there to evidence that our state's toxic air pollutant controls are critical to protecting public health, and this is in fact why North Carolina implemented its own program in addition to that provided by the federal agencies. We cannot move backgrounds, resigning our state to the slow-moving standards of the federal agencies that often only acknowledge health risks when it is too late for many already affected.

In lowering its standards under its state program, North Carolina puts its residents at risk, jeopardizing not only the health of the old, the very young, and the sick, but also the active members of our communities that enjoy spending time outdoors, such as our healthy children playing at playgrounds or

our athletes who practice and perform outdoors. By settling for the federal standards, North Carolina puts its environment at risk, including all the grand flora and fauna it includes.

North Carolina must do better than the federal regulations, which are technology-based and don't reflect the latest medical research, often lagging years behind the current understanding of the impact of air pollutants on human health. As a state we should strive to have current regulations, directly corresponding to the most recent medical information. It is our duty to govern the people, to provide for their safety, not to roll back regulations and settle for an out-dated federal system. We, as North Carolinians, are better than that.

Please maintain the current air toxics program, or make it stronger! Put public health before corporate interests. Corporations can comply, North Carolinians cannot undo the harm they will be subjected to by weakened standards. Let's bring North Carolina towards the top of the list of best places to live and work, instead of continuing to allow it to work its way up on the list of most polluted air.

Thank you for your time and attention,

Megan K. McLaurin
J.D./MELP Candidate
Staff Editor, Vermont Journal of Environmental Law Vermont Law School
910.200.6130

Appendix E

From: Lynn Hale [llhale@gmail.com]
Sent: Monday, October 08, 2012 10:53 PM
To: SVC_DENR.DAQ.publiccomments
Subject: changing NC Air Quality laws

I am writing to express my concern that eliminating NC regulations related to clean air regulation and accepting Federal laws will create an unsafe and unhealthy environment. My understanding is that the Federal laws are not based on how pollutants affect human health. I want to maintain the stricter regulations that we have in NC. In fact, they need to be stricter, as our state was listed in the top 10 with the worst air quality. This affects everyone. Children and the elderly at at highest risk. We must listen to the medical experts. If our legislators don't make concerned decisions for the welfare of the public (instead of for financial gains) they will be stealing the hope of present and future generations for good health. This generation has a moral obligation to protect the environment for future generations and to protect the health of our fragile citizens.
Thanks you. Lynn Hale, 3601 Fieldgate Rd., Greensboro, NC 27406 336-674-3326
LLHale@gmail.com