

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
DIVISION OF AIR QUALITY

REPORT OF PROCEEDINGS OF PUBLIC HEARING  
ON AIR TOXICS RULE REVISIONS AND ASBESTOS ACCEPTABLE  
AMBIENT LEVEL (AAL) CORRECTION

SEPTEMBER 19, 2013  
RALEIGH, NC

ENVIRONMENTAL MANAGEMENT COMMISSION

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## CHAPTER I

**Summaries and Recommendations**

Proposed amendments to Rules 15A NCAC 02D .1104 and 02Q .0701, .0702, .0703, .0704, .0706, .0709, .0711 and proposed repeal to Rules 15A NCAC 02Q .0705 and .0714.

**BACKGROUND AND SUMMARY**

A public hearing was held in Raleigh, NC on September 19, 2013, to take public comments on amendments to the toxic air pollutant procedures rules and a correction to the asbestos acceptable ambient level. Mr. Bradley Newland was appointed and acted as the hearing officer for this hearing.

Under the current toxic air pollutant procedures in Section 02Q .0700, all facilities emitting a toxic air pollutant are required to demonstrate to the satisfaction of the Director 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. The facilities may show that the toxic pollutant emission rate (TPER) is below the thresholds in Rule 15A NCAC 02Q .0711 or if above the TPER, use dispersion modeling to demonstrate that the ambient air level (AAL) is below the thresholds in Rule 15A NCAC 02D .1104. The demonstration includes all sources of toxic air pollutants at the facility except for the exemptions in the current Rule 02Q .0702.

In 2012, the General Assembly amended the statutes that authorize the state air toxics rules. Section 1 of Session Law 2012-91 exempts from state air toxics emissions rules those sources of emissions that are:

- (A) subject to an applicable requirement under 40 CFR Part 61, as amended;
- (B) an affected source under 40 CFR Part 63, as amended; or
- (C) subject to a case-by-case maximum achievable control technology (MACT) permit requirement issued by the Division pursuant to Paragraph (j) of 42 U.S.C. Section 7412, as amended.

The Session Law also requires the Division of Air Quality, upon receipt of a permit application for a new source or facility, or the modification of an existing source or facility, that would result in an increase in the emission of toxic air pollutants, to review the application to determine if the emissions 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 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.

Facilities are still required to submit either TPER calculations or, if over the TPERs, demonstrations that model the toxic air pollutant emissions from sources that are not exempted

by S.L. 2012-91 or 02Q .0702. It should be noted that the Division of Air Quality is always available to do that analysis for any facility.

Section 2 of the Session Law requires rule amendments consistent with Section 1. Section 3 of the Session Law requires the DAQ to review the existing air toxics rules and make recommendations 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. These recommendations were provided in a report to the Environmental Review Commission (ERC) on December 1, 2012. The report included six recommendations based on a review conducted in consultation with interested parties:

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 unobstructed and vertically oriented,
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,
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,
4. Do not retain the Standard Industrial Classification (SIC) Call rule,
5. Clarify the use of actual rate of emissions in the air toxics rules, and
6. Remove the term “unadulterated wood” from the air toxics rules.

Section 4 of the Session Law requires the DAQ to report to the ERC on implementation of the Session Law including an analysis of air toxic emission changes and a summary of results of the Division’s analysis of air quality impacts. The reports are due to the ERC each December 1st of 2012, 2013, and 2014. The first two reports, *Implementation of Session Law 2012-91, December 1, 2012*, and *Implementation of Session Law 2012-91, December 1, 2013*, have been provided to the ERC and can be found in Chapter VI of this hearing record. Rules in Section 15A NCAC 02Q .0700 are proposed to be revised to incorporate Section 1 of Session Law 2012-91 and the rule changes resulting from the Section 3 report recommendations.

Additionally, a calculation error was recently found in the original determination of the acceptable ambient level (AAL) for asbestos made in the early 1990s. In September 2011, the SAB members observed a mathematical mistake during a recent review of AAL documentation that led to an error of five orders of magnitude (by not using the total average number of deaths per 100,000). Existing rule numerical values for the asbestos AAL in 15A NCAC 02D .1104 and the associated asbestos TPER in 02Q .0711 are proposed to be modified. The asbestos AAL should be  $2.8 \times 10^{-6}$  fibers per milliliter (f/mL) and not the  $2.8 \times 10^{-11}$  f/mL currently listed in 15A NCAC 02D .1104, Toxic Air Pollutant Guidelines. The associated asbestos TPER in 02Q .0711, Emission Rates Requiring a Permit, is proposed to be  $5.7 \times 10^{-3}$  lb/year.

## **PUBLIC COMMENTS AND RESPONSES THERETO**

### **Section Law 2012-91**

**Comment:** Mr. Dave Walsh, Mr. Bill Gupton, Ms. Elizabeth O’Nan, Ms. Julie Gros, Ms. Muriel Vollum, Mr. Greg Shiffer, Mr. Fred and Ms. Alice Stanbuck, Jr., Ms. Jessica Schorr-Saxe, Mr. Chris North, Ms. Alicia Kaiser urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state’s Air Toxics Program. With over 195,000 children in NC suffering with asthma, it’s crucial to safeguard the air we breathe - not damage it.

**Comment:** Mr. Delano Hill comments that exempting facilities from the state air toxics rules create unacceptable health risks.

**Comment:** Ms. Kristen Dubay, Mr. Julius Kerr and Ms. Beverly Kerr comment that they are worried about the proposed changes to the Air Toxics program which would weaken current pollution standards.

**Comment:** Mr. Sam and Ms. Betty Tesh comment that the rules should not be weakened by this Governor or legislature and if anything, the rules should be strengthened.

**Comment:** Dr. Jonathan Kotch comments that under the new law, the amount of known poisons reaching our air and consequently, our lungs, poisons such as arsenic and mercury (not to mention particulates) will increase. The cost of changes to the air toxics rules will be paid for by personal health tragedies and medical expenses incurred by North Carolina’s seniors, children, pregnant and breastfeeding women and those with existing medical conditions. Dr. Kotch strongly opposes the proposed changes.

**Comment:** Dr. Donald Lauria comments that by lowering air quality standards, the State of North Carolina is giving away, as a gift, a chunk of this scarce resource (air quality) to a select group of companies. Reducing air quality regulations is like imposing a tax on all North Carolinians in order to give an unfair advantage to a few companies. Lowering regulations beg the questions: a) who gains from them, b) who loses, c) why should some companies be given the gift of a scarce resource that belongs to all of us, d) what do the owners of this resource want from the stewards who manage it, e) what is the responsibility of the stewards to the owners?

**Comment:** Ms. Deborah Kornegay comments that she is in opposition to the changes in the state air toxics rules enacted by the 2012 General Assembly. Allowing technology-based (rather than health-based) limits for such toxics is not enough.

**Comment:** Mr. Louis Zeller of Blue Ridge Environmental Defense League (BREDL) comments that we oppose any changes which reduce the state’s ability to limit the impact of toxic air pollutants on public health in North Carolina. The proposed rules will have such an impact and we oppose adoption.

**Comment:** Mr. Chad Kornegay, Ms. Kelly Kornegay, Ms. Cindy Strickland, Ms. Hazel Kornegay, Dr. Henry Kornegay, Ms. Eva Hill and Mr. Delano Hill state that they oppose the changes enacted by the 2012 General Assembly to the state air toxics rules. Protection of the public health should be the number one priority of DENR. Allowing technology-based (rather than health-based) limits for chemical that are toxic to human health is not enough.

**Comment:** Ms. Rebecca Cheatham of Medical Advocates for Healthy Air comments that if DAQ adopts the proposed rule changes, we will have uncontrolled unmonitored and unmeasured amounts of toxic air pollutants released into the air. And with increased pollution, we can be sure there will be increased health effects.

**Comment:** Dr. John Rusher of the North Carolina Pediatric Society (NCPS) comments that in 2012 the Air Toxics program was dismantled, as large numbers of permitted facilities were made exempt from the program.

**Comment:** Mr. Noah Read comments that your agency does not create efficiency by advocating these responsibilities. Instead of leading, now the federal government sets our standards for our air quality, making their minimum standards our maximum standards. Instead of leading, you rely on citizens to form environmental neighborhood watches. Your agency claims to want to reduce regulatory burdens, but for me and my children and my neighbors, you are not reducing our burdens. You're passing the burdens for those who dispose their waste in our air to the men who breathe that air

**Comment:** Ms. Terry Taylor of the Medical Advocates for Healthy Air comments that it is incredible to me that new industry could come to the region potentially adding unknown, unmeasured air toxics to our current burden.

**Comment:** Ms. Myra Blake of the Southern Environmental Law Center comments the air toxics program was established in 1990 for the sole purpose of protecting public health. The state program fills gaps left by the federal hazardous air pollution program. In the North Carolina Division of Air Quality's own words, federal programs are not intended to comprehensively address all air toxics emissions, but were instead designed in anticipation that the state and local air toxics programs would address local issues and federal program limitations. The air toxics program complements the federal program in two key respects. First, while the federal program focuses on technology-based standards, the state program institutes health-based standards to ensure that levels of pollution in the ambient air are safe. The state program is unique in that it is the only program focused on limiting public exposure to air toxics in North Carolina, even when toxics are generated by well controlled facilities. Second, the air toxics program covers pollutants that are not covered by the federal program, but are pollutants of concern here in North Carolina. In the summer of 2012, the North Carolina legislature began to take bricks out of the foundation of the air toxics program. In response to pressure from a handful of corporations, the state passed legislation would exempt some of the largest polluters from the program. It also shifts the burden of modeling emissions from polluters to the state agency, which is already strapped for time and resources.

**Comment:** Ms. Leslie Rupracht comments that as a forty-five year old woman with no asthma have difficulty breathing while trying to walk and exercise outside, how difficult must it be for North Carolina's children with asthma to participate in sports or even gym class without great difficulty? And I ask myself how difficult must it be for adults with COPD to breathe in Charlotte and other parts of our state impacted by air pollution? These questions are not rhetorical and must be addressed by the DAQ before regulations are changed that will make it even more difficult to breathe in North Carolina.

**Response:** In 2012, the General Assembly amended the statutes that authorize the state air toxics rules. Section 1 of Session Law 2012-91 exempts from state air toxics emissions rules those sources of emissions that are:

- (A) subject to an applicable requirement under 40 CFR Part 61, as amended;
- (B) an affected source under 40 CFR Part 63, as amended; or
- (C) subject to a case-by-case maximum achievable control technology (MACT) permit requirement issued by the Division pursuant to Paragraph (j) of 42 U.S.C. Section 7412, as amended.

The session law also requires the Division of Air Quality, upon receipt of a permit application for a new source or facility, or the modification of an existing source or facility, that would result in an increase in the emission of toxic air pollutants, to review the application to determine if the emissions 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 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.

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, toxic air emissions in North Carolina decreased by 67 percent between 1998 and 2012. Facilities required to comply with federal standards rarely have had to install additional pollution control equipment to meet the state air toxics rules.

Upon the enactment of S.L. 2012-91, the 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 protection. The law also instructed the 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 work groups. 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, the 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 the 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, the 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, the 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 the DAQ's experience implementing the air toxics rules and from comments from the regulated community through the years. The mandated review resulted in a set of six recommendations contained in the December 2012 report to the Environmental Review Commission. These recommendations can be found in the *Section 3 Report - Review of the North Carolina Air Toxics Rules* found in Chapter VI of this hearing record.

The proposed rule amendments incorporate the required changes due to the statutory requirements in Section 1 of S.L. 2012-91 and the recommended changes due to Section 3 of S.L. 2012-91. After carefully considering all of the input received since S.L. 2012-91 became law, the DAQ has determined the proposed recommended changes due to Section 3 could be made to the air toxics rules to reduce unnecessary regulatory burden and increase the efficient use of the DAQ's resources while maintaining protection of public health.

**Comment:** Mr. Preston Howard of the North Carolina Manufacturers Alliance (NCMA) comments that it is NCMA's understanding that DAQ is interpreting a provision of HB 952 in a manner that requires continued air modeling demonstrations for applications that include an increase in air toxics emissions. Prior to the adoption of HB 952, DAQ required individual companies to conduct air modeling to prove compliance with the AALs. The legislation sought to eliminate this wasteful and time consuming step in permitting. As a result of DAQ's interpretation, some permit applicants choose to continue to perform their own modeling in order to minimize the time required to acquire permit approval. A simple shift in responsibility for completing air toxics modeling from the applicant to DAQ is not what was contemplated by the General Assembly in passing the air toxics reform legislation.

DAQ has considerable and substantial data and experience gathered for more than 20 years of operating the state air toxics program. None of the 36 applications DAQ has received from June 2012 to September 2013 would have resulted in air toxics emissions in excess of the established AALs. This wealth of information combined with the recent knowledge gained from agency reviews since enactment of HB 952 form an adequate basis for concluding that sources subject to

federal regulations of air toxics emissions do not pose an unacceptable risk to human health and obviate the need to model each and every increase in air toxics emissions.

He requests the following amendment to the end of Paragraph (b) of Rule 02Q .0702 as follows: “provided that the terms of the exclusion shall not affect the authority of the Director under 15A NCAC 02Q .0712”. The effect of this amendment would be to fully exempt federally regulated sources that were specifically exempted under the HB 952 legislation, and to acknowledge that the DAQ Director may still require compliance demonstrations when the Director finds that any particular source or group of sources pose an unacceptable risk to human health.

NCMA also notes it was clearly the General Assembly’s intent that HB 952 exempts any source of air toxics that is regulated under a federal air toxics emission standard. Therefore, NCMA recommends the DAQ include in 15A NCAC 02Q .0702(a)(27) those sources subject to 112(g) case by case MACT determinations.

**Response:** Prior to the adoption of HB 952, individual companies or their consultants conducted air modeling if their emissions rates for non-exempt sources exceeded thresholds in the air toxics rules called the Toxics Permitting Emission Rates (TPERs). This process led to many situations where modeling simply wasn’t necessary. The legislation indeed provides relief to individual companies and ensures efficient use of DAQ resources by relieving the permit applicants from reviewing the sources subject to an applicable requirement under 40 CFR Parts 61 or 63, or subject to 112(j). The legislation also places a duty on the DAQ to review permit applications that result in an increase in the emission of toxic air pollutants. From the time the HB 952 became law, through September 30, 2013, DAQ received 36 permit applications that could result in an increase in the emission of toxic air pollutants, thus triggering a review. The results of those 36 reviews are noted below:

- In nine of the 36 cases, the proposed emission rates in the permit application were compared to the TPER found in 02Q .0700, and were found to be below those levels. No further analysis was necessary.
- In sixteen of the 36 cases, DAQ or the local air program leveraged existing knowledge, experience and data (such as previous modeling performed for the facility) to do an informed review of the permit application. These were situations where the proposed emissions were over the TPERs, but new modeling was not conducted. In all sixteen of those cases, DAQ or the local programs determined that the proposed modification would be below the AAL guidelines.
- In seven cases, the permit applicant voluntarily provided a modeling analysis demonstrating the emissions changes would be below the AAL guidelines. The DAQ or the local programs confirmed the results of those modeling analyses. Of these seven cases:
  - Two of the applicants submitted modeling because their primary sources of toxics were not subject to 40 CFR Parts 61 or 63, or subject to 112(j).
  - Another two applications were received before HB 952 became law, but the permits were issued afterwards.

- Another two facilities submitted modeling because their consultant advised that they model.
- One facility submitted modeling to the local air program, because they thought that was the quickest way to get a permit.
- Finally, in 4 cases, the agency performed modeling showing no unacceptable risk. One of those applications was modeled because their primary sources of toxics were not subject to 40 CFR Parts 61 or 63, or subject to 112(j).

In summary, the legislation is providing the sought after relief to reduce unnecessary and redundant modeling, using DAQ resources wisely, while maintaining protection of public health. When evaluating emission increases the DAQ relies on air dispersion modeling, application of engineering judgment, and/or prior modeling and experience. The DAQ believes that its implementation is consistent with the principles of efficiency that NCMA expresses in their comments, and when considered along with the additional rule changes proposed in this hearing record, clearly carry out the intent of the legislation.

With regard to NCMA's recommendation on how to change the text of 02Q .0702(b), DAQ understands and agrees with this clarifying language. The language "provided that the terms of this exclusion shall not affect the authority of the Director under 15A NCAC 02Q .0712" will be added to 02Q .0702(b). Additionally, clarifying language is added to 02Q .0702(b) to clearly indicate which sources should be included/excluded "by the facility" when determining compliance with the toxic air pollutant requirements.

Finally, with regard to NCMA's recommendation on 112(g) case by case MACT determinations, DAQ believes this is already covered via the exemption of affected sources under 40 CFR Part 63.

**Comment:** Mr. Louis Zeller of BREDL comments that the Clean Air Act lists 188 compounds as hazardous air pollutants. The North Carolina toxic air pollutant regulations currently list 97 substances as carcinogens, chronic or acute toxicants and irritants that may adversely affect human health. The two lists contains many of the same substances but the NC TAP regulation has 19 toxics which are not on the federal list and therefore, are not regulated under the federal program. In other words, the toxics listed in the table attached to this letter are not controlled by national emission standards for hazardous air pollutants. If the proposed exemption were to be approved, there would be no limits on these toxics.

**Comment:** Ms. Myra Blake of the Southern Environmental Law Center comments that the air toxics program covers pollutants that are not covered by the federal program, but are pollutants of concern here in North Carolina. These pollutants include ammonia, bromine, hydrogen sulfite, and nitric acid which can cause acute and chronic health effects. The air toxics program is the only source of protection against emissions of these air pollutants

**Response:** The AALs in Rule 15A NCAC 02D .1104 are not amended in this rulemaking with the exception of a correction of an error in the asbestos AAL. The following clarifying language will be added to the end of 15A NCAC 02Q .0702(b) "...provided that the terms of this exclusion shall not affect the authority of the Director under 15A NCAC 02Q .0712". If

there is a finding of unacceptable risk to human health, the owner or operator of the facility would be required 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 21 toxics that are not on the federal hazardous air pollutant list would be part of the evaluation that DAQ performs to determine unacceptable risk. Facilities would not be allowed to emit unlimited quantities of these 21 pollutants.

**Comment:** Mr. Louis Zeller of BREDL comments that Session Law 2012 exempts sources subject to case-by-case emission limits under CAA Section 112(j). However, the federal Section 112(j) requires states to develop standards if EPA misses deadlines. In general, EPA does not delegate to state or local agencies the authority to make decisions that reduce the stringency of the underlying standards. The EMC cannot enforce one part of the law and not the other.

**Response:** Case-by-case emission limits under Section 112(j) would be developed independently of the State air toxics program. The exemptions in S.L.2012-91 do not reduce the stringency of the standards that the State develops under 112(j).

**Comment:** Ms. Rebecca Cheatham of Medical Advocates for Healthy Air and Dr. John Rusher of the North Carolina Pediatric Society (NCPS) comment that DAQ create definitions for “unacceptable risks” for pollutants and require facilities to prove that emissions do not meet these “unacceptable risks”.

**Comment:** Ms. Myra Blake of the Southern Environmental Law Center comments that the agency can require a facility to curb its emissions if it finds that the facility presents unacceptable risks to human health, but this term is not defined and the determination is made behind closed doors

**Response:** Rule 15A NCAC 02D .1104, Toxic Air Pollutant Guidelines, sets the Acceptable Ambient Level (AAL), where “acceptable” means “below the concentration that would produce adverse health effects in sensitive subgroups of the general population.” The rule requires the regulated community to reduce emissions of toxic air pollutants below those levels that are predicted to exceed the AAL beyond their property line.

Currently, the Secretary of the Department of Environment and Natural Resources maintains a scientific body of experts known as the Secretary's Science Advisory Board for Toxic Air Pollutants (SAB), which is responsible for routinely reviewing the scientific information that forms the basis of each AAL. The SAB 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 SAB meets regularly to perform risk assessments on toxic air pollutants emitted in North Carolina. The meetings are open to the public.

### **Recommendation 1 – New TPERs for Vertical Unobstructed Emission Points**

**Comment:** Dr. John Rusher of the North Carolina Pediatric Society (NCPS) comments that DAQ should reconsider the proposal to raise output limits for facilities with vertical, unobstructed smokestacks.

**Comment:** Ms Rebecca Cheatham of Medical Advocates for Healthy Air comments that if DAQ raises output limits for facilities with vertical, unobstructed smokestacks, we will have uncontrolled unmonitored, and unmeasured amounts of toxic air pollutants released into the air. And with increased pollution, we can be sure there will be increased health effects.

**Comment:** Ms. Myra Blake of the Southern Environmental Law Center comments that it is unwise and unnecessary to exempt these facilities from public health protections without making any site-specific determinations.

**Comment:** Mr. Louis Zeller of BREDL comments the DAQ has proposed to develop a separate set of screening thresholds for analyzing toxic air pollutants emitted from unobstructed vertical emission release points (stacks). He states in our experience, every asphalt plant permit which we have reviewed has a vertical stack with no obstruction or rain cap, the very type contemplated in this exemption. The problem here is that the Division will not find excessive levels unless it looks for them. For years, owner-operators of industrial air pollution sources have had the option of either doing their own modeling to estimate pollution impacts, or have the DAQ do one. This is hardly a burden to the permit applicants because the state analysis costs them nothing. It is no burden for the people of North Carolina because the screening is designed to catch potential sources of air pollutants.

**Comment:** Ms. Nadia Luhr of the North Carolina Conservation Network comments that DAQ should not develop a more lenient set of TPERs for facilities with unobstructed vertically oriented release points. DAQ's proposal raises two concerns. First, a more lenient set of TPERs will limit the amount of information available to DAQ, possibly resulting in violations of the AAL without DAQ's knowledge. TPERs are strictly emissions-based and do not take into account the cumulative impacts of multiple facilities or other background air pollution. It is possible a facility could contribute to AAL violations regardless of its emissions remaining below this new, more lenient set of TPER thresholds. Second, a more lenient set of TPERs for these facilities could have serious unintended consequences in areas where inversion occurs. When inversion occurs, the air becomes stagnant and air pollution become trapped closed to ground level instead of being circulated away. Inversion occurs frequently in North Carolina particularly in the western part of the state. Regardless of the speed or angle of release, toxic emissions can become trapped in an inversion system and remain in the air, close to ground level.

**Response:** The current NC Air Toxics regulations provide for a two-step demonstration process for facilities that make modifications that trigger review. The first step allows facilities to “sum up” all non-exempt emissions of a triggered TAP and compare that emission rate to the TPER. If the summed emissions are below the TPER the second step – air dispersion modeling

– is not required. The TPERs act as a screening tool that reduces regulatory burden on facilities and increases the efficient use of DAQ resources.

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 and modeled concentrations at the property boundary occurs most often at facilities where emissions are released through an unobstructed, vertical stack. 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.

For determining TPERs representative of vertical unobstructed stacks, the modeling data was modified to increase the default exit velocity to 1.0 m/s (considered to be conservative for this stack type). This exit velocity used in developing the set of TPERs for vertical unobstructed stacks is below the lowest actual stack velocity of 1.5 m/s at current North Carolina facilities. The TPERs are back-calculated from the AAL guidelines in 15A NCAC 2D .1100 using conservative assumptions about emissions and dispersion characteristics (e.g. worst case meteorology and stack parameters). The change being proposed by DAQ does not alter the underlying AALs therefore the health-based guidelines remain the same.

### **Recommendation 2 – natural gas and propane fired combustion sources**

**Comment:** Mr. Louis Zeller of BREDL comments that under the proposed rule change, natural gas and propane burners would be added to the list of facilities for which a “permit to emit toxic air pollutants shall not be required”. The exemption would apply regardless of the permit threshold rate, the TPER, which is the determining factor for whether the Division performs air modeling, not permitting.

**Comment:** Ms. Myra Blake of the Southern Environmental Law Center comments that it is unwise and unnecessary to exempt these facilities from public health protections without making any site-specific determinations.

**Response:** Combustion source means boilers, space heaters, process heaters, internal combustion engines and combustion turbines which burn only wood or unadulterated fossil fuel. Internal combustion engines and combustion turbines are affected sources under 40 CFR Part 63 and therefore are exempt from the toxic air pollutant procedures in Section 02Q .0700 unless the Director makes a determination that emissions from the source or facility would present an unacceptable risk to human health. Natural gas and propane-fired boilers, space heaters and process heaters are not affected sources under 40 CFR Part 63 and therefore not exempt under G.S. 143-215.107(a)(5). Unmodified units in this classification which existed prior to July 10, 2010 were already exempted under 02Q .702. Adding newer cleaner burning units to this exemption creates consistency among this source classification and was done in a manner which

continues to protect public health. The threshold level for this proposed exemption from air toxics permitting was based on worst-case TPER values for boilers. The controlling TAP is the first TAP that would be expected to be exceeded. Benzene was selected as the “controlling” pollutant because it is the first TAP whose TPER would be exceeded based on the amount of natural gas burned at a facility. Based on the calculations completed by DAQ staff, the benzene TPER would not be exceeded if a facility operates natural gas combustion sources whose aggregate heat input are less than 449 mmBtu/hr and has no other sources of benzene emissions. For the exemption in the rule, the aggregate heat input limit was set at 450 mmBtu/hr.

Because the TPERs represent an emissions rate, below which the AAL will not be exceeded even under the worst case dispersion characteristics, the DAQ considers the TPERs to be protective of human health. The change being proposed by the DAQ does not change the underlying AAL for the same pollutant. The health based standard would remain the same.

**Comment:** Mr. Louis Zeller of BREDL comments that the exemption from air toxics rules of natural gas- and propane-fired plants with a heat input below 450 mmBtu/hour would allow higher levels of pollution because it exempts a significant number of sources within certain facilities. For example, the Richmond County Combustion Turbines have nineteen emission units, ten of which have heat inputs below the 450 mmBtu/hour threshold. The ten sources burn natural gas with a combined heat input of 80 mmBtu/hour and 7.0E+05 mmBTU/year. The maximum facility-wide annual natural gas heat input is 3.18E+07, which means the ten exempted units emit about 2% of the facility’s air pollution while burning natural gas for fuel. However, if approved by the EMC, this exemption would allow about 497 more pounds of formaldehyde be emitted from the RCCT facility annually.

**Response:** The proposed exemption is conditioned for facilities with an aggregate heat input of less than 450 mmBtu/hr with no other sources of benzene emissions. The exemption requires all natural gas combustion sources to be included when determining the aggregate heat input. This means that all the units’ heat input when combined must be below 450 mmBtu/hr, not each individual combustion unit.

**Comment:** Mr. Chuck Greco of Mecklenburg County Air Quality comments that DAQ should expand the exemption for gas fired combustion sources [2Q .0702(a)(25)], to include sources that burn liquid fuel during periods of gas curtailment, supply interruptions, startups or periodic testing. This is consistent with the definition contained in 40 CFR 63 Subpart JJJJJJ.

**Response:** The exemption for gas-fired combustion sources would include sources that burn liquid fuel during periods of gas curtailment, supply interruptions, startups or periodic testing. The definition of gas-fired combustion sources subject to North Carolina air toxics rules would be consistent with the definition contained in 40 CFR Part 63, Subpart JJJJJJ and Subpart DDDDDD. The rule does not require clarification.

**Comment:** Mr. Chuck Greco of Mecklenburg County Air Quality comments that DAQ should clarify which sources must be included in the aggregate mmBTU/hr calculation in 2Q .0702(a)(25). Should all combustion sources at a facility be included, even those exempt under 2Q .0702(a)(18), or only new combustion sources permitted on or after July 10, 2010?

**Response:** The 450 mmBtu/hr allowable heat input threshold is the aggregate threshold for all new and existing combustion sources at the facility.

### **Recommendation 3 – Emergency Generators**

**Comment:** Mr. Chuck Greco of Mecklenburg County Air Quality comments that DAQ should clarify which sources must be included in calculating the aggregate horsepower in 2Q .0702(a)(26). Should all emergency engines be included, even those exempt under 2Q .0702(a)(18) or only new emergency engines permitted on or after July 10, 2010?

**Response:** The 4843 horsepower (HP) threshold is the aggregate threshold for all new and existing emergency engines at the facility.

### **Recommendation 6 – Unadulterated Wood**

**Comment:** Ms. Rebecca Cheatham of Medical Advocates for Healthy Air, Ms. Myra Blake of the Southern Environmental Law Center and Dr. John Rusher of the North Carolina Pediatric Society (NCPS) oppose the plan to allow industrial boilers to burn chemically treated wood.

**Response:** The non-hazardous secondary material (NHSM) regulations under the Resource Conservation and Recovery Act (RCRA) identifies which non-hazardous secondary materials are, or are not, solid wastes when burned in combustion units. EPA issued the NHSM final rule in March 2011. The rule was developed under the Resource Conservation and Recovery Act (RCRA) in conjunction with three rules under the Clean Air Act (CAA) – the major boiler, area boiler and CISWI rules. 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.

### **Director’s Call**

**Comment:** Ms. Therese Vick of BREDL comments that the Director’s Call can be manipulated by the agency’s upper management who don’t have protection of public health on their radar. When a Director’s Call is being considered, there should be a process established to inform and include the public.

**Response:** The Director of the Division of Air Quality will take appropriate action when there is an unacceptable risk to public health. When the Division requires an owner or operator of a source or facility to submit a permit application pursuant to a written finding of unacceptable risk, the Division shall report to the Chairs of the Environmental Review Commission on the circumstances surrounding the permit requirement, including a copy of the written finding.

**Other comments:**

**Comment:** Mr. Preston Howard of NCMA comments that industries must go to extreme measures to quantify extremely low “trace” level of air toxics emissions when conducting air toxics compliance determinations. These trace level or incidental emissions have not been shown to pose any compliance issues, but one still has to quantify them for analysis. NCMA recommends that the Commission establish a de minimis threshold for identifying very low levels of air toxics emissions within a particular source of emissions. This de minimis level would be based upon the same threshold as the MACT and GACT standards (i.e. from a Material Safety Data Sheet (MSDS) or Certified Product Data Sheet (CPDS)) where any air toxic below 1% for non-carcinogens and 0.1% for carcinogens may be excluded from inclusion in an air toxics compliance demonstration.

**Response:** With regard to NCMA’s recommendation on de minimis thresholds for identifying very low levels of emissions, DAQ believes the comment has merit. However, additional study is necessary to further develop this concept. Once a concept is further developed, DAQ can initiate a separate rule-making action at that time.

**Comment:** Ms. Therese Vick of BREDL comments that the DAQ must hold additional public hearings because the 3:00 pm early start time in Raleigh limits public participation.

**Comment:** Ms June Blotnick of Clean Air Carolina comments that she is dissatisfied that the hearing was held at a time and place where most of the people who will be directly affected by the proposed changes cannot attend. The hearing was clearly held for the convenience of agency staff and not the public.

**Comment:** Ms. Kate Dunningham and Ms. Helen Livingston request that DAQ hold more public hearings regarding these regulatory changes.

**Response:** The DAQ solicited input on changes to the air toxics rules during the 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, the 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, the 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 the 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, the DAQ received 18 written comments.

The resulting draft rules that were developed from comments received during the September 25, 2012 stakeholder meeting were presented to another stakeholder meeting that was held on March 20, 2013 with a comment period ending on April 4, 2013. The DAQ reviewed the comments received during the meeting and comment period and made a few minor modifications. On July 11, 2013, the DAQ presented the proposed rule to the EMC for approval to go to public hearing.

At this point, the regulated community which included industry, environmental groups and the public had three opportunities to give input on the changes that could be made to the current rules. Due to the extensive review process, the DAQ determined that only one public hearing to be held in Raleigh would be required to receive additional comments on the proposed rules.

**Comment:** Ms. Therese Vick of BREDL comments that the proposed changes to the rules pay lip service to public health and that DAQ should be directed to consider the health care costs of these proposed rules.

**Response:** The fiscal note approved by the Office of State Budget and Management did consider the health care costs associated with the rule changes. The proposed rule amendment does not change the ambient air level (AAL) for any toxic air pollutant except for asbestos emitted from an affected facility. The AAL is a health based standard and is designed to protect public health by minimizing exposure to and the resulting risk from toxic air pollutants emitted from a facility. The asbestos AAL was changed in this rulemaking. The asbestos AAL was changed from  $2.8 \times 10^{-6}$  fibers per milliliter (f/mL) from the  $2.8 \times 10^{-11}$  f/mL currently listed in 15A NCAC 02D .1104, Toxic Air Pollutant Guidelines. The DAQ has determined that there are not any facilities in the North Carolina that emit asbestos, so there will not be any fiscal impact for the error corrections related to asbestos.

**Comment:** Ms. Therese Vick of BREDL comments that if recent and past decisions of the DAQ are any indication of the future, we can expect more permits to be issued with modeled toxic emission rates at 90-plus percent of the acceptable ambient levels. This is especially alarming considering start-up, shutdowns and malfunctions with their attendant excess emissions.

**Response:** AALs are set to protect public health. If the concentrations are below the AAL at the fence line, public health should be protected. The AALs are not changing with the exception of asbestos in this rulemaking. There are no sources of asbestos in the state affected by the air toxics rules.

**Comment:** Ms. Keely Wood expressed concern about the presence of benzene, a potentially cancer-causing toxin detected near compressors at fracking operations, could pose long-term health risks. She asks if constant air testing will be done on all compressors and drill wells when natural gas exploration begins. She comments that the state should not even consider decreasing the air quality standards when natural gas exploration is about to begin.

**Response:** The DAQ has been studying the impacts of shale gas operations for several years. The DAQ has been reviewing the regulatory framework and compliance assurance and permitting procedures of other states that have extensive experience on these operations. The DAQ has been reviewing its data needs and assessing its existing monitoring network to establish a baseline monitoring strategy.

The DAQ determined a regulatory framework is in place covering air emission sources (and the permitting process) at shale gas development and production facilities. Also the USEPA adopted two new regulations, New Source Performance Standards for Oil and Gas (Subpart OOOO) and National Emission Standards for Hazardous Air Pollutants (Subpart HH). These federal rules are already adopted by reference into NC's air quality rules (02D .0524 and 02D .1111).

At this time, the DAQ is not recommending any changes to existing rules or adoption of new rules with regards to shale gas operations. It will continue to review any new studies or information on shale gas operations that would require rule changes. It has also installed a new multi-pollutant monitor in Lee County that will measure 127 different compounds.

**Comment:** Ms. Keely Wood comments that a health impact assessment done in Garfield County, CO showed health effect that may include respiratory disease, neurological problems, birth defects and cancers. She says that a health impact assessment needs to be done in Lee County.

**Comment:** Ms. June Blotnick of Clean Air Carolina comments that DAQ should consult with the Institute for the Environment and the Gillings School of Global Public Health for the purpose of conducting a health impact assessment in those communities where proposed threshold limits will result in more emissions.

**Comment:** Dr. Jonathan Kotch calls on the DAQ to conduct a health impact assessment to determine how these changes will affect North Carolinians.

**Response:** The comments are outside the scope of this hearing. The AALs which are set to protect public health are not be amended in this rulemaking except for asbestos. There are not any sources subject to the air toxics rules emitting asbestos in the state.

**Comment:** Mr. Delano Hill comments that facilities that burn poultry litter would create emissions that are unsafe now and for future generations and that the state should prevent these facilities from burning poultry litter.

**Response:** Facilities that burn poultry litter are required to comply with the air toxics rules if it emits an air toxic pollutant that is listed in Rule 15A NCAC 02D .1104.

**Comment:** Ms. Kristen Dubay and Ms. Jean Bryson comments that greater arsenic in the air ends up on our crops and then our bodies, which is extremely harmful.

**Response:** The arsenic AAL was not amended during this rulemaking. An amendment to the arsenic AAL is being considered in a separate rulemaking. A public hearing was held in Raleigh,

NC on May 14, 2013, to take public comments on amendments to the state air toxics rules to revise the health-based acceptable ambient level in 15A NCAC 02D .1104 and associated emission rate requiring a permit and 02Q .0711 for arsenic and inorganic arsenic compounds. The hearing officer's report was presented to, and approved by, the Environmental Management Commission at its November 14, 2013 meeting. The rules were approved by the Rules Review Commission at its December 19, 2013 meeting. More than 10 letters of objection were received and the rules are pending legislative review.

**Comment:** Ms. June Blotnick of Clean Air Carolina comments that DAQ never really looked at nearby polluting facilities when granting permits. Now that DAQ is proposing to increase pollution thresholds, it's more important than ever to determine if there is an unacceptable risk to human health.

**Comment:** Ms Rebecca Cheatham of the Medical Advocates for Healthy Air, Ms. Myra Blake of the Southern Environmental Law Center and Ms. Terry Taylor of the Medical Advocates for Healthy Air comment that DAQ does not evaluate emissions of neighboring industry when issuing new permits.

**Response:** The authority of the Division of Air Quality to assess health risks from multiple facilities has not been diminished by this rulemaking.

### **SUMMARY OF COMMENTS AND RESPONSES**

<b><u>Comment</u></b>	<b><u>Response</u></b>
EMC should not adopt the proposed rule changes due to Session Law 2012-91.	Rules are required to conform to General Statutes.
19 toxic air pollutants in State program not included in 188 hazardous air pollutants in federal program. Under proposed rules, no limit on these pollutants.	Subject sources emitting the 21 TAPs that are not in common with federal HAPs still must meet the AALs.
DAQ misinterpreting HB 952. DAQ should not be modeling all federal regulated sources. Exempt sources under S.L. 2012-91 should be fully exempt except when Director determines there may be an unacceptable health risk.	The legislation is providing the sought after relief to reduce unnecessary and redundant modeling, using DAQ resources wisely, while maintaining protection of public health. When evaluating emission increases the DAQ relies on air dispersion modeling, application of engineering judgment, and/or prior modeling and experience. DAQ believes that its implementation is consistent with the principles of efficiency expressed in the comment, and when considered along with the additional rule changes proposed in this hearing record, clearly carry out the intent of the legislation.

<u>Comment</u>	<u>Response</u>
Add the following language to the end of Paragraph (b) of Rule 02Q .0702: “provided that the terms of the exclusion shall not affect the authority of the Director under 15A NCAC 02Q .0712”.	DAQ will add the clarifying language to 02Q .0702(b).
Exempt 112(g) sources.	DAQ believes 112(g) sources are already covered via the exemption of affected sources under 40 CFR Part 63.
112(j) requires states to develop standards if EPA misses deadlines. In general, EPA does not delegate to state or local agencies the authority to make decisions that reduce the stringency of the underlying standards.	The exemptions in S.L.2012-91 do not reduce the stringency of the standards that the State develops under 112(j).
DAQ should develop definition for “unacceptable risk”.	AALs define unacceptable risk. This may be based on modeling, epidemiological studies, actual monitoring data or other information.
EMC should not adopt new TPERs for vertical, unobstructed emission points.	New TPERs for vertical, unobstructed emissions points are still quite conservative and are based on past DAQ experience.
Natural gas combustion source exemption would apply regardless of TPER.	Exemption threshold is based on the TPER.
Natural gas combustion source exemption exempts a significant portion of sources with certain facilities.	Exemption is an aggregate threshold and applies to all applicable sources, not just a portion of them.
Natural gas combustion source exemption should be expanded to sources that burn liquid fuel during periods of gas curtailment.	Exemptions does include sources that burn liquid fuel during periods of gas curtailment. No change in rules needed.
Clarify combustion source exemption to specify if all sources or new sources after July 10, 2010 are included in aggregate limit.	Threshold exemption is for all new and existing combustion sources at the facility
Clarify emergency generator exemption to specify if all sources or new sources after July 10, 2010 are included in aggregate limit.	Threshold exemption is for all new and existing emergency engines at the facility
Oppose removing “unadulterated wood” definition.	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.

<u>Comment</u>	<u>Response</u>
When a Director's Call is being considered, there should be a process established to inform and include the public.	All Director calls are reported to Environmental Review Commission.
Establish de minimis threshold for trace levels of toxics emissions.	Additional study is necessary to further develop this concept. Once a concept is further developed, DAQ can initiate a separate rule-making action at that time.
DAQ must hold additional public hearings because the 3:00pm early start time in Raleigh limits public participation.	Extensive stakeholder process before public hearing. Written and oral comments treated the same. There was 60 day written comment period.
DAQ should consider the health costs of these proposed rules.	Fiscal note accounts for health costs.
Expect more permits to be issued with modeled toxic emission rates at 90-plus percent of the acceptable ambient levels.	AALs are set to protect public health. Emissions rates below the AAL are protective of public health.
State should not even consider decreasing the air quality standards when natural gas exploration is about to begin.	Out of scope for this hearing. No change to rules.
State should conduct health impact assessment in various NC communities.	Out of scope for this hearing. No change to rules.
State should prevent these facilities from burning poultry litter.	Poultry litter facilities required to comply with toxics rules. No change to rules.
Greater arsenic in the air ends up on our crops and then our bodies, which is extremely harmful.	Out of scope for this hearing. No change to rules.
DAQ never really looked at nearby polluting facilities when granting permits.	Rulemaking does not diminish DAQ's ability to deal with multiple facilities.

## CONCLUSION

Forty five people submitted forty three comments on the proposed amendments to the toxic air pollutant rules during the comment period for the hearing record.

Thirty four people commented that they oppose to the changes in the state air toxics rules enacted by the 2012 General Assembly. The commenters expressed concern that allowing technology based, rather than health based, limits on toxic air pollutants is inadequate for protection of public health. Several commenters expressed concern that sources that are exempt from the toxic air pollutant rules would not be reviewed for unacceptable health risks by the

DAQ. One person commented that the shift in responsibility for completing air toxics modeling from the applicant to DAQ is not what was contemplated by the General Assembly in passing the air toxics reform legislation.

Paragraph (b) of Rule 15A NCAC 02Q .0702 was amended to clarify what emission activities are included by the facility in determining compliance with the requirements of Section 02Q .0700. Additionally, the following clarifying language - “provided that the terms of this exclusion shall not affect the authority of the Director under 15A NCAC 02Q .0712” – has been added to the end of 02Q .0702(b).

Three people commented that unacceptable risk to human health is undefined. The acceptable ambient air levels (AALs) in Rule 15A NCAC 02D .1104 set the concentrations, above which could produce adverse health effects in sensitive subgroups of the general population beyond the property line of the facility. No changes were made to the rules.

Five people were opposed to the additional toxic pollutant emission rates (TPERs) for vertical, unobstructed emission points. The new TPERs were developed using conservative assumptions that took into consideration actual stack velocities and DAQ’s extensive experience with modeling analyses. The new TPERs do not alter the underlying AALs, therefore the health based guidelines remain the same. No changes were made to the rules.

Three people commented on the natural gas and propane-fired combustion source exemption. Two commenters oppose the exemption. One commenter requested that the exemption should include sources that burn liquid fuel during periods of gas curtailment. One commenter asked for a clarification on which sources should be included in the aggregate threshold calculation. The DAQ considers the exemption to be protective of public health since it is based on a threshold that is based on worst-case TPER values. The exemption would include combustion sources that burn liquid fuel during periods of gas curtailment since the definition for combustion sources subject to NC air toxics rules would be consistent with federal rules. No changes were made to the rules.

One person asked for a clarification to the emergency generator exemption. The exemption threshold is an aggregate threshold that includes all new and existing emergency engines at the facility. No changes were made to the rules.

Three people opposed the removal of the definition for unadulterated wood. Federal regulations for major and area source boilers and Commercial/Industrial Solid Waste Incinerators (CISWI) classify any combusted material (including wood) as either a fuel or a solid waste which makes further distinction in the state rules unnecessary. No changes were made to the rules.

One person commented that the public should be informed when there is a Director’s Call. The DAQ reports its written findings to the Environmental Review Commission. No changes were made to the rules.

One person recommended that the EMC establish a de minimis threshold for very low levels of toxic air pollutant emissions. DAQ believes the comment has merit, but additional study is

necessary to further develop this concept. Once a concept is further developed, DAQ can initiate a separate rule-making action at that time. No changes were made to the rules.

Four people commented that there should have been additional public hearings. The proposed changes to the rules went through an extensive stakeholder process where there were three opportunities to give input, including comment periods, on the proposed rule changes before the official public hearing comment period. The DAQ determined only one public hearing was required since the regulated community participated in this stakeholder process.

One person commented that the DAQ should consider the health care costs due to the proposed amendments. The fiscal note approved by the Office of State Budget and Management did consider the health care costs. The amendments do not change the ambient air level (AAL), health based standards designed to protect public health, for toxic air pollutants emitted from an affected facility.

One person commented that more permits would be modeled up to 90-plus percent of the AAL. AALs are set to protect public health. If the concentrations are below the AAL at the fence line, public health should be protected. No change to the rules is needed as a result of the comment.

One person commented on shale gas operations, one person commented on poultry litter facilities, three people asked DAQ to conduct health impact assessments and one person commented on arsenic emissions. These comments were out of scope for this hearing.

Two people commented that DAQ does not look at emissions from nearby polluting facilities when granting permits. The ability of the Division of Air Quality to assess health risks from multiple facilities has not been affected or diminished by this rulemaking.

### **HEARING OFFICERS' RECOMMENDATION**

The Hearing Officer recommends that the proposed amendments and repeals as presented in Chapter II of this hearing report be adopted by the Environmental Management Commission.

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## CHAPTER II

### Rule Change Formatting Key

Chapter IV of this hearing record represents the proposed rules as noticed in the *North Carolina Register* for public comment.

Chapter II represents the proposed rules as published with changes made in response to comments received during the public comment period incorporated.

For Rule Amendments:

~~Text~~ = deleted text

Text = added text

~~Text~~ = existing text in what was published in the *North Carolina Register* (NCR) that is proposed to be deleted following the comment period

Text = text proposed to be added to what was published in the NCR following the comment period

~~Text~~ = text initially proposed in the NCR to be deleted that is restored following the comment period

[~~Text~~] = text proposed in the NCR to be added that is deleted following the comment period

Note: For new rules proposed for adoption, all text is initially underlined. If there are changes to the proposed new rule following publication in the NCR, the underlining is removed, deleted text is struck through, added text is underlined, and there is no highlighting.

1 15A NCAC 02D .1104 is proposed for amendment with changes as follows:

2

3 **15A NCAC 02D .1104 TOXIC AIR POLLUTANT GUIDELINES**

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

9

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	$2.3 \times 10^{-7}$			
asbestos (1332-21-4)	<del><math>2.8 \times 10^{-11}</math></del> $2.8 \times$ $10^{-6}$ fibers/ml			
aziridine (151-56-4)		0.006		
benzene (71-43-2)	$1.2 \times 10^{-4}$			
benzidine and salts (92-87-5)	$1.5 \times 10^{-8}$			
benzo(a)pyrene (50-32-8)	$3.3 \times 10^{-5}$			
benzyl chloride (100-44-7)			0.5	
beryllium (7440-41-7)	$4.1 \times 10^{-6}$			
beryllium chloride (7787-47-5)	$4.1 \times 10^{-6}$			
beryllium fluoride (7787-49-7)	$4.1 \times 10^{-6}$			
beryllium nitrate (13597-99-4)	$4.1 \times 10^{-6}$			
bioavailable chromate pigments, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
bis-chloromethyl ether (542-88-1)	$3.7 \times 10^{-7}$			

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
bromine (7726-95-6)				0.2
1,3-butadiene (106-99-0)	$4.4 \times 10^{-4}$			
cadmium (7440-43-9)	$5.5 \times 10^{-6}$			
cadmium acetate (543-90-8)	$5.5 \times 10^{-6}$			
cadmium bromide (7789-42-6)	$5.5 \times 10^{-6}$			
carbon disulfide (75-15-0)		0.186		
carbon tetrachloride (56-23-5)	$6.7 \times 10^{-3}$			
chlorine (7782-50-5)		0.0375		0.9
chlorobenzene (108-90-7)		2.2		
chloroform (67-66-3)	$4.3 \times 10^{-3}$			
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		
epichlorohydrin (106-89-8)	$8.3 \times 10^{-2}$			
ethyl acetate (141-78-6)			140	
ethylenediamine (107-15-3)		0.3	2.5	
ethylene dibromide (106-93-4)	$4.0 \times 10^{-4}$			
ethylene dichloride (107-06-2)	$3.8 \times 10^{-3}$			
ethylene glycol monoethyl ether (110-80-5)		0.12	1.9	
ethylene oxide (75-21-8)	$2.7 \times 10^{-5}$			
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-)	$7.6 \times 10^{-8}$			

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
85-7)				
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)	$2.4 \times 10^{-2}$		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)	$2.1 \times 10^{-6}$			
nitric acid (7697-37-2)				1
nitrobenzene (98-95-3)		0.06	0.5	
n-nitrosodimethylamine (62-75-9)	$5.0 \times 10^{-5}$			
non-specific chromium (VI) compounds, as chromium (VI)	$8.3 \times 10^{-8}$			

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
equivalent				
pentachlorophenol (87-86-5)		0.003	0.025	
perchloroethylene (127-18-4)	$1.9 \times 10^{-1}$			
phenol (108-95-2)			0.95	
phosgene (75-44-5)		0.0025		
phosphine (7803-51-2)				0.13
polychlorinated biphenyls (1336-36-3)	$8.3 \times 10^{-5}$			
soluble chromate compounds, as chromium (VI) equivalent		$6.2 \times 10^{-4}$		
styrene (100-42-5)			10.6	
sulfuric acid (7664-93-9)		0.012	0.1	
tetrachlorodibenzo-p-dioxin (1746-01-6)	$3.0 \times 10^{-9}$			
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)	$6.3 \times 10^{-3}$			
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)	$5.9 \times 10^{-2}$			
trichlorofluoromethane (75-69-4)			560	
1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)				950
vinyl chloride (75-01-4)	$3.8 \times 10^{-4}$			
vinylidene chloride (75-35-4)		0.12		
xylene (1330-20-7)		2.7		65

1

2 *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;

1           *Eff. May 1, 1990;*

2           *Amended Eff. September 1, 1992; March 1, 1992;*

3           *Temporary Amendment Eff. July 20, 1997;*

4           *Amended Eff. May 1, 2014; March 1, 2010; June 1, 2008; April 1, 2005; April 1, 2001; July 1,*  
5           *1998.*

7 15A NCAC 02Q .0701 is proposed for amendment as follows:

9 **15A NCAC 02Q .0701    APPLICABILITY**

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

13           (1)     new facilities according to Rule .0704 of this Section;

14           ~~(2)     existing facilities according to Rule .0705 of this Section;~~

15           ~~(3)~~(2)    modifications according to Rule .0706 of this Section.

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

20 ~~(c) Facilities required to comply with MACT standards under 15A NCAC 02D .1109, .1111, or .1112 or 40 CFR~~  
21 ~~Part 63 shall be deemed in compliance with this Subchapter and 15A NCAC 02D .1100 unless the Division~~  
22 ~~determines that modeled emissions result in one or more acceptable ambient levels in 15A NCAC 02D .1104 being~~  
23 ~~exceeded. This review shall be made according to the procedures in 15A NCAC 02D .1106. Once a facility~~  
24 ~~demonstrates compliance with the acceptable ambient levels in 15A NCAC 02D .1104, future demonstrations shall~~  
25 ~~only be required on a five year basis. When an acceptable ambient level for a toxic air pollutant in 15A NCAC 02D~~  
26 ~~.1104 is changed, any condition that has previously been put in a permit to protect the previous acceptable ambient~~  
27 ~~level for that toxic air pollutant shall not be changed until the permit is renewed, at which time the owner or operator~~  
28 ~~of the facility shall submit an air toxic evaluation showing that the new acceptable ambient level will not be~~  
29 ~~exceeded.~~

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

32           *Rule originally codified as part of 15A NCAC 2H .0610;*

33           *Eff. July 1, 1998;*

34           *Amended Eff. May 1, 2014; July 10, 2010; February 1, 2005.*

35

36

1 15A NCAC 02Q .0702 is proposed for amendment with changes as follows:

2  
3 **15A NCAC 02Q .0702 EXEMPTIONS**

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

- 5 (1) residential wood stoves, heaters, or fireplaces;
- 6 (2) hot water heaters that are used for domestic purposes only and are not used to heat process water;
- 7 (3) maintenance, structural changes, or repairs that do not change capacity of that process, fuel-
- 8 burning, refuse-burning, or control equipment, and do not involve any change in quality or nature
- 9 or increase in quantity of emission of any regulated air pollutant or toxic air pollutant;
- 10 (4) housekeeping activities or building maintenance procedures, including painting buildings,
- 11 resurfacing floors, roof repair, washing, portable vacuum cleaners, sweeping, use and associated
- 12 storage of janitorial products, or non-asbestos bearing insulation removal;
- 13 (5) use of office supplies, supplies to maintain copying equipment, or blueprint machines;
- 14 (6) paving parking lots;
- 15 (7) replacement of existing equipment with equipment of the same size, type, and function if the new
- 16 equipment:
- 17 (A) does not result in an increase to the actual or potential emissions of any regulated air
- 18 pollutant or toxic air pollutant;
- 19 (B) does not affect compliance status; and
- 20 (C) fits the description of the existing equipment in the permit, including the application,
- 21 such that the replacement equipment can be operated under that permit without any
- 22 changes to the permit;
- 23 (8) comfort air conditioning or comfort ventilation systems that do not transport, remove, or exhaust
- 24 regulated air pollutants to the atmosphere;
- 25 (9) equipment used for the preparation of food for direct on-site human consumption;
- 26 (10) non-self-propelled non-road engines, except generators, regulated by rules adopted under Title II
- 27 of the federal Clean Air Act;
- 28 (11) stacks or vents to prevent escape of sewer gases from domestic waste through plumbing traps;
- 29 (12) use of fire fighting equipment;
- 30 (13) the use for agricultural operations by a farmer of fertilizers, pesticides, or other agricultural
- 31 chemicals containing one or more of the compounds listed in 15A NCAC 02D .1104 if such
- 32 compounds are applied according to agronomic practices acceptable to the North Carolina
- 33 Department of Agriculture;
- 34 (14) asbestos demolition and renovation projects that comply with 15A NCAC 02D .1110 and that are
- 35 being done by persons accredited by the Department of Health and Human Services under the
- 36 Asbestos Hazard Emergency Response Act;

- 1 (15) incinerators used only to dispose of dead animals or poultry as identified in 15A NCAC 02D  
2 .1201(c)(4) or incinerators used only to dispose of dead pets as identified in 15A NCAC 02D  
3 .1208(a)(2)(A);
- 4 (16) refrigeration equipment that is consistent with Section 601 through 618 of Title VI (Stratospheric  
5 Ozone Protection) of the federal Clean Air Act, 40 CFR Part 82, and any other regulations  
6 promulgated by EPA under Title VI for stratospheric ozone protection, except those units used as  
7 or with air pollution control equipment;
- 8 (17) laboratory activities:
- 9 (A) bench-scale, on-site equipment used exclusively for chemical or physical analysis for  
10 quality control purposes, staff instruction, water or wastewater analyses, or non-  
11 production environmental compliance assessments;
- 12 (B) bench scale experimentation, chemical or physical analyses, training or instruction from  
13 nonprofit, non-production educational laboratories;
- 14 (C) bench scale experimentation, chemical or physical analyses, training or instruction from  
15 hospital or health laboratories pursuant to the determination or diagnoses of illnesses; and
- 16 (D) research and development laboratory activities that are not required to be permitted under  
17 Section .0500 of this Subchapter provided the activity produces no commercial product  
18 or feedstock material;
- 19 (18) combustion sources as defined in 15A NCAC 02Q .0703 except new or modified combustion  
20 sources permitted on or after July 10, 2010.
- 21 ~~The DAQ shall review and recommend to the EMC no later than July 1, 2014, and every five years~~  
22 ~~thereafter, whether the exemption shall remain in place or be removed.~~
- 23 (19) storage tanks used only to store:
- 24 (A) inorganic liquids with a true vapor pressure less than 1.5 pounds per square inch absolute;
- 25 (B) fuel oils, kerosene, diesel, crude oil, used motor oil, lubricants, cooling oils, natural gas,  
26 liquefied petroleum gas, or petroleum products with a true vapor pressure less than 1.5  
27 pounds per square inch absolute;
- 28 (20) dispensing equipment used solely to dispense diesel fuel, kerosene, lubricants or cooling oils;
- 29 (21) portable solvent distillation systems that are exempted under 15A NCAC 02Q .0102(c)(1)(I).
- 30 (22) processes:
- 31 (A) electric motor burn-out ovens with secondary combustion chambers or afterburners;
- 32 (B) electric motor bake-on ovens;
- 33 (C) burn-off ovens for paint-line hangers with afterburners;
- 34 (D) hosiery knitting machines and associated lint screens, hosiery dryers and associated lint  
35 screens, and hosiery dyeing processes where bleach or solvent dyes are not used;
- 36 (E) blade wood planers planing only green wood;

- 1 (F) saw mills that saw no more than 2,000,000 board feet per year provided only green wood  
2 is sawed;
- 3 (G) perchloroethylene drycleaning processes with 12-month rolling total consumption of:  
4 (i) less than 1366 gallons of perchloroethylene per year for facilities with dry-to-  
5 dry machines only;  
6 (ii) less than 1171 gallons of perchloroethylene per year for facilities with transfer  
7 machines only; or  
8 (iii) less than 1171 gallons of perchloroethylene per year for facilities with both  
9 transfer and dry-to-dry machines;
- 10 (23) wood furniture manufacturing operations as defined in 40 CFR 63.801(a) that comply with the  
11 emission limitations and other requirements of 40 CFR Part 63 Subpart JJ, provided that the terms  
12 of this exclusion shall not affect the authority of the Director under 15A NCAC 02Q .0712;
- 13 (24) wastewater treatment systems at pulp and paper mills for hydrogen sulfide and methyl mercaptan  
14 only;
- 15 ~~(25)~~ natural gas and propane fired combustion sources with an aggregate allowable heat input value  
16 less than 450 million Btu per hour that are the only source of benzene at the facility;
- 17 ~~(26)~~ emergency engines with an aggregate total horsepower less than 4843 horsepower that are the only  
18 source of formaldehyde at the facility;
- 19 ~~(27)~~ an air emission source that is any of the following:  
20 (A) subject to an applicable requirement under 40 CFR Part 61, as amended;  
21 (B) an affected source under 40 CFR Part 63, as amended; or  
22 (C) subject to a case-by-case MACT permit requirement issued by the Division pursuant to  
23 Paragraph (j) of 42 U.S.C. Section 7412, as amended;
- 24 ~~(25)~~~~(28)~~ gasoline dispensing facilities or gasoline service station operations that comply with 15A NCAC  
25 02D .0928 and .0932 and that receive gasoline from bulk gasoline plants or bulk gasoline  
26 terminals that comply with 15A NCAC 02D .0524, .0925, .0926, .0927, .0932, and .0933 via tank  
27 trucks that comply with 15A NCAC 02D .0932;
- 28 ~~(26)~~~~(29)~~ the use of ethylene oxide as a sterilant in the production and subsequent storage of medical devices  
29 or the packaging and subsequent storage of medical devices for sale if the emissions from all new  
30 and existing sources at the facility described in 15A NCAC 02D .0538(d) are controlled at least to  
31 the degree described in 15A NCAC 02D .0538(d) and the facility complies with 15A NCAC 02D  
32 .0538(e) and (f);
- 33 ~~(27)~~~~(30)~~ bulk gasoline plants, including the storage and handling of fuel oils, kerosenes, and jet fuels but  
34 excluding the storage and handling of other organic liquids, that comply with 15A NCAC 02D  
35 .0524, .0925, .0926, .0932, and .0933; unless the Director finds that a permit to emit toxic air  
36 pollutants is required under Paragraph (b) of this Rule or Rule .0712 of this Section for a particular  
37 bulk gasoline plant; ~~or~~

1 ~~(28)~~(31) bulk gasoline terminals, including the storage and handling of fuel oils, kerosenes, and jet fuels  
 2 but excluding the storage and handling of other organic liquids, that comply with 15A NCAC 02D  
 3 .0524, .0925, .0927, .0932, and .0933 if the bulk gasoline terminal existed before November 1,  
 4 1992; unless:

- 5 (A) the Director finds that a permit to emit toxic air pollutants is required under Paragraph (b)  
 6 of this Rule or Rule .0712 of this Section for a particular bulk gasoline terminal, or  
 7 (B) the owner or operator of the bulk gasoline terminal meets the requirements of 15A NCAC  
 8 02D .0927(i).

9 (b) Emissions from the activities identified in Subparagraphs ~~(a)(25)(a)(28)~~ through ~~(a)(28)(a)(31)~~ of this Rule shall  
 10 be included by the facility in determining compliance with the toxic air pollutant requirements in this Section and  
 11 shall be included in the permit if necessary to assure compliance. Emissions from the activities identified in  
 12 Subparagraphs (a)(1) through ~~(a)(24)(a)(27)~~ of this Rule shall not be included by the facility in determining  
 13 compliance with the toxic air pollutant requirements in this Section provided that the terms of this exclusion shall  
 14 not affect the authority of the Director under Rule .0712 of this Section.

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

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

20  
 21 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*  
 22 *Rule originally codified as part of 15A NCAC 02H .0610;*  
 23 *Eff. July 1, 1998;*  
 24 *Amended Eff. May 1, 2014; July 10, 2010; April 1, 2005; July 1, 2002; July 1, 2000.*

25  
 26 15A NCAC 02Q .0703 is proposed for amendment with changes as follows:

27  
 28 **15A NCAC 02Q .0703 DEFINITIONS**

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

- 30 (1) "Actual rate of emissions" means:  
 31 (a) for existing sources:  
 32 (i) for toxic air pollutants with an annual averaging period, the average rate or rates  
 33 at which the source actually emitted the pollutant during the two-year period  
 34 preceding the date of the particular modification and that represents normal  
 35 operation of the source. If this period does not represent normal operation, the  
 36 Director may allow the use of a different, more representative, period.

- 1 (ii) for toxic air pollutants with a 24-hour or one-hour averaging period, the  
2 maximum actual emission rate at which the source actually emitted for the  
3 applicable averaging period during the two-year period preceding the date of the  
4 particular modification and that represents normal operation of the source. If  
5 this period does not represent normal operation, the Director may require or  
6 allow the use of a different, more representative, period.
- 7 (b) for new or modified sources, the average rate or rates, determined for the applicable  
8 averaging period(s), that the proposed source will actually emit the pollutant as  
9 determined by engineering evaluation.
- 10 (2) "Applicable averaging period" means the averaging period for which an acceptable ambient limit  
11 has been established by the Commission and is listed in 15A NCAC 02D .1104.
- 12 (3) "Bioavailable chromate pigments" means the group of chromium (VI) compounds consisting of  
13 calcium chromate (CAS No.13765-19-0), calcium dichromate (CAS No. 14307-33-6), strontium  
14 chromate (CAS No. 7789-06-2), strontium dichromate (CAS No. 7789-06-2), zinc chromate (CAS  
15 No. 13530-65-9), and zinc dichromate (CAS No. 7789-12-0).
- 16 (4) "CAS Number" means the Chemical Abstract Service registry number identifying a particular  
17 substance.
- 18 (5) "Chromium (VI) equivalent" means the molecular weight ratio of the chromium (VI) portion of a  
19 compound to the total molecular weight of the compound multiplied by the associated compound  
20 emission rate or concentration at the facility.
- 21 (6) "Combustion sources" means boilers, space heaters, process heaters, internal combustion engines,  
22 and combustion turbines, which burn only ~~unadulterated~~ wood or unadulterated fossil fuel. It does  
23 not include incinerators, waste combustors, kilns, dryers, or direct heat exchange industrial  
24 processes.
- 25 (7) "Creditable emissions" means actual decreased emissions that have not been previously relied on  
26 to comply with Subchapter 15A NCAC 02D. All credible emissions shall be enforceable by  
27 permit condition.
- 28 (8) "Cresol" means o-cresol, p-cresol, m-cresol, or any combination of these compounds.
- 29 (9) "Evaluation" means:
- 30 (a) a determination that the emissions from the facility, including emissions from sources  
31 exempted by Rule .0702 (a) ~~(24)(28)~~ through ~~(27)(31)~~ of this Section, are less than the  
32 rate listed in Rule .0711 of this Section; or
- 33 (b) a determination of ambient air concentrations as described under 15A NCAC 02D .1106,  
34 including emissions from sources exempted by Rule .0702 ~~(24)(28)~~ through ~~(27)(31)~~ of  
35 this Section.
- 36 (10) "GACT" means any generally available control technology emission standard applied to an area  
37 source or facility pursuant to Section 112 of the federal Clean Air Act.

- 1 (11) "Hexane isomers except n-hexane" means 2-methyl pentane, 3-methyl pentane, 2,2-dimethyl  
2 butane, 2,3-dimethyl butane, or any combination of these compounds.
- 3 (12) "MACT" means any maximum achievable control technology emission standard applied to a  
4 source or facility pursuant to Section 112 federal Clean Air Act.
- 5 (13) "Maximum feasible control" means the maximum degree of reduction for each pollutant subject to  
6 regulation under this Section using the best technology that is available taking into account, on a  
7 case-by-case basis, human health, energy, environmental, and economic impacts and other costs.
- 8 (14) "Modification" means any physical changes or changes in the methods of operation that result in a  
9 net increase in emissions or ambient concentration of any pollutant listed in Rule .0711 of this  
10 Section or that result in the emission of any pollutant listed in Rule .0711 of this Section not  
11 previously emitted.
- 12 (15) "Net increase in emissions" means for a modification the sum of any increases in permitted  
13 allowable and decreases in the actual rates of emissions from the proposed modification from the  
14 sources at the facility for which the air permit application is being filed. If the net increase in  
15 emissions from the proposed modification is greater than zero, all other increases in permitted  
16 allowable and decreases in the actual rates of emissions at the facility within five years  
17 immediately preceding the filing of the air permit application for the proposed modification that  
18 are otherwise creditable emissions may be included.
- 19 (16) "Nickel, soluble compounds" means the soluble nickel salts of chloride ( $\text{NiCl}_2$ , CAS No. 7718-54-  
20 9), sulfate ( $\text{NiSO}_4$ , CAS No. 7786-81-4), and nitrate ( $\text{Ni}(\text{NO}_3)_2$ , CAS No. 13138-45-9).
- 21 (17) "Non-specific chromium (VI) compounds" means the group of compounds consisting of any  
22 chromium (VI) compounds not specified in this Section as a bioavailable chromate pigment or a  
23 soluble chromate compound.
- 24 (18) "Polychlorinated biphenyls" means any chlorinated biphenyl compound or mixture of chlorinated  
25 biphenyl compounds.
- 26 (19) "Pollution prevention plan" means a written description of current and projected plans to reduce,  
27 prevent, or minimize the generation of pollutants by source reduction and recycling and includes a  
28 site-wide assessment of pollution prevention opportunities at a facility that addresses sources of air  
29 pollution, water pollution, and solid and hazardous waste generation.
- 30 (20) "SIC" means standard industrial classification code.
- 31 (21) "Soluble chromate compounds" means the group of chromium (VI) compounds consisting of  
32 ammonium chromate (CAS No. 7788-98-9), ammonium dichromate (CAS No. 7789-09-5),  
33 chromic acid (CAS No. 7738-94-5), potassium chromate (CAS No. 7789-00-6), potassium  
34 dichromate (CAS No. 7778-50-9), sodium chromate (CAS No. 7775-11-3), and sodium  
35 dichromate (CAS No. 10588-01-9).
- 36 (22) "Toxic air pollutant" means any of those carcinogens, chronic toxicants, acute systemic toxicants,  
37 or acute irritants listed in 15A NCAC 02D .1104.

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

4  
 5 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*  
 6 *Rule originally codified as part of 15A NCAC 02H .0610;*  
 7 *Eff. July 1, 1998;*  
 8 *Amended Eff. May 1, 2014; April 1, 2001.*

9  
 10 15A NCAC 02Q .0704 is proposed for amendment as follows:

11  
 12 **15A NCAC 02Q .0704 NEW FACILITIES**

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

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

15 ~~(1)~~ (1) is required to have a permit because of applicability of a Section in Subchapter 2D of this Chapter  
 16 other than Section .1100 of Subchapter 2D of this Chapter except for facilities whose emissions of  
 17 toxic air pollutants result only from sources exempted under Rule .0102 of this ~~Subchapter;~~  
 18 Subchapter.

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

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

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

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

29 (c) The owner or operator of the facility shall submit a permit application to comply with 15A NCAC 02D .1100 if  
 30 emissions of any toxic air pollutant exceed the levels contained in Rule .0711 of this Section.

31 (d) The permit application filed pursuant to this Rule shall include an evaluation for all toxic air pollutants covered  
 32 under 15A NCAC 02D .1104. All sources at the facility, excluding sources exempt from evaluation in Rule .0702 of  
 33 this Section, emitting these toxic air pollutants shall be included in the evaluation.

34  
 35 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*  
 36 *Rule originally codified as part of 15A NCAC 2H .0610;*  
 37 *Eff. July 1, ~~1998~~, 1998;*

1 Amended Eff. May 1, 2014.

2  
3 15A NCAC 02Q .0705 is proposed for repeal as follows:

4  
5 **15A NCAC 02Q .0705 EXISTING FACILITIES AND SIC CALLS (Repealed)**

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

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

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

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

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

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

33 ~~(c) For facilities that will not be subject to a MACT or GACT standard, or that will be subject only to a MACT or~~  
34 ~~GACT standard for unadulterated fuel combustion sources, the owner or operator of the facility shall have 180 days~~  
35 ~~to apply for a permit or permit modification for the emissions of toxic air pollutants after receiving written~~  
36 ~~notification from the Director that such permit or permit modification is required. The permit application shall~~  
37 ~~include an evaluation for all toxic air pollutants covered under 15A NCAC 2D .1104 for all sources at the facility,~~

1 ~~excluding sources exempt from evaluation in Rule .0702 of this Section. Such facilities shall comply with 15A~~  
2 ~~NCAC 2D .1100 within three years from the date that the permit is issued. The Director shall notify facilities~~  
3 ~~subject to this Paragraph by calling for permit applications based on standard industrial classifications, that is, the~~  
4 ~~Director shall call at one time for permits for all facilities statewide that have the same four digit standard industrial~~  
5 ~~classification code, except those facilities in certified local air pollution control agency areas. (Local air pollution~~  
6 ~~control agencies shall call the standard industrial classification code within their jurisdiction when the Director calls~~  
7 ~~that code. A local air pollution control agency may call a particular standard industrial classification code before the~~  
8 ~~Director calls that code if the Commission approves the call by the local air pollution control agency. In deciding if~~  
9 ~~it shall grant permission to a local air pollution control agency to call a particular standard industrial classification~~  
10 ~~code before the Director calls that code, the Commission shall consider if the call is necessary to protect human~~  
11 ~~health or to allow the local program to better implement these Rules in its jurisdiction.) Facilities with sources that~~  
12 ~~will be subject to MACT that receive an SIC call shall notify the Director and shall comply with 15 NCAC 2D .1100~~  
13 ~~in accordance with Paragraph (b) of this Rule. All sources, regardless of their standard industrial classification code,~~  
14 ~~excluding sources exempt from evaluation in Rule .0702 of this Section, at the facility shall be included in the call~~  
15 ~~for permit applications. When the Environmental Protection Agency (EPA) promulgates MACT under Section~~  
16 ~~112(e) of the federal Clean Air Act, excluding cooling towers, the Director shall notify the owners or operators of~~  
17 ~~facilities in the standard industrial classification that best corresponds to the MACT category that they are required~~  
18 ~~to submit a permit application for the emissions of toxic air pollutants from their facilities. If the EPA fails to~~  
19 ~~promulgate a MACT as scheduled, the Director shall notify the owners or operators of facilities 18 months after the~~  
20 ~~missed promulgation date that they are required to submit a permit application for the emissions of toxic air~~  
21 ~~pollutants from their facilities. The owner or operator of a facility whose actual rate of emissions from all sources~~  
22 ~~are not greater than the toxic permitting emissions rates listed in Rule .0711 of this Section does not have to file a~~  
23 ~~permit application to comply with 15A NCAC 2D .1100. He shall provide documentation that the facility's~~  
24 ~~emissions of toxic air pollutants are below the levels in Rule .0711 of this Section if the Director requests this~~  
25 ~~documentation. The Director may request this documentation if he finds that the facility's potential emissions of~~  
26 ~~toxic air pollutants are above the levels in Rule .0711 of this Section.~~

27 ~~(d) The owner or operator of a facility may request a permit to emit toxic air pollutants any time before such~~  
28 ~~application is required. The permit application shall include an evaluation for all toxic air pollutants covered under~~  
29 ~~15A NCAC 2D .1104 for all sources at the facility, excluding sources exempt from evaluation in Rule .0702 of this~~  
30 ~~Section.~~

31  
32 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*

33 *Rule originally codified as part of 15A NCAC 2H .0610;*

34 *Eff. July 1, 1998-1998;*

35 *Repealed Eff. May 1, 2014.*

36  
37

1 15A NCAC 02Q .0706 is proposed for amendment as follows:

2

3 **15A NCAC 02Q .0706 MODIFICATIONS**

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

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

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

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

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

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

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

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

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

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

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

27 All sources at the facility, excluding sources exempt from evaluation in Rule .0702 of this Section, emitting these  
28 toxic air pollutants shall be included in the evaluation. ~~Notwithstanding 02Q .0702(a)(18), on and after July 10,~~  
29 ~~2010, an evaluation of a modification to a combustion source shall also include emissions from all permitted~~  
30 ~~combustion sources as defined in 02Q .0703. A permit application filed pursuant to Subparagraph (b)(2) of this~~  
31 ~~Rule shall include an evaluation for all toxic air pollutants identified by the Director as causing an acceptable~~  
32 ~~ambient level in 15A NCAC 02D .1104 to be exceeded.~~

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

1  
2 *History Note:* Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, C. 168, S. 45;  
3 Rule originally codified as part of 15A NCAC 2H .0610;  
4 Eff. July 1, 1998;  
5 Amended Eff. May 1, 2014; July 10, 2010; December 1, 2005; April 1, 2005.

6  
7 15A NCAC 02Q .0709 is proposed for amendment as follows:

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9 **15A NCAC 02Q .0709 DEMONSTRATIONS**

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

- 12 (1) demonstrate to the satisfaction of the Director through dispersion modeling that the emissions of  
13 toxic air pollutants from the facility will not cause any acceptable ambient level listed in 15A  
14 NCAC 02D .1104 to be exceeded beyond the premises (adjacent property boundary); or  
15 (2) demonstrate to the satisfaction of the Commission or its delegate that the ambient concentration  
16 beyond the premises (adjacent property boundary) for the subject toxic air pollutant shall not  
17 adversely affect human health (e.g., a risk assessment specific to the facility) though the  
18 concentration is higher than the acceptable ambient level in 15A NCAC 02D .1104 by providing  
19 one of the following demonstrations:  
20 (A) the area where the ambient concentrations are expected to exceed the acceptable ambient  
21 levels in 15A NCAC 02D .1104 is not inhabitable or occupied for the duration of the  
22 averaging time of the pollutant of concern, or  
23 (B) new toxicological data that show that the acceptable ambient level in 15A NCAC 02D  
24 .1104 for the pollutant of concern is too low and the facility's ambient impact is below the  
25 level indicated by the new toxicological data.

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

- 31 (1) demonstrate to the satisfaction of the Commission or its delegate that complying with the  
32 guidelines in 15A NCAC 02D .1104 is technically infeasible (the technology necessary to reduce  
33 emissions to a level to prevent the acceptable ambient levels in 15A NCAC 02D .1104 from being  
34 exceeded does not exist); or  
35 (2) demonstrate to the satisfaction of the Commission or its delegate that complying with the  
36 guidelines in 15A NCAC 02D .1104 would result in serious economic hardship. (In deciding if a  
37 serious economic hardship exists, the Commission or its delegate shall consider market impact;

1 impacts on local, regional and state economy; risk of closure; capital cost of compliance; annual  
2 incremental compliance cost; and environmental and health impacts.)

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

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

- 10 (1) statement of corporate and facility commitment to pollution prevention;
- 11 (2) identification of current and past pollution prevention activities;
- 12 (3) timeline and strategy for implementation;
- 13 (4) description of ongoing and planned employee education efforts;
- 14 (5) identification of internal pollution prevention goal selected by the facility and expressed in either  
15 qualitative or quantitative terms.

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

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

24 (e) Change in Acceptable Ambient Level. When an acceptable ambient level for a toxic air pollutant in 15A NCAC  
25 02D .1104 is changed, any condition that has previously been put in a permit to protect the previous acceptable  
26 ambient level for that toxic air pollutant shall not be changed until:

- 27 (1) The permit is renewed, at which time the owner or operator of the facility shall submit an air toxic  
28 ~~evaluation~~ evaluation, ~~excluding sources exempt from evaluation in Rule .0702 of this Section,~~  
29 showing that the new acceptable ambient level will not be exceeded (If additional time is needed  
30 to bring the facility into compliance with the new acceptable ambient level, the owner or operator  
31 shall negotiate a compliance schedule with the Director. The compliance schedule shall be written  
32 into the facility's permit and final compliance shall not exceed two years from the effective date of  
33 the change in the acceptable ambient level.); or
- 34 (2) The owner or operator of the facility requests that the condition be changed and submits along  
35 with that request an air toxic ~~evaluation~~ evaluation, ~~excluding sources exempt from evaluation in~~  
36 Rule .0702 of this Section, showing that the new acceptable ambient level shall not be exceeded.

1 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45;*  
 2 *Rule originally codified as part of 15A NCAC 2H .0610;*  
 3 *Eff. July 1, 1998;*  
 4 *Amended Eff. May 1, 2014; July 10, 2010; February 1, 2005.*

5  
 6 15A NCAC 02Q .0711 is proposed for amendment with changes as follows:

7  
 8 **15A NCAC 02Q .0711 EMISSION RATES REQUIRING A PERMIT**

9 (a) A permit to emit toxic air pollutants is required for any facility where one or more emission release points are  
 10 obstructed or non-vertically oriented whose actual (~~or permitted if higher~~) rate of emissions from all sources are  
 11 greater than any one of the following toxic air pollutant permitting emissions rates:

12

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)	<del>1.9 X 10<sup>-6</sup></del> <u>5.7</u> <u>X 10<sup>-3</sup></u>			
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

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(b) A permit to emit toxic air pollutants is required for any facility where all emission release points are unobstructed and vertically oriented whose actual rate of emissions from all sources are greater than any one of the following toxic air pollutant permitting emissions rates:

<u>Pollutant (CAS Number)</u>	<u>Carcinogens</u>	<u>Chronic Toxicants</u>	<u>Acute Systemic Toxicants</u>	<u>Acute Irritants</u>
	- <u>lb/yr</u>	- <u>lb/day</u>	<u>lb/hr</u>	- <u>lb/hr</u>
<u>acetaldehyde (75-07-0)</u>				<u>28.43</u>
<u>acetic acid (64-19-7)</u>				<u>3.90</u>
<u>acrolein (107-02-8)</u>				<u>0.08</u>
<u>acrylonitrile (107-13-1)</u>		<u>1.3</u>	<u>1.05</u>	
<u>ammonia (7664-41-7)</u>				<u>2.84</u>
<u>aniline (62-53-3)</u>			<u>1.05</u>	
<u>arsenic and inorganic arsenic compounds</u>	<u>0.194</u>			
<u>asbestos (1332-21-4)</u>	<u>7.748 x 10<sup>-3</sup></u>			
<u>aziridine (151-56-4)</u>		<u>0.3</u>		
<u>benzene (71-43-2)</u>	<u>11.069</u>			
<u>benzidine and salts (92-87-5)</u>	<u>1.384 x 10<sup>-3</sup></u>			
<u>benzo(a)pyrene (50-32-8)</u>	<u>3.044</u>			

benzyl chloride (100-44-7)			<u>0.53</u>	
beryllium (7440-41-7)	<u>0.378</u>			
beryllium chloride (7787-47-5)	<u>0.378</u>			
beryllium fluoride (7787-49-7)	<u>0.378</u>			
beryllium nitrate (13597-99-4)	<u>0.378</u>			
bioavailable chromate pigments, as chromium (VI) equivalent	<u>0.008</u>			
bis-chloromethyl ether (542-88-1)	<u>0.034</u>			
bromine (7726-95-6)				<u>0.21</u>
1,3-butadiene (106-99-0)	<u>40.585</u>			
cadmium (7440-43-9)	<u>0.507</u>			
cadmium acetate (543-90-8)	<u>0.507</u>			
cadmium bromide (7789-42-6)	<u>0.507</u>			
carbon disulfide (75-15-0)		<u>7.8</u>		
carbon tetrachloride (56-23-5)	<u>618.006</u>			
chlorine (7782-50-5)		<u>1.6</u>		<u>0.95</u>
chlorobenzene (108-90-7)		<u>92.7</u>		
chloroform (67-66-3)	<u>396.631</u>			
chloroprene (126-99-8)		<u>18.5</u>	<u>3.69</u>	
cresol (1319-77-3)			<u>2.32</u>	
p-dichlorobenzene (106-46-7)				<u>69.50</u>
dichlorodifluoromethane (75-71-8)		<u>10445.4</u>		
dichlorofluoromethane (75-43-4)		<u>21.1</u>		
di(2-ethylhexyl)phthalate (117-81-7)		<u>1.3</u>		
dimethyl sulfate (77-78-1)		<u>0.1</u>		
1,4-dioxane (123-91-1)		<u>23.6</u>		
epichlorohydrin (106-89-8)	<u>7655.891</u>			
ethyl acetate (141-78-6)			<u>147.41</u>	
ethylenediamine (107-15-3)		<u>12.6</u>	<u>2.63</u>	
ethylene dibromide (106-93-4)	<u>36.896</u>			
ethylene dichloride (107-06-2)	<u>350.511</u>			
ethylene glycol monoethyl ether (110-80-5)		<u>5.1</u>		<u>2.00</u>
ethylene oxide (75-21-8)	<u>2.490</u>			
ethyl mercaptan (75-08-1)			<u>0.11</u>	
fluorides		<u>0.7</u>	<u>0.26</u>	
formaldehyde (50-00-0)				<u>0.16</u>

<u>hexachlorocyclopentadiene (77-47-4)</u>		<u>2.5 x 10<sup>-2</sup></u>	<u>0.01</u>	
<u>hexachlorodibenzo-p-dioxin (57653- 85-7)</u>	<u>0.007</u>			
<u>n-hexane (110-54-3)</u>		<u>46.3</u>		
<u>hexane isomers except n-hexane</u>				<u>379.07</u>
<u>hydrazine (302-01-2)</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>hydrogen chloride (7647-01-0)</u>				<u>0.74</u>
<u>hydrogen cyanide (74-90-8)</u>		<u>5.9</u>	<u>1.16</u>	
<u>hydrogen fluoride (7664-39-3)</u>		<u>1.3</u>		<u>0.26</u>
<u>hydrogen sulfide (7783-06-4)</u>		<u>5.1</u>		
<u>maleic anhydride (108-31-6)</u>		<u>0.5</u>	<u>0.11</u>	
<u>manganese and compounds</u>		<u>1.3</u>		
<u>manganese cyclopentadienyl tricarbonyl (12079-65-1)</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>manganese tetroxide (1317-35-7)</u>		<u>0.3</u>		
<u>mercury, alkyl</u>		<u>2.5 x 10<sup>-3</sup></u>		
<u>mercury, aryl and inorganic compounds</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>mercury, vapor (7439-97-6)</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>methyl chloroform (71-55-6)</u>		<u>505.4</u>		<u>257.98</u>
<u>methylene chloride (75-09-2)</u>	<u>2213.752</u>		<u>1.79</u>	
<u>methyl ethyl ketone (78-93-3)</u>		<u>155.8</u>		<u>93.19</u>
<u>methyl isobutyl ketone (108-10-1)</u>		<u>107.8</u>		
<u>methyl mercaptan (74-93-1)</u>			<u>0.05</u>	
<u>nickel carbonyl (13463-39-3)</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>nickel metal (7440-02-0)</u>		<u>0.3</u>		
<u>nickel, soluble compounds, as nickel</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>nickel subsulfide (12035-72-2)</u>	<u>0.194</u>			
<u>nitric acid (7697-37-2)</u>				<u>1.05</u>
<u>nitrobenzene (98-95-3)</u>		<u>2.5</u>	<u>0.53</u>	
<u>n-nitrosodimethylamine (62-75-9)</u>	<u>4.612</u>			
<u>non-specific chromium (VI) compounds, as chromium (VI) equivalent</u>	<u>0.008</u>			
<u>pentachlorophenol (87-86-5)</u>		<u>0.1</u>	<u>0.03</u>	
<u>perchloroethylene (127-18-4)</u>	<u>17525.534</u>			
<u>phenol (108-95-2)</u>			<u>1.00</u>	
<u>phosgene (75-44-5)</u>		<u>0.1</u>		
<u>phosphine (7803-51-2)</u>				<u>0.14</u>

<u>polychlorinated biphenyls (1336-36-3)</u>	<u>7.656</u>			
<u>soluble chromate compounds, as chromium (VI) equivalent</u>		<u><math>2.6 \times 10^{-2}</math></u>		
<u>styrene (100-42-5)</u>			<u>11.16</u>	
<u>sulfuric acid (7664-93-9)</u>		<u>0.5</u>	<u>0.11</u>	
<u>tetrachlorodibenzo-p-dioxin (1746-01-6)</u>	<u><math>2.767 \times 10^{-4}</math></u>			
<u>1,1,1,2-tetrachloro-2,2,- difluoroethane (76-11-9)</u>		<u>2190.2</u>		
<u>1,1,2,2-tetrachloro-1,2- difluoroethane (76-12-0)</u>		<u>2190.2</u>		
<u>1,1,2,2-tetrachloroethane (79-34-5)</u>	<u>581.110</u>			
<u>toluene (108-88-3)</u>				<u>58.97</u>
<u>toluene diisocyanate,2,4-(584-84-9) and 2,6-(91-08-7) isomers</u>		<u><math>8.4 \times 10^{-3}</math></u>		
<u>trichloroethylene (79-01-6)</u>	<u>5442.140</u>			
<u>trichlorofluoromethane (75-69-4)</u>			<u>589.66</u>	
<u>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</u>				<u>1000.32</u>
<u>vinyl chloride (75-01-4)</u>	<u>35.051</u>			
<u>vinylidene chloride (75-35-4)</u>		<u>5.1</u>		
<u>xylene (1330-20-7)</u>		<u>113.7</u>		<u>68.44</u>

1  
2 ~~(b)~~(c) For the following pollutants, the highest emissions occurring for any 15-minute period shall be multiplied by  
3 four and the product shall be compared to the value in Paragraph ~~(a)~~: (a) or (b) as applicable. These pollutants are:

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

14  
15 *History Note:* Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; ~~S.L. 1989, c. 168, s. 45;~~

16 *Rule originally codified as part of 15A NCAC 02H .0610;*

1 *Eff. July 1, 1998;*

2 *Amended Eff. May 1, 2014; January 1, 2010; June 1, 2008; April 1, 2005; February 1, 2005;*  
3 *April 1, 2001.*

4  
5 15A NCAC 02Q .0714 is proposed for repeal as follows:

6  
7 **15A NCAC 02Q .0714 WASTEWATER TREATMENT SYSTEMS AT PULP AND PAPER MILLS**

8 **(REPEALED)**

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

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

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

22 ~~(2) using the emission estimates developed under Subparagraph (b)(1), perform air dispersion~~  
23 ~~modeling of all hydrogen sulfide emission sources, including all emissions associated with the~~  
24 ~~wastewater collection and treatment system, as described in 15A NCAC 02D .1106 (a) through (i).~~  
25 ~~If the modeling analysis demonstrates that predicted concentrations of hydrogen sulfide are below~~  
26 ~~the acceptable ambient levels outlined in 15A NCAC 02D .1104, no further plan development,~~  
27 ~~measurement or monitoring action is required to maintain the exemption provided by this Rule.~~  
28 ~~The results of the favorable modeling demonstration must be submitted to the Director by July 1,~~  
29 ~~2006. The Director shall report to the Environmental Management Commission the information~~  
30 ~~submitted under this Subparagraph by September 1, 2006;~~

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

1 ~~determines to be representative of the industry. The Director shall complete review and make the~~  
2 ~~decision regarding approval of the monitoring plan by December 31, 2006;~~

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

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

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

13  
14 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143B-282;*  
15 *Eff. April 1, 2005-2005;*  
16 *Repealed Eff. May 1, 2014.*  
17  
18  
19  
20

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CHAPTER III  
REPORT OF PROCEEDINGS

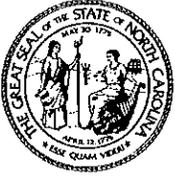
**Introduction**

The Department of Environmental and Natural Resources, Division of Air Quality, held a public hearing on September 19, 2013 at 3:00pm in Raleigh, NC.

The hearing considered the proposed amendments to the toxic air procedures rules and a correction to the asbestos acceptable ambient level.

The proposed effective date for these rules is projected to be January 1, 2014.

A public notice announcing this hearing was mailed to each person on the official mailing list for rule-making hearings. The public notice was also published in the North Carolina Register at least 15 days before the public hearing and posted on the North Carolina Division of Air Quality website at least 30 days prior to the public hearing.

**ENVIRONMENTAL MANAGEMENT COMMISSION**Benne C. Hutson  
ChairmanNORTH CAROLINA  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCESPat McCrory, Governor  
John Skvarla, Secretary

September 3, 2013

**MEMORANDUM**

TO: Bradley Newland

From: Benne C. Hutson

Handwritten signature of Benne C. Hutson.

Subject: Hearing Officer Appointment

A public hearing has been scheduled for September 19, 2013 at 3:00 p.m. at the Division of Air Quality central office in Raleigh to receive public comments on amendments to the toxic air pollutant procedures rules. The attached public notice describes the hearing's purpose.

I am hereby appointing you to serve as hearing officer for this hearing. Please receive all relevant public comment and report your findings and recommendations to the Environmental Management Commission. Ms. Joelle Burleson will provide staff support for you.

If you have any questions, please feel free to contact Joelle Burleson at (919) 707-8720, or me.

SCH/jb

Attachment

cc: Sheila Holman  
Lois Thomas  
Hearing Record File

## NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

## PUBLIC NOTICE

Notice is hereby given for one public hearing to be heard by the North Carolina Department of Environment and Natural Resources, Division of Air Quality concerning the proposed amendments to air quality rules.

## PURPOSE:

To receive comments on amendments to the Toxic Air Procedures rules to incorporate the Session Law 2012-91 Section 1 statutory exemptions of certain federally regulated sources and the Section 3 related recommendations to reduce unnecessary regulatory burden and increase efficient use of Division resources while maintaining public health protections.

Proposed amendments include: exemption of certain sources of toxic air pollutants subject to federal maximum achievable control technology (MACT), generally available control technology (GACT), case-by-case emission limits established under CAA Section 112j, or 40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAPs), where the Division determines emissions will not pose unacceptable risk to human health; an additional set of toxics permitting emission rates for unobstructed vertical stacks; exemption of certain natural gas and propane-fired combustion sources and certain emergency generators; repeal of the Standard Industrial Classification (SIC) Code call rule; clarification of use of the term "actual rate of emissions"; and removal of the term "unadulterated wood".

In addition, Rule 15A NCAC 02Q .0714, Waste Water Treatment Systems At Pulp And Paper Mills, is proposed for repeal due to applicable requirements having expired.

Existing rule numerical values for the asbestos ambient air level (AAL) in 15A NCAC 02D .1104 and the associated asbestos Toxics Permitting Emission Rate (TPER) in 15A NCAC 02Q .0711 are proposed to be revised due to a calculation error in their original development.

## DATES AND LOCATION:

September 19, 2013, 3:00 P.M.  
Training Room (#1210), DENR Green Square Office

Building, 217 West Jones Street, Raleigh, NC

COMMENT PROCEDURES:

All persons interested in these matters are invited to attend the public hearings. **Any person desiring to comment is requested to submit a written statement for inclusion in the record of proceedings at the public hearing.** The hearing officer may limit oral presentation lengths if many people want to speak. The hearing record will remain open until October 14, 2013 to receive additional written statements. To be included, the statement must be received by the Division by October 14, 2013.

INFORMATION:

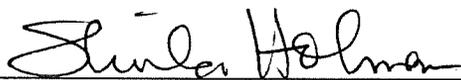
Copies of the proposed rule changes may be downloaded at <http://daq.state.nc.us/Rules/Hearing/> Copies of the proposals may also be reviewed at the regional offices of the North Carolina Department of Environment and Natural Resources, Division of Air Quality, located at the following cities:

Asheville	828/296-4500
Fayetteville	910/433-3300
Mooresville	704/663-1699
Raleigh	919/791-4200
Washington	252/946-6481
Wilmington	910/796-7215
Winston-Salem	336/771-5000

Comments should be sent to and additional information concerning the hearings or the proposals may be obtained by contacting:

Ms. Joelle Burleson  
 Division of Air Quality  
 1641 Mail Service Center  
 Raleigh, North Carolina 27699-1641  
 (919) 707-8720 Phone/Fax  
[joelle.burleson@ncdenr.gov](mailto:joelle.burleson@ncdenr.gov)

DATE: 8/12/2013




---

Sheila Holman,  
 DAQ Director

Transcript

A transcript of the September 19, 2013 hearing has not been prepared; however, an audio recording of the proceeding will be kept on file with the Division of Air Quality for one year from the date of the final actions by the Environmental Management Commission.

A list of those attending the hearing as follows:

## Hearing Officer

Mr. Bradley Newland, Wilmington Regional Office, Regional Supervisor

## Staff Members

Ms. Joelle Burleson, DAQ, DENR  
Mr. Patrick Knowlson, DAQ, DENR  
Mr. Steve Schliesser, DAQ, DENR  
Ms. Betty Gatano, DAQ, DENR  
Ms. Candace Prusiewicz, DAQ, DENR  
Ms. Lori Cherry, DAQ, DENR  
Mr. Tom Mather, DAQ, DENR  
Mr. Joseph Voelker, DAQ, DENR  
Ms. Sushma Masemore, DAQ, DENR  
Mr. Mitch Gillespie, Assistant Secretary for Environment, DENR

## Members of the General Public

Ms. Deborah Kornegay  
Mr. Noah Read  
Mr. Louis Zeller, Blue Ridge Environmental Defense League (BREDL)  
Ms. Jean Bryson  
Mr. Donald T. Lauria, Professor Emeritus, UNC-Chapel Hill  
Ms. Therese Vick, BREDL  
Mr. Julius Kerr, BREDL  
Ms. Beverly Kerr, BREDL  
Ms. June Blotnick, Clean Air Carolina  
Mr. Jonathan Kotch, Medical Advocates for Clean Air  
Ms. Myra Blake, Southern Environmental Law Center  
Ms. Terry Taylor, Medical Advocates for Healthy Air  
Ms. Leslie Ruprecht, Clean Air Carolina  
Mr. Matt Lamb  
Ms. Rebecca Cheatham, Medical Advocates for Healthy Air  
Mr. Marshall Rackley, RST Engineering  
Mr. George Everett, Duke Energy  
Mr. Preston Howard, North Carolina Manufacturers Alliance  
Mr. Alan McConnell  
Mr. Mark Hawes, Shurtape  
Mr. Alan Madewell, Duke Energy  
Mr. Charlie Carter

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## CHAPTER IV

## EXHIBITS

<u>EXHIBIT</u>	<u>PAGE</u>
Proposed Regulations as Published in the North Carolina Register and Presented at the Hearing	IV-2
Hearing Officer Comments at the Public Hearing	IV-18

~~Office, California Air Resources Board, P.O. Box 2815, Sacramento, CA, 95812.~~

Authority G.S. 143-215.3(a)(1); 143-215.107(a)(6)-(7).

\*\*\*\*\*

Notice is hereby given in accordance with G.S. 150B-21.2 that the Environmental Management Commission intends to amend the rules cited as 15A NCAC 02D .1104; 02Q .0701-.0704, .0706, .0709, .0711 and repeal the rules cited as 15A NCAC 02Q .0705 and .0704.

Agency obtained G.S. 150B-19.1 certification:

- OSBM certified on: June 28, 2013
- RRC certified on:
- Not Required

Link to agency website pursuant to G.S. 150B-19.1(c): <http://www.ncair.org/rules/hearing/>

Proposed Effective Date: January 1, 2014

Public Hearing:

Date: September 19, 2013

Time: 3:00 p.m.

Location: Training Room (#1210), DENR Green Square Office Building, 217 West Jones Street, Raleigh, NC

Reason for Proposed Action: 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.

Section 1 of the law exempts sources subject to federal maximum achievable control technology (MACT), generally available control technology (GACT), or case-by-case emission limits for toxic air pollutants established under Section 112(j) of the Clean Air Act, and codifies the Director's Call provision of the state air toxics rules.

Section 2 of the law requires rule amendments consistent with Section 1.

Section 3 of the Session Law requires the DAQ to review the existing air toxics rules and make recommendations to the Environmental Review Commission (ERC) 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.

The proposed recommendations include: develop additional set of toxic emission permitting rates (TPER) for unobstructed vertical stacks; exempt natural gas and propane-fired combustion sources less than 450 mm BTU/hr that are only source of benzene; exempt emergency engines less than 4843 hp that are only source of formaldehyde; repeal Standard Industrial Classification (SIC) call rule; clarify the term "actual rate of emissions"; and remove the term "unadulterated wood".

Rules in Section 15A NCAC 02Q .0700 are proposed to be amended or repealed to incorporate the Section 1 statutory

exemptions and the Section 3 report recommendations. In addition, Rule 15A NCAC 02Q .0714, Waste Water Treatment Systems At Pulp And Paper Mills, is proposed to be repealed due to applicable requirements having expired.

Existing rule numerical values for the asbestos ambient air level (AAL) in 15A NCAC 02D .1104 and the associated asbestos TPER in 15A NCAC 02Q .0711 are proposed to be revised due to a calculation error in their original development.

Comments may be submitted to: Joelle Burlison, Division of Air Quality, 1641 Mail Service Center, Raleigh, NC 27699-1641, Phone (919)707-8720, fax (919)707-8720, email joelle.burlison@ncdenr.gov.

Comment period ends: October 14, 2013

Procedure for Subjecting a Proposed Rule to Legislative

Review: If an objection is not resolved prior to the adoption of the rule, a person may also submit written objections to the Rules Review Commission after the adoption of the Rule. If the Rules Review Commission receives written and signed objections after the adoption of the Rule in accordance with G.S. 150B-21.3(b2) from 10 or more persons clearly requesting review by the legislature and the Rules Review Commission approves the rule, the rule will become effective as provided in G.S. 150B-21.3(b1). The Commission will receive written objections until 5:00 p.m. on the day following the day the Commission approves the rule. The Commission will receive those objections by mail, delivery service, hand delivery, or facsimile transmission. If you have any further questions concerning the submission of objections to the Commission, please call a Commission staff attorney at 919-431-3000.

Fiscal impact (check all that apply).

- State funds affected
- Environmental permitting of DOT affected
- Analysis submitted to Board of Transportation
- Local funds affected
- Date submitted to OSBM:
- Substantial economic impact (≥\$500,000)
- Approved by OSBM
- No fiscal note required by G.S. 150B-21.4

CHAPTER 02 - ENVIRONMENTAL MANAGEMENT

SUBCHAPTER 02D - AIR POLLUTION CONTROL REQUIREMENTS

SECTION .1100 - CONTROL OF TOXIC AIR POLLUTANTS

Note: Text in italics was previously published in 27:20 NCR 1903-1906 and has not yet been adopted by the Environmental Management Commission.

**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	$2.3 \times 10^{-7}$ $2.1 \times 10^{-6}$			
asbestos (1332-21-4)	$2.8 \times 10^{-11}$ $2.8 \times 10^{-6}$ fibers/ml			
aziridine (151-56-4)		0.006		
benzene (71-43-2)	$1.2 \times 10^{-4}$			
benzidine and salts (92-87-5)	$1.5 \times 10^{-8}$			
benzo(a)pyrene (50-32-8)	$3.3 \times 10^{-5}$			
benzyl chloride (100-44-7)			0.5	
beryllium (7440-41-7)	$4.1 \times 10^{-6}$			
beryllium chloride (7787-47-5)	$4.1 \times 10^{-6}$			
beryllium fluoride (7787-49-7)	$4.1 \times 10^{-6}$			
beryllium nitrate (13597-99-4)	$4.1 \times 10^{-6}$			
bioavailable chromate pigments, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
bis-chloromethyl ether (542-88-1)	$3.7 \times 10^{-7}$			
bromine (7726-95-6)				0.2
1,3-butadiene (106-99-0)	$4.4 \times 10^{-4}$			
cadmium (7440-43-9)	$5.5 \times 10^{-6}$			
cadmium acetate (543-90-8)	$5.5 \times 10^{-6}$			
cadmium bromide (7789-42-6)	$5.5 \times 10^{-6}$			
carbon disulfide (75-15-0)		0.186		
carbon tetrachloride (56-23-5)	$6.7 \times 10^{-3}$			
chlorine (7782-50-5)		0.0375		0.9
chlorobenzene (108-90-7)		2.2		
chloroform (67-66-3)	$4.3 \times 10^{-3}$			
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		
epichlorohydrin (106-89-8)	$8.3 \times 10^{-2}$			
ethyl acetate (141-78-6)			140	
ethylenediamine (107-15-3)		0.3	2.5	
ethylene dibromide (106-93-4)	$4.0 \times 10^{-4}$			

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
ethylene dichloride (107-06-2)	$3.8 \times 10^{-3}$			
ethylene glycol monoethyl ether (110-80-5)		0.12	1.9	
ethylene oxide (75-21-8)	$2.7 \times 10^{-5}$			
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)	$7.6 \times 10^{-8}$			
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)	$2.4 \times 10^{-2}$		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)	$2.1 \times 10^{-6}$			
nitric acid (7697-37-2)				1
nitrobenzene (98-95-3)		0.06	0.5	
n-nitrosodimethylamine (62-75-9)	$5.0 \times 10^{-5}$			
non-specific chromium (VI) compounds, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
pentachlorophenol (87-86-5)		0.003	0.025	
perchloroethylene (127-18-4)	$1.9 \times 10^{-1}$			
phenol (108-95-2)			0.95	
phosgene (75-44-5)		0.0025		
phosphine (7803-51-2)				0.13
polychlorinated biphenyls (1336-36-3)	$8.3 \times 10^{-5}$			
soluble chromate compounds, as chromium (VI) equivalent		$6.2 \times 10^{-4}$		
styrene (100-42-5)			10.6	

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
sulfuric acid (7664-93-9)		0.012	0.1	
tetrachlorodibenzo-p-dioxin (1746-01-6)	$3.0 \times 10^{-9}$			
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)	$6.3 \times 10^{-3}$			
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)	$5.9 \times 10^{-2}$			
trichlorofluoromethane (75-69-4)			560	
1,1,2-trichloro-1,2,2- trifluoroethane (76-13-1)				950
vinyl chloride (75-01-4)	$3.8 \times 10^{-4}$			
vinylidene chloride (75-35-4)		0.12		
xylene (1330-20-7)		2.7		65

Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(4),(5); 143B-282; S.L. 1989, c. 168, s. 45.

## SUBCHAPTER 02Q - AIR QUALITY PERMITS PROCEDURES

### 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)~~(2) 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.~~

Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45.

#### 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) natural gas and propane fired combustion sources with an aggregate allowable heat input value less than 450 million Btu per hour that are the only source of benzene at the facility;
- (26) emergency engines with an aggregate total horsepower less than 4843 horsepower that are the only source of formaldehyde at the facility;
- (27) an air emission source that is any of the following:
- (A) subject to an applicable requirement under 40 CFR Part 61, as amended;
  - (B) an affected source under 40 CFR Part 63, as amended; or
  - (C) subject to a case-by-case MACT permit requirement issued by the Division pursuant to Paragraph (j) of 42 U.S.C. Section 7412, as amended;
- ~~(25)~~(28) 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)~~(29) 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)~~(30) 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)~~(31) 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)~~ (a)(28) through ~~(a)(28)~~ (a)(31) 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)~~ (a)(27) 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.

*Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45.*

#### 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<sub>2</sub>, CAS No. 7718-54-9), sulfate (NiSO<sub>4</sub>, CAS No. 7786-81-4), and nitrate (Ni(NO<sub>3</sub>)<sub>2</sub>, 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.~~

*Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S L. 1989, c. 168, s. 45.*

#### 15A NCAC 02Q .0704 NEW FACILITIES

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

(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; 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.~~

(c) The owner or operator of the facility shall submit a permit application to comply with 15A NCAC 02D .1100 if emissions of any toxic air pollutant exceed the levels contained in Rule .0711 of this Section.

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

*Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45.*

#### 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(e) 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(c) 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.~~

*Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45.*

#### 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; ~~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.

*Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, C. 168, S. 45.*

### 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~~ evaluation, excluding sources exempt from evaluation in Rule .0702 of this Section, 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~~ evaluation, excluding sources exempt from evaluation in Rule .0702 of this Section, showing that the new acceptable ambient level shall not be exceeded.

*Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S.L. 1989, c. 168, s. 45.*

**Note:** Text in italics was previously published in 27:20 NCR 1906-1908 and has not yet been adopted by the Environmental Management Commission.

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

(a) A permit to emit toxic air pollutants is required for any facility where one or more emission release points are obstructed or non-vertically oriented 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	<del>0.016</del> 0.053			
asbestos (1332-21-4)	<del>1.9 X 10<sup>-6</sup></del> 5.7 X 10 <sup>-3</sup>			
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) A permit to emit toxic air pollutants is required for any facility where all emission release points are unobstructed and vertically oriented whose actual 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)				28.43
acetic acid (64-19-7)				3.90
acrolein (107-02-8)				0.08
acrylonitrile (107-13-1)		1.3	1.05	
ammonia (7664-41-7)				2.84
aniline (62-53-3)			1.05	
arsenic and inorganic arsenic compounds	0.194			
asbestos (1332-21-4)	7.748 x 10 <sup>-3</sup>			
aziridine (151-56-4)		0.3		
benzene (71-43-2)	11.069			

benzidine and salts (92-87-5)	$1.384 \times 10^{-3}$			
benzo(a)pyrene (50-32-8)	3.044			
benzyl chloride (100-44-7)			0.53	
beryllium (7440-41-7)	0.378			
beryllium chloride (7787-47-5)	0.378			
beryllium fluoride (7787-49-7)	0.378			
beryllium nitrate (13597-99-4)	0.378			
bioavailable chromate pigments, as chromium (VI) equivalent	0.008			
bis-chloromethyl ether (542-88-1)	0.034			
bromine (7726-95-6)				0.21
1,3-butadiene (106-99-0)	40.585			
cadmium (7440-43-9)	0.507			
cadmium acetate (543-90-8)	0.507			
cadmium bromide (7789-42-6)	0.507			
carbon disulfide (75-15-0)		7.8		
carbon tetrachloride (56-23-5)	618.006			
chlorine (7782-50-5)		1.6		0.95
chlorobenzene (108-90-7)		92.7		
chloroform (67-66-3)	396.631			
chloroprene (126-99-8)		18.5	3.69	
cresol (1319-77-3)			2.32	
p-dichlorobenzene (106-46-7)				69.50
dichlorodifluoromethane (75-71-8)		10445.4		
dichlorofluoromethane (75-43-4)		21.1		
di(2-ethylhexyl)phthalate (117-81-7)		1.3		
dimethyl sulfate (77-78-1)		0.1		
1,4-dioxane (123-91-1)		23.6		
epichlorohydrin (106-89-8)	7655.891			
ethyl acetate (141-78-6)			147.41	
ethylenediamine (107-15-3)		12.6	2.63	
ethylene dibromide (106-93-4)	36.896			
ethylene dichloride (107-06-2)	350.511			
ethylene glycol monoethyl ether (110-80-5)		5.1		2.00
ethylene oxide (75-21-8)	2.490			
ethyl mercaptan (75-08-1)			0.11	
fluorides		0.7	0.26	
formaldehyde (50-00-0)				0.16
hexachlorocyclopentadiene (77-47-4)		$2.5 \times 10^{-2}$	0.01	
hexachlorodibenzo-p-dioxin (57653- 85-7)	0.007			
n-hexane (110-54-3)		46.3		
hexane isomers except n-hexane				379.07
hydrazine (302-01-2)		$2.5 \times 10^{-2}$		
hydrogen chloride (7647-01-0)				0.74
hydrogen cyanide (74-90-8)		5.9	1.16	
hydrogen fluoride (7664-39-3)		1.3		0.26
hydrogen sulfide (7783-06-4)		5.1		
maleic anhydride (108-31-6)		0.5	0.11	
manganese and compounds		1.3		
manganese cyclopentadienyl tricarbonyl (12079-65-1)		$2.5 \times 10^{-2}$		
manganese tetroxide (1317-35-7)		0.3		
mercury, alkyl		$2.5 \times 10^{-3}$		
mercury, aryl and inorganic compounds		$2.5 \times 10^{-2}$		
mercury, vapor (7439-97-6)		$2.5 \times 10^{-2}$		

<u>methyl chloroform (71-55-6)</u>		<u>505.4</u>		<u>257.98</u>
<u>methylene chloride (75-09-2)</u>	<u>2213.752</u>		<u>1.79</u>	
<u>methyl ethyl ketone (78-93-3)</u>		<u>155.8</u>		<u>93.19</u>
<u>methyl isobutyl ketone (108-10-1)</u>		<u>107.8</u>		
<u>methyl mercaptan (74-93-1)</u>			<u>0.05</u>	
<u>nickel carbonyl (13463-39-3)</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>nickel metal (7440-02-0)</u>		<u>0.3</u>		
<u>nickel, soluble compounds, as nickel</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>nickel subsulfide (12035-72-2)</u>	<u>0.194</u>			
<u>nitric acid (7697-37-2)</u>				<u>1.05</u>
<u>nitrobenzene (98-95-3)</u>		<u>2.5</u>	<u>0.53</u>	
<u>n-nitrosodimethylamine (62-75-9)</u>	<u>4.612</u>			
<u>non-specific chromium (VI) compounds, as chromium (VI) equivalent</u>	<u>0.008</u>			
<u>pentachlorophenol (87-86-5)</u>		<u>0.1</u>	<u>0.03</u>	
<u>perchloroethylene (127-18-4)</u>	<u>17525.534</u>			
<u>phenol (108-95-2)</u>			<u>1.00</u>	
<u>phosgene (75-44-5)</u>		<u>0.1</u>		
<u>phosphine (7803-51-2)</u>				<u>0.14</u>
<u>polychlorinated biphenyls (1336-36-3)</u>	<u>7.656</u>			
<u>soluble chromate compounds, as chromium (VI) equivalent</u>		<u>2.6 x 10<sup>-2</sup></u>		
<u>styrene (100-42-5)</u>			<u>11.16</u>	
<u>sulfuric acid (7664-93-9)</u>		<u>0.5</u>	<u>0.11</u>	
<u>tetrachlorodibenzo-p-dioxin (1746-01-6)</u>	<u>2.767 x 10<sup>-4</sup></u>			
<u>1,1,1,2-tetrachloro-2,2,- difluoroethane (76-11-9)</u>		<u>2190.2</u>		
<u>1,1,2,2-tetrachloro-1,2- difluoroethane (76-12-0)</u>		<u>2190.2</u>		
<u>1,1,2,2-tetrachloroethane (79-34-5)</u>	<u>581.110</u>			
<u>toluene (108-88-3)</u>				<u>58.97</u>
<u>toluene diisocyanate,2,4-(584-84-9) and 2,6-(91-08-7) isomers</u>		<u>8.4 x 10<sup>-3</sup></u>		
<u>trichloroethylene (79-01-6)</u>	<u>5442.140</u>			
<u>trichlorofluoromethane (75-69-4)</u>			<u>589.66</u>	
<u>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</u>				<u>1000.32</u>
<u>vinyl chloride (75-01-4)</u>	<u>35.051</u>			
<u>vinylidene chloride (75-35-4)</u>		<u>5.1</u>		
<u>xylene (1330-20-7)</u>		<u>113.7</u>		<u>68.44</u>

(b)(c) 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). (a) or (b) as applicable. 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).

Authority G.S. 143-215.3(a)(1); 143-215.108; 143B-282; S L. 1989, c. 168, s. 45.

### 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.~~

Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143B-282.

### TITLE 19A – DEPARTMENT OF TRANSPORTATION

*Notice is hereby given in accordance with G.S. 150B-21.2 that the NC Department of Transportation intends to repeal the rule cited as 19A NCAC 02C .0208.*

Agency obtained G.S. 150B-19.1 certification:

- OSBM certified on: July 25, 2013  
 RRC certified on:  
 Not Required

Link to agency website pursuant to G.S. 150B-19.1(c):  
[www.ncdot.gov/about/regulations/rules](http://www.ncdot.gov/about/regulations/rules)

Proposed Effective Date: December 1, 2013

Public Hearing:

Date: October 1, 2013

Time: 2:00 p.m. – 3:30 p.m.

Location: Greenfield Parkway Building, Conference Room 161,  
 750 N. Greenfield Parkway, Garner, NC 27529

Reason for Proposed Action: G.S. 136-44 covers the requirements set out in 19A NCAC 02C .0208-Wheelchair

## Hearing Officer's Suggested Hearing Comments

### INTRODUCTION

[Hearing officer]:

Good evening ladies and gentlemen. My name is Brad Newland. I am the Division of Air Quality Regional Supervisor for the Wilmington Regional Office. My role as hearing officer is to listen to all relevant comment on these proceedings and report them to the full commission. Sitting with me is Ms. Joelle Burleson. She is with the North Carolina Division of Air Quality, Planning Section.

Some of the staff from the Division of Air Quality are here to assist. Ms. Burleson, please introduce the staff present.

[Ms. Burleson] (Introduces staff)

[Hearing officer]:

This afternoon we are conducting a public hearing to receive comments concerning amendments to the Toxic Air Pollutant Procedures rules. A fiscal note has been written for the rule amendments presented in the hearings tonight and was approved and certified by the Office of State Budget and Management. This hearing will be held according to the North Carolina Administrative Procedures Act. The public notice for these hearings has been advertised in the North Carolina Register and on the Division of Air Quality website. Copies of the notice have been sent to those on the official DAQ mailing list. I will enter the public notice, proposed amendments and fiscal note into the hearing record without reading them at this time.

It would be helpful if any person desiring to comment also submit a written statement for inclusion into the hearing record. Once called to speak, please come to the podium and state your name clearly, identify the rule or rules you are commenting on, and whom you represent.

[Hearing officer]:

I will now open the hearing and take relevant comments on amendments to the Toxic Air Procedures rules to incorporate the Session Law 2012-91 Section 1 statutory exemptions of certain federally regulated sources and the Section 3 related recommendations to reduce unnecessary regulatory burden and increase efficient use of Division resources while maintaining public health protections.

Proposed amendments include: exemption of certain sources of toxic air pollutants subject to federal maximum achievable control technology (MACT), generally available control technology (GACT), case-by-case emission limits established under CAA Section 112j, or 40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAPs), where the Division determines emissions will not pose unacceptable risk to human health; an additional set of toxics permitting emission rates for unobstructed vertical stacks; exemption of certain natural gas and propane-fired combustion sources and certain emergency generators; repeal of the Standard Industrial Classification (SIC) Code call rule; clarification of use of the term “actual rate of emissions”; and removal of the term “unadulterated wood”.

In addition, Rule 15A NCAC 02Q .0714, Waste Water Treatment Systems At Pulp And Paper Mills, is proposed for repeal due to applicable requirements having expired.

Existing rule numerical values for the asbestos ambient air level (AAL) in 15A NCAC 02D .1104 and the associated asbestos Toxics Permitting Emission Rate (TPER) in 15A NCAC 02Q .0711 are proposed to be revised due to a calculation error in their original development.

{ optional script if there are a large number of speakers }

---

[Hearing officer]:        Optional Time Limit

Many people have requested to speak at this hearing. Due to time constraints, speakers' presentations will be limited to \_\_\_ minutes.

---

[Hearing officer]:

I will now take any comments that you may have.

[SPEAKERS]

[Hearing officer]:

Is there anyone else who would like to comment? If there are no more comments, then this hearing is closed. The hearing record will remain open until October 14, 2013 for additional written comments.

## CHAPTER V

## COMMENTS DURING THE COMMENT PERIOD

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# Blue Ridge Environmental Defense League

www.BREDL.org PO Box 88 Glendale Springs, North Carolina 28629 BREDL@skybest.com (336) 982-2691

September 19, 2013

Benne C. Hutson, Chairman  
 NC Environmental Management Commission  
 1617 Mail Service Center  
 Raleigh, NC 27699-1617

## **RE: Toxic Air Procedures Rules Incorporating S.L. 2012-91**

On behalf of the Blue Ridge Environmental Defense League, I write to comment on the proposed amendments to the state air toxics regulations. In brief, we oppose any changes which reduce the state's ability to limit the impact of toxic air pollutants on public health in North Carolina. The proposed rules will have such an impact and we oppose adoption.

### Background

The proposed changes would: exempt from state law a group of toxic air pollutant sources which may be subject to:

- Maximum achievable control technology (MACT)
- Generally available control technology (GACT)
- Case-by-case emission limits under CAA Section 112j or
- 40 CFR Part 61 (NESHAP)

Supposedly, the Division would determine that the higher levels of emissions do not pose an "unacceptable risk to human health" before allowing the exemptions. Also, the rule changes would:

- Establish new emission rates for triggering permit thresholds (TPER) for emission sources with vertical stacks
- Exempt certain natural gas-fired combustion units
- Exempt emissions from emergency generators

Further, the changes would repeal the SIC code rule, redefine "actual rate of emissions," eliminate the term "unadulterated wood," and alter the asbestos TPER and AAL.

### MACT, GACT, NESHAP

First, North Carolina's health-based air toxics rules and the elusive federal MACT are neither duplicative nor equivalent. The federal Clean Air Act regulates hazardous air pollutants by imposing a technology standard on industrial facilities, not health standards.<sup>1</sup> The Environmental Protection Agency's method of setting maximum

<sup>1</sup> The federal Clean Air Act makes health impacts from hazardous air pollutants optional. It states: "With respect to pollutants for which a health threshold has been established, the Administrator may consider such threshold level, with an ample margin of safety, when establishing emission standards under this

achievable control technologies for the reduction of toxins does not do what North Carolina's health-based standards do. For example, the federal Industrial Boiler MACT does not impose numerical HAP emission limits, only work practice requirements. An Environmental Review Commission study of the state TAP program agreed:

The AALs [acceptable ambient limits] 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.<sup>2</sup>

In North Carolina, controls emissions by setting a health-based maximum level of pollution in the atmosphere. North Carolina's acceptable ambient levels take into account the distance of smokestacks from property lines and hence from people. In fact, full implementation of the state toxics limits, without exemptions, is the best such protection available to the residents of this state. It also comports with the basic charge of the Environmental Management Commission; i.e., "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."<sup>3</sup> (emphasis added)

Further, the Clean Air Act lists 188 compounds as hazardous air pollutants. The North Carolina toxic air pollutant regulations currently list 97 substances as carcinogens, chronic or acute toxicants and irritants that may adversely affect human health.<sup>4</sup> The two lists contain many of the same substances, but the NC TAP regulation has 19 toxics which are not on the federal list and, therefore, are not regulated under the federal program. In other words, the toxics listed in the table attached to this letter are not controlled by national emission standards for hazardous air pollutants (NESHAP). If the proposed exemption were to be approved, there would be no limits on these toxics.

Second, if this rulemaking is adopted by the Environmental Management Commission, it will be complicit—along with the General Assembly, the Governor and the Division of Air Quality—in making a total hash of toxic air pollution control in North Carolina. This will be a virtual lawyers' employment program because opposing groups, both the regulated industry and public interest organizations, will have myriad opportunities for

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subsection." See 42 USC § 7412 (d)(4) - Hazardous Air Pollutants, Emission Standards, Health Threshold.

<sup>2</sup> *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*

<sup>3</sup> Article 21 § 143-211, Part 1, Water and Air Resources, Organization and Powers Generally, Control of Pollution, Declaration of public policy.

<sup>4</sup> 15A NCAC 02D .1104 TOXIC AIR POLLUTANT GUIDELINES, Amended Eff. June 1, 2008

litigation.

The instant problem began with North Carolina Session Law 2012-91 which exempted from state toxic air pollutant rules sources subject to federal maximum achievable control technology (MACT), generally available control technology (GACT), case-by-case emission limits under CAA Section 112(j) or 40 CFR Part 61 (NESHAP). However, the federal Clean Air Act's Section 112(j) requires the states to develop standards if EPA misses deadlines; hence, it is dubbed the "MACT Hammer." Also, in 2005 EPA revised its findings regarding CAA 112(c) 40 CFR Part 63 for power plants and removed electric utilities from CAA Section 112 altogether. See 70 FR 15994, March 29, 2005. In general, EPA does not delegate to state or local agencies the authority to make decisions that reduce the stringency of the underlying standards.

The EMC cannot enforce one part of the law and not the other. Question: Did the fiscal note for this rulemaking do an assessment of funding for the Attorney General's office versus the DAQ's air modeling section?

### Vertical Stacks

For permitting purposes, the DAQ has proposed to develop a separate set of screening thresholds for analyzing toxic air pollutants emitted from unobstructed vertical emission release points (stacks). According to Recommendation 1, the DAQ reviewed various types of facilities which have vertical stacks which would be subject to this exemption, including chemical manufacturing, pulp and paper mills, concrete and asphalt production, furniture manufacturing, brick production, and electric power generation.

In our experience, every asphalt plant permit which we have reviewed has a vertical stack with no obstruction or rain cap, the very type contemplated in this exemption. The problem here is that the Division will not find excessive levels unless it looks for them. For years, owner-operators of industrial air pollution sources have had the option of either doing their own computerized modeling to estimate pollution impacts, or have the Division of Air Quality to do one. This is hardly a burden to the permit applicants because the state analysis costs them nothing. It is no burden for the people of North Carolina because the screening is designed to catch potential sources of air pollutants such as arsenic, benzene, cadmium and formaldehyde. These are toxic and/or carcinogenic substances which no one would find acceptable to breathe.

### Natural Gas-fired Combustion Units

Under the proposed rule change, natural gas and propane burners would be added to the list of toxic air pollution emitting facilities for which a "permit to emit toxic air pollutants shall not be required."<sup>5</sup> The discussion of TPER in Recommendation 2 is a red herring. The exemption would apply regardless of the permit threshold rate, the TPER, which is the determining factor for whether the Division performs air modeling, not permitting.

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<sup>5</sup> NCAC 2Q .0702

The exemption from air toxics rules of natural gas- and propane-fired plants with a heat input value below 450 mmBtu/hour would allow higher levels of pollution because it exempts a significant number of sources within certain facilities. For example, the Richmond County Combustion Turbines have nineteen emission units, ten of which have heat inputs below the 450 mmBtu/hour threshold. The ten sources burn natural gas with a combined heat input of 80 mmBtu/hour and 700,187 mmBtu/year. The maximum facility-wide annual natural gas heat input is 3.18E+07, which means the ten exempted unit emit about 2% of the facility's air pollution while using natural gas for fuel.

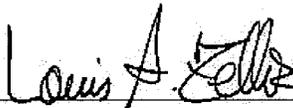
$$7.0 \text{ E}+05 \div 3.19 \text{ E}+07 = 0.022$$

However, if approved by the EMC, this exemption would allow about 497 more pounds of formaldehyde to be emitted from the RCCT facility annually; also, 91 pounds of toluene, 8 pounds of benzene and lesser amounts of acetaldehyde, ethylbenzene, naphthalene, PAH and xylene. Duke Energy Progress, the owner-operator of the RCCT plant, is already seeking to escape the inclusion of emissions from six of these pollution sources in its permit. As a result, pollution will increase by this amount because the extra margin of toxic air pollution will be available to the remaining, larger units. If the proposed exemption is approved, this scenario would be repeated perhaps hundreds of times across the state.

### Conclusion

At the behest of the regulated community, the legislature has made mischief for the state's environmental agencies during the last few years. Nevertheless, the EMC should use its considerable resources to protect the people and the environment of North Carolina first and not allow rollbacks, loopholes and exemptions to destroy the exemplary North Carolina Toxic Air Pollutant Program.

Respectfully,



Louis A. Zeller

Executive Director  
Blue Ridge Environmental Defense League  
email: BREDL@skybest.com  
phone (336) 982-2691  
cell: (336) 977-0852  
website: <http://www.BREDL.org>

CC: Joelle Burleson

Attachment

## North Carolina Toxics Not Regulated as Federal Hazardous Air Pollutants

Toxic air pollutant	CAS Number	Carcinogen	Acute/chronic toxic/irritant
Acetic Acid	64-19-7		✓
Ammonia	7664-41-7		✓
Bromine	7726-95-6		✓
Dichlorodifluoromethane	75-71-8		✓
Dichlorofluoromethane	75-43-4		✓
Ethyl acetate	141-78-6		✓
Ethyl mercaptan	75-08-1		✓
Ethylene glycol monoethyl ether	110-80-5		✓
Ethylene diamine	107-15-3		✓
Hexachlorodibenzo-p-dioxin	57653-85-7	✓	
Hexane isomers			✓
Mercury vapor	7439-97-6		✓
Methyl mercaptan	74-93-1		✓
Nickel metal	7440-02-0		✓
Nitric acid	7697-37-2		✓
Sulfuric acid	7664-93-9		✓
Tetrachloro-1,2-difluoroethane 1,1,2,2	76-12-0		✓
Tetrachloro-2,2-difluoroethane 1,1,1,2	76-11-9		✓
Trichlorofluoromethane	75-69-4		✓



14 October 2013

Delivered Via Hand Delivery

Ms. Joelle Burleson  
 North Carolina Division of Air Quality  
 1641 Mail Service Center  
 Raleigh, NC 27699-1641

**Subject: Comments on Proposed Revisions to the  
 State Air Toxics Rules  
 15A NCAC 02D .1104, and  
 15A NCAC 02Q .0701 - .0714**

Dear Ms. Burleson:

I write to you today on behalf of the North Carolina Manufacturers Alliance (NCMA) and our many member companies who have a significant interest in the subject rulemaking action. Our members represent a diverse cross-section of the many North Carolina manufacturing companies who are directly impacted by the State Air Toxics Program.

NCMA worked closely with leaders in DENR and in the General Assembly to craft the legislation that forms the basis for this proposed rulemaking (House Bill 952 / Session Law 2012-91), and we are pleased to see that the Division of Air Quality (DAQ) and the Environmental Management Commission (EMC or Commission) are taking the steps necessary to conform the Commission's rules with that legislation.

For purposes of simplicity and clarity, I have divided our comments into three (3) main themes: Proposed Rule Amendments Supported by NCMA; NCMA's Requested Modifications to Proposed Rules; and NCMA's Requested Additions to Proposed Rules.

**Proposed Rule Amendments Supported by NCMA**

NCMA supports the proposed amendments to the following rules:

- 15A NCAC 02D .1104 Toxic Air Pollutant Guidelines
- 15A NCAC 02Q .0701 Applicability
- 15A NCAC 02Q .0703 Definitions
- 15A NCAC 02Q .0704 New Facilities and SIC Calls
- 15A NCAC 02Q .0706 Modifications
- 15A NCAC 02Q .0709 Demonstrations
- 15A NCAC 02Q .0711 Emission Rates Requiring a Permit
- 15A NCAC 02Q .0714 Wastewater Treatment Systems at Pulp and Paper Mills

*THE VOICE OF NORTH CAROLINA MANUFACTURERS*

We also fully support the proposed exemptions from the air toxics program for certain natural gas and propane fired combustion sources and certain emergency engines, as provided in 15A NCAC 02Q .0702 (25) and (26), respectively.

### **NCMA's Requested Modifications to Proposed Rules**

NCMA has no major issues with the plain language of the proposed rule in 15A NCAC 02Q .0702 – Exemptions. However, based on more than 15 months of implementation of the new legislation by the Division of Air Quality, we are concerned that the intent of the legislation, as well as the plain language of both the statute and the proposed rule, are not being followed. We are further concerned that, in the absence of further clarification by this rulemaking, those implementation practices will continue.

Since many of the current members of the EMC have only recently been appointed, and since most of those new members have had very little exposure to the State Air Toxics Program, we wish to enumerate for the EMC the circumstances that led to introduction of HB 952, and ultimately to this proposed rulemaking action.

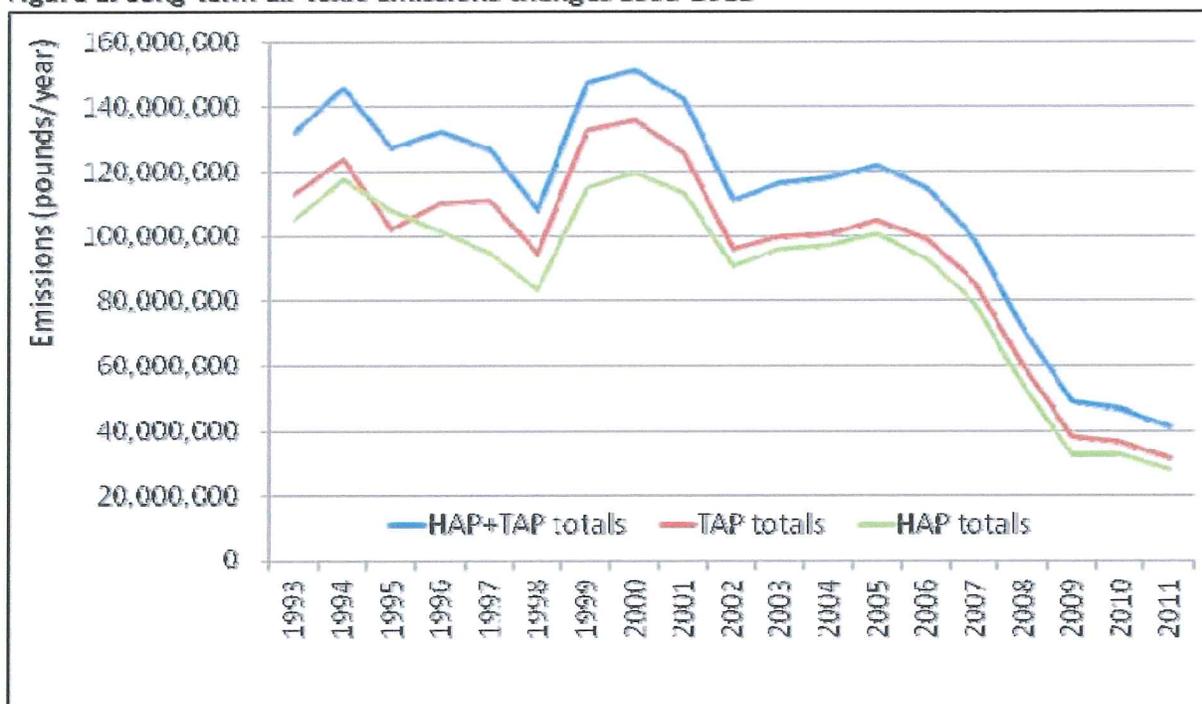
The rules to implement the North Carolina Air Toxics Program were first adopted in 1990, after several hazardous waste companies expressed interest in locating hazardous waste incinerators in North Carolina. At that time there was no effective federal or state program to regulate toxic air emissions from such incinerators. So the General Assembly directed the EMC to adopt rules to regulate emissions of toxic air pollutants. Many other states also adopted air toxics programs during this era.

About this same time, Congress passed the 1990 Amendments to the Clean Air Act. Under the 1990 Amendments, Congress directed EPA to adopt Maximum Achievable Control Technology (MACT) standards for a wide range of industrial sources. In setting the MACT standards for existing sources, EPA establishes the “floor” of control at the average level of control achieved by the top 12% of all existing sources in a particular industry category. MACT for a new source requires installation of the most stringent controls achieved by any MACT source in operation anywhere.

Since 1990, EPA has adopted more than 100 MACT standards for larger industrial sources and 40 Generally Available Control Technology (GACT) standards for smaller sources.

Concurrent with the implementation of these new federal programs, North Carolina has experienced dramatic reductions in emissions of toxic air pollutants. The Division of Air Quality reported to the Environmental Review Commission (ERC) of the General Assembly on December 1, 2012 that “*toxic air emission in North Carolina decreased by 62% between 1998 and 2011.*” The large majority of those emission reductions are due to implementation of the federal MACT standards program. The following graph, prepared by the Division of Air Quality and included in the December 2012 report to the ERC, depicts the dramatic reductions in toxic air emissions in North Carolina over the past decade.

Figure 1. Long-term air toxic emissions changes 1993-2011



Source: Annual toxic air emissions reported by North Carolina facilities to the DAQ.

In its December 2012 report to the ERC, DAQ acknowledged the tremendous impact that federal toxic emission reduction programs have had on individual sources of air toxics emissions in North Carolina by noting that *“Facilities required to comply with federal standards rarely have had to install additional pollution control equipment to meet the state air toxics rules.”*

Also, earlier this month, in response to an inquiry by NCMA, DAQ reported that between June 28, 2012 and September 30, 2013, 36 facilities submitted applications to either DAQ or one of the three (3) local air programs, requesting increases in emissions of one or more air toxics. Based on the agencies’ reviews of those 36 applications, none of the applications would have resulted in air toxics emissions in excess of the established acceptable ambient levels (AALs).

Similar experiences (i.e., repeatedly modeling sources subject to federal requirements simply in order to confirm compliance with the State AALs), is what led the General Assembly to enact the air toxics reform legislation in 2012. North Carolina companies were being placed at an economic disadvantage because our competitors were located in states that had modified their air toxics programs to recognize the benefits derived from compliance with the federal MACT and GACT programs resulting in reduced cost and reduced permitting time. Because other states in the southeast had already reformed their air toxics permitting programs to acknowledge the reductions achieved under the federal programs, our competitors in those states were (and still are) allowed to be more nimble and flexible in their manufacturing operations, and thus more competitive.

It has been the experience of our member companies that DAQ's insistence on modeling every proposed increase in air toxics emissions increases project costs and lengthens the time line necessary to get a product line from concept to production – often with little or no environmental benefit. This is clearly demonstrated by the most recent agency experiences with the 36 applications filed since enactment of the air toxics reform legislation.

Prior to the adoption of HB 952, DAQ required individual companies to conduct air modeling to prove compliance with the AAL's. The legislation sought to eliminate this wasteful and time-consuming step in permitting. Unfortunately, DAQ has adopted an interpretation of HB 952 that has resulted in a continuation of that same wasteful and time-consuming process. The only difference in the air toxics program since the passage of HB 952 is that the modeling is now performed by DAQ instead of the applicant. We note that as a result of DAQ's interpretation of the bill, some permit applicants choose to continue to perform their own modeling in order to minimize the time required to acquire permit approval.

A simple shift in responsibility for completing air toxics modeling from the applicant to DAQ is not what was contemplated by the General Assembly in passing air toxics reform legislation. Such an interpretation frustrates the overall intent of the legislation, which was to recognize the air toxics emission reduction impacts of mature federal programs, reduce unnecessary regulatory burdens, align North Carolina's air toxics program with those of other southeastern states, and improve competitiveness of North Carolina manufacturers.

One only has to read the first phrase in the title of House Bill 952 to appreciate the General Assembly's intent..." AN ACT TO EXEMPT FROM STATE AIR TOXICS EMISSIONS CONTROLS THOSE SOURCES OF EMISSIONS THAT ARE SUBJECT TO CERTAIN FEDERAL EMISSIONS REQUIREMENTS..." (emphasis added). Under current permitting procedures at DAQ, those sources of emissions that are subject to certain federal emission requirements are definitely not being treated as exempt.

It is NCMA's understanding that DAQ is interpreting a provision of HB 952 in a manner that requires continued air modeling demonstrations for applications that include an increase in air toxics emissions. The pertinent language of the bill may be found at NCGS 143-215.107 (a)(5)(b). The first sentence of that paragraph reads as follows: "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." DAQ interprets this provision to require a continuation of its long-standing practice of requiring modeling of every increase in air toxics emissions. NCMA believes that such an interpretation ignores the intent of the air toxics reform legislation.

In addition to the plain language of the title which says that federally regulated sources are exempt, paragraph (a) of NCGS 143-215.107 (a)(5) directs that air toxics rules adopted by the Commission (i.e., the rules currently under consideration) not apply to sources that fall into either of three listed categories of federally regulated sources (i.e., exempts such sources from regulation).

DAQ has considerable and substantial data and experience gathered through more than 20 years of operating the state air toxics program, as well many years of air toxics emissions data (TRI data and NC Emissions Inventory data) submitted by permitted sources in the state. This wealth of information, combined with the recent knowledge gained through agency reviews of the 36 applications submitted since enactment of HB 952, form an adequate basis for concluding that sources subject to federal regulation of air toxics emissions do not pose an unacceptable risk to human health; and obviate the need to model each and every increase in air toxics emissions.

NCMA feels that in order to implement the law as intended, the Commission should modify its rule to exempt all sources subject to federal air toxics emissions requirements, in the same manner that the Commission exempts wood furniture manufacturing operations [see 15A NCAC 02Q .0702(a)(23)]. Such furniture sources are only subject to the air toxics rule when the Director determines that one or more sources pose an unacceptable risk to public health under the “Directors Call” provision of the current rule [see 15A NCAC 02Q .0712]. Thus, we propose the following amendment to the language of the proposed rule in 15A NCAC 02Q .0702(b) [recommended amendment is underlined text].

“Emission from the activities identified in Subparagraphs ~~(a)(25)(a)(28)~~ through ~~(a)(28)(a)(31)~~ 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)(a)(27)~~ of this Rule shall not be included in determining compliance with the toxic air pollutant requirements in this Section provided that the terms of this exclusion shall not affect the authority of the Director under 15A NCAC 02Q.0712.”

The effect of this amendment would be to exempt federally regulated sources that were specifically exempted under the HB 952 legislation, and to acknowledge that the DAQ Directory may still require compliance demonstrations when the Director finds that any particular source or group of sources pose an unacceptable risk to public health.

### **NCMA’s Requested Additions to Proposed Rules**

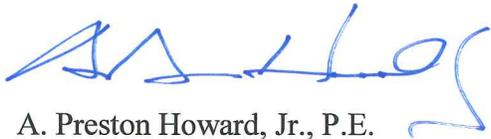
Under current practices, North Carolina industries must go to extreme measures to quantify extremely low “trace” levels of air toxics emissions when conducting air toxics compliance demonstrations. These trace level or incidental emissions have not been shown to pose any compliance issues, but one still has to quantify them for the analysis.

NCMA recommends that the Commission establish within its rules a de minimis threshold for identifying very low levels of air toxics emissions within a particular source of emissions, much in the same manner as de minimis thresholds have been established in the MACT and GACT standards. This de minimis level would be based upon the same threshold as the MACT and GACT Standards (i.e., from a Material Safety Data Sheet (MSDS) or Certified Product Data Sheet (CPDS) )where any air toxic below 1% for Non-Carcinogens and 0.1% Carcinogens may be excluded from inclusion in an air toxics compliance demonstration.

Also, as it was clearly the General Assembly's intent that HB 952 / Session Law 2012-91 exempt any source of air toxics that is regulated under a federal air toxics emission standard, NCMA recommends the Division of Air Quality include in 15A NCAC 02Q.0702(a)(27) those sources subject to 112(g) case by case MACT determinations.

Thank you for the opportunity to participate in this rulemaking action, and for your thoughtful consideration of our comments and requested changes. If you have any questions or need any additional information from NCMA concerning these comments, any please contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "A. Preston Howard, Jr.", with a stylized flourish at the end.

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

## NCMA Member Companies and Business Partners as of August 1, 2013

The membership of the North Carolina Manufacturers Alliance ("NCMA") comprises over 50 leading manufacturing companies with operations in North Carolina. The Alliance's current members employ over 50,000 North Carolinians at 130 facilities across the state.

Air Products and Chemicals, Inc.	General Electric
Ajinomoto North America, Inc.	Georgia-Pacific Corporation
AkzoNobel	GlaxoSmithKline
Alcoa	Glycotech, Inc.
Arauco Panels USA, LLC	IGM Resins
Archer Daniels Midland Company	Industrial & Agricultural Chemicals
Ashley Furniture Industries, Inc.	Ingredion, Inc.
Cargill	International Paper
Carolinac Cement Company, LLC	INVISTA
Carolina Stalite	Kao Specialties Americas LLC
Carus	Kapstone Kraft Paper Corp.
Caterpillar, Inc.	Kimberly-Clark Corp.
Chemtura	Louisiana Pacific
Clariant Corporation	Mallinckrodt Pharmaceuticals
Corning Incorporated	Momentive Specialty Chemicals, Inc.
Daimler Trucks North America	Novozymes North America
DAK Americas	Nucor
Domtar Paper Company	Potash Corp, - Aurora
Dow Chemical	Resinall Corporation
DSM Pharmaceuticals	Reynolds American Inc.
DuPont Company	Shurtape Technologies, Inc.
Eastman Chemical Company	Silar, LLC
Elementis Chromium	Surry Chemicals, Inc.
EnCee Chemical Sales, Inc.	Surtronics, Inc.
Evergreen Packaging	Syngenta Crop Protection
Evonik Stockhausen	The Timken Company
FMC Corporation	Trinity Manufacturing, Inc.
Fortron Industries	Unilin US MDF
	Weyerhaeuser Company

### NCMA Business Partners

AECOM Environmental  
 Carolina Industrial Group for Fair Utility Rates  
 Hunton & Williams  
 Kilpatrick Townsend & Stockton LLP  
 McGuireWoods  
 McNair Law Firm  
 Moore & Van Allen  
 Nexsen Pruet  
 Solutions-IES  
 Trinity Consultants  
 URS Corporation - North Carolina  
 Womble, Carlyle, Sandridge & Rice, PLLC



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[www.nccconservationnetwork.org](http://www.nccconservationnetwork.org)

October 14, 2013

Joelle Burleson  
Division of Air Quality  
N.C. Department of Environment and Natural Resources  
1641 Mail Service Center  
Raleigh, NC 27699

Re: Proposed Amendments to Air Toxics Rules

Dear Ms. Burleson:

Thank you for the opportunity to comment on the proposed amendments to the North Carolina air toxics program. The North Carolina Conservation Network is a statewide network of more than 90 environmental, community and environmental justice organizations focused on protecting the state's environment and public health.

As discussed in more detail below, the proposed revisions to 15A NCAC 02Q .0711 (Emissions Rates Requiring a Permit) will weaken public health protections against toxic air pollution and diminish the ability of the Division of Air Quality to adequately monitor pollution levels.

### **Background**

North Carolina established its air toxics program in the late 1980s to protect the public health of its residents. The state air toxics program is a health-based regulatory scheme that prohibits facilities from emitting toxic air pollutants in quantities that "may cause or contribute beyond the premises . . . to any significant ambient air concentration that may adversely affect human health."<sup>1</sup>

North Carolina's air toxics program works in conjunction with the federal program, which lists fewer pollutants and mandates specific pollution control technology rather than health-based restrictions. Together, the state and federal programs regulate the emission of dangerous toxic pollutants such as PCBs, dioxins, asbestos, heavy metals and known carcinogens.

In 2012, the North Carolina General Assembly amended the state's air toxics program.<sup>2</sup> One of the most significant changes in Session Law 2012-91 is the exemption of certain facilities from the air toxics rules. In addition, Section 3 of Session Law 2012-91 requires the Division of Air Quality ("DAQ") to review the existing air toxics rules and recommend further changes that could be made to "reduce unnecessary regulatory burden and increase the efficient use of [DAQ] resources *while maintaining protection of public health.*"<sup>3</sup>

In March 2013, DAQ published its proposed amendments to the air toxics rules. In addition to a host of other recommendations, DAQ proposes to develop an additional, more lenient set of toxic permitting emission rates ("TPERs") for facilities with unobstructed and vertically oriented release points. As discussed below, the proposed

<sup>1</sup> 15A NCAC 02D .1104 (Toxic Air Pollutant Guidelines).

<sup>2</sup> North Carolina Session Law 2012-91 (2012).

<sup>3</sup> Id. (emphasis added).

change in TPER thresholds would weaken public health protections, contrary to the mandate in Session Law 2012-91.

**DAQ Should Not Develop a More Lenient Set of TPERs for Facilities with Unobstructed, Vertically Oriented Release Points**

Toxic permitting emission rates (“TPERs”) set a threshold above which a facility must obtain an emissions permit.<sup>4</sup> An exceedance of a TPER will trigger a modeling analysis, which will help DAQ to determine whether the acceptable ambient levels (“AALs”) are being violated at the facility’s property boundary. DAQ proposes to amend 15A NCAC 02Q.0711 (Emission Rates Requiring a Permit) by creating a new, more lenient set of TPERs for facilities with unobstructed, vertically oriented release points. DAQ expects that “at a minimum, one-third of all facilities subject to the air toxics rules” would be able to use this new set of TPERs.<sup>5</sup>

DAQ’s proposal raises two significant concerns. First, a more lenient set of TPERs will limit the amount of information available to DAQ, possibly resulting in violations of the AAL without DAQ’s knowledge. TPERs are strictly emissions-based and do not take into account the cumulative impacts of multiple facilities or other background air pollution. It is possible that a facility could contribute to AAL violations regardless of its emissions remaining below this new, more lenient set of TPER thresholds. It is essential that TPERs remain at a conservative level for all facilities in order to assist DAQ in determining whether AAL exceedances exist.

Second, a more lenient set of TPERs for these facilities could have serious unintended consequences in areas where inversion occurs. Inversion is a reversal of normal temperature patterns in which a warm air layer sits over an area and prevents the mixing of cooler, denser air. When inversion occurs, the air becomes stagnant and air pollution become trapped close to ground level instead of being circulated away. Inversion occurs frequently in North Carolina particularly in the western part of the state.

When inversion is taken into account, the rationale for creating a more lenient set of TPERs for unobstructed, vertically oriented release points is no longer applicable. Regardless of the speed or angle of release, toxic emissions can become trapped in an inversion system and remain in the air, close to ground level, at unhealthy levels. Increasing the TPERs for one-third of all facilities in the state will lead to a higher risk of AAL exceedances without detection. It is crucial that the TPER thresholds remain at a conservative level so that the impacts of these inversion systems can be monitored by DAQ.

If, despite these concerns, the Environmental Management Commission does move forward to adopt these amendments, we recommend that DAQ give serious thought to identifying situations in which the cumulative emissions of multiple facilities could rise above safe levels absent TPER exceedances. In addition, we recommend that DAQ specifically exclude the use of these new, more lenient TPERs in geographic locations where inversion has been known to occur.

<sup>4</sup> 15A NCAC 02Q .0711 (Emission Rates Requiring a Permit).

<sup>5</sup> DENR, Division of Air Quality, “Review of the North Carolina Air Toxics Rules; A Report to the Environmental Review Commission.” December 1, 2012.

**Conclusion**

Section 3 of Session Law 2012-91 directs DAQ to recommend amendments to the existing air toxics rules in order to “reduce unnecessary regulatory burden and increase the efficient use of [DAQ] resources *while maintaining protection of public health.*”<sup>6</sup> DAQ’s proposed revisions to the TPERs, however, will compromise DAQ’s ability to monitor unsafe levels of toxic air pollution. DAQ must ensure that it is able to comply with its mandate to protect the public health, and we ask that the TPER thresholds not be amended at this time.

If you have any questions about these comments please contact me at (919) 857-4699 x 107 or [nadia@ncconservationnetwork.org](mailto:nadia@ncconservationnetwork.org).

Sincerely,



Nadia L. Luhr  
Policy Analyst  
North Carolina Conservation Network

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<sup>6</sup> North Carolina Session Law 2012-91 (2012) (emphasis added).

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NC Division of Air Quality  
Air Toxics Public Hearing  
September 19, 2013  
Comments by June Blotnick, Clean Air Carolina

I'm here today as Executive Director of Clean Air Carolina, Charlotte-based nonprofit work to restore clean air for all North Carolinians. While I appreciate the opportunity to make public comments, I have to express my dissatisfaction that this hearing was held at a time and place where most of the people who will be directly affected by these proposed changes cannot attend. This hearing was clearly held for the convenience of agency staff and not the public.

So I'm here on behalf of the thousands of North Carolinians who live near the coal plants, paper mills, lumberyards, chemical companies and other facilities which emit toxic air pollution but could not be here to speak for themselves because they are working or taking care of children or don't have transportation or most likely didn't know about this hearing and may not even know they are living down the road from a toxic facility.

For more than 20 years, the Division of Air Quality has implemented a program designed to protect the health of people living at the fence lines of these polluting facilities. We applaud the lawmakers and the staff from various state agencies who worked hard to create this health-based program and implement it over the years. But even with this program, North Carolina's industries still put us near the top of the list of states in the US with the most toxic emissions—particularly for coal plants.

In 2010, according to EPA's toxic release inventory, sources emitted 34 million pounds of toxic air emissions into our Carolina blue skies. 1.5 million pounds of these toxins were also carcinogens. DAQ's proposal to raise the threshold limit for many of these facilities means even more toxic air pollution.

More toxic air pollution means more illness and premature death, which is not a good thing, especially for residents of Columbus County in Eastern NC.

According to the University of Wisconsin's County Health Rankings website:

- Columbus County ranks last out of our state's 100 counties in terms of positive health outcomes
- 28% of Columbus County residents are in poor or fair health; for the state, it's 18%

- Newborn babies with low-birth weight—a risk factor for health problems down the road, is 11.6%; for the state it's 9.1%
- 37% of the children live in poverty compared with 25% for the rest of our state

And worse, Columbus County is home to number of permitted facilities which will be impacted by these changes to NC's air toxics rules.

DAQ has never really looked at nearby polluting facilities when granting permits. Now that you are proposing to increase pollution thresholds, it's more important than ever to determine if there is an unacceptable risk to human health. You might want to start in Columbus County.

Looking at DAQ's map of permitted facilities, we can see three Title V facilities in the town of Riegelwood, including International Paper, the largest source of toxic pollution in the state, according to EPA data from 2011.

Some of the chemicals spewing from the facilities in Riegelwood include:

Acetaldehyde—short-term exposure to acetaldehyde results in effects including irritation of the eyes, skin, and respiratory tract. Acetaldehyde is considered a probable human carcinogen.

Methanol—is a toxic alcohol that is used industrially as a solvent, pesticide, and alternative fuel source and highly flammable.

Lead, ammonia, sulfuric acid, toluene and dioxin are other toxic chemicals released by plants in Riegelwood.

Columbus County isn't the only county with poor health outcomes that is home to clusters of facilities permitted under the Air Toxics program. Out of the 26 counties with the worst health outcomes in the state, 18 have companies emitting toxic air pollution. While we can't prove there is a direct correlation between poor health outcomes and the emissions from these facilities, we can say that the residents of these counties are suffering enough and don't need the state to allow any more air pollution into the air they breathe.

The town of Riegelwood has 10 schools—many of them located within several miles of these factories.

In 2010, UNC Chapel Hill's Institute for the Environment published a report entitled

“Safe Schools: Identifying Potential Threats to the Health and Safety of Schoolchildren in North Carolina”.

Researchers found that 1,445 public schools in our state, nearly half of all schools are in close proximity to a potential environmental hazard including many of the facilities permitted and perhaps soon to be *not* permitted by DAQ for emitting toxic pollution.

Because of the clear impact the proposed changes will have on children's health, Clean Air Carolina calls on DAQ to consult with the Institute for the Environment and the Gillings School of Global Public Health for the purpose of conducting a health impact assessment in those communities where proposed threshold limits will result in more emissions. No changes should be made to the Air Toxics program until the medical, public health, and academic experts in our state have thoroughly researched the health impact of DAQ's proposed changes.

## Air Toxics Hearing

Sept. 19, 2013

Raleigh, NC

Only 6 days ago, Philippe Grandjean, who is professor and chair of environmental medicine at the University of Southern Denmark and an adjunct professor of environmental health at the Harvard School of Public Health, wrote in

*Environmental Health News* that mercury, arsenic, pesticides and persistent industrial compounds are a hidden threat to a whole generation of children, whose brain development is being compromised by *in utero* and post-natal exposures.

What is insidious about this epidemic is that it is a silent epidemic, not linked to any specific medical diagnosis. We are at risk of raising a generation of children whose intellectual ability and motor skills will be subtly, although measurably, compromised, and compromised permanently. (9/13/13 Opinion: 'Chemical brain drain' endangers generations of children — Environmental Health News)

It is undeniable that increasing toxicants and particles in the air will exacerbate health problems for people with respiratory illnesses such as asthma and emphysema. I am a pediatrician, and so I am especially concerned with children. In most cases we don't even know what safe levels of these chemicals are for

children, let alone pregnant women. We know even less about how combinations of exposures affect the developing fetus and child. Yet we do know that epidemiologic studies have linked air pollution to insulin resistance and type 2 diabetes, hyperactivity, asthma, and rare childhood cancers. Similar effects have been seen in children who were exposed *in utero* to air pollution, such as that created by heavy truck and automobile traffic. But what is really scary to me are the effects of air pollution on the brains of young children. It is plausible, and suggested but not proven yet, that maternal exposure *in utero* to air pollution can be one of the causes of the increasing frequency of autism spectrum disorder in our society.

How did we allow this to happen? By insisting that we need proof of harm in order to regulate toxicants, rather than simply being cautious, and giving pregnant women and children the benefit of the doubt. We know that under the new law the amount of known poisons reaching our air and, consequently, our lungs, poisons such as arsenic and mercury (not to mention particulates), will increase. There is no reasonable justification for this. It is not economically in the best interests of the state of North Carolina. Will it lead to more jobs? Probably not, since the short term savings will initially wind up in investors' dividend checks and CEOs'

Jonathan B. Kotch, MD, MPH  
Research Professor  
Department of Maternal and Child Health  
UNC Gillings School of Global Public Health

bonuses, but even if it did lead to job creation, the cost to the state of the likely additional cases of asthma, cancer, and diabetes, not to mention the likelihood of adverse neurological effects, will far exceed any presumed positive impact of the relaxation of regulatory standards on the overall economy.

Children are different, and the fact that they are more sensitive to toxicants in the environment demands that we implement a precautionary approach, one that acknowledges that health is more important than profit, and that children are more important than chief executives. Any additional risk is not acceptable when it comes to pregnant and breastfeeding women and children. We need to preserve the advances of the last 40 years, not undermine them. It is estimated that taking lead out of automobile fuel in the 1970s raised the overall IQ of the US population by 2 points. This legislation is the first step in taking those 2 points back. The cost of changes to the air toxics rules will be paid for by personal health tragedies and medical expenses incurred by North Carolina's seniors, children, pregnant and breastfeeding women and those with existing medical conditions. As a physician and member of Medical Advocates for Healthy Air, I strongly oppose the proposed changes and call on DAQ to conduct a health impact assessment to determine how these changes will affect North Carolinians.

**Air Toxics Public Hearing; DENR; September 19, 2013**

Emeritus Prof. Donald T Lauria  
School of Public Health, UNC-Chapel Hill

1. Air quality is a public good, a common property resource. It belongs to all of us.
2. Government is the steward of this resource. Its responsibility is to allocate it for the welfare of the owners, the people of North Carolina.
3. Air quality is like timber on Federal lands that can be harvested, and grasslands that can be grazed.
4. Whereas timber and grass are measured in acres, air quality is measured in parts per million and parts per billion.
5. Air quality, like timber and grass, has value because it is scarce. The supply is limited. Its value can be measured in dollars.
6. The Government sells timber and grazing rights that generate revenue.
7. But by lowering air quality standards, the State of North Carolina is giving away... as a gift... a chunk of this scarce resource to a select group of companies.
8. Reducing air quality regulations is like imposing a tax on all North Carolinians in order to give an unfair advantage to a few companies.
9. The benefits flow to these companies by lowering their cost of doing business and improving their bottom line.
10. The costs, however, which are the increased risks due to dirtier air, are borne by all of us.
11. Air quality is not substantially different than labor, or land, or buildings, or utilities, or any other inputs used by manufacturers to supply their products. It is an input used by companies that discharge pollutants to the air.
12. Manufacturers need to purchase their inputs from suppliers. Suppliers don't give them away as gifts.
13. An important difference between air quality and other inputs, however, is that air quality cannot be purchased in the marketplace.
14. A company that uses air quality by discharging pollutants into the air can't go to a store and say: Let me buy 10 tons of air quality.
15. Because air quality can't be purchased in stores, the task of providing it to manufacturers falls to government.
16. The principal method used to provide it is regulation, which is the business of DENR.
17. Manufacturers who pollute the air pay for this resource by installing treatment devices or by modifying their operations to remove the difference between the amount of pollution they would produce in the absence of regulations and the less risky amount that regulations allow them to discharge.
18. Lowering air quality regulations allows a subgroup of NC companies to increase their discharge of pollution free of charge.
19. But the consequences of dirtier air affect everyone... through the air we breathe, the food we eat, tourism, commercial development, and in a jillion other ways.

20. Lower regulations beg the questions: a) who gains by them, b) who loses, c) why should some companies be given the gift of a scarce resource that belongs to all of us, d) what do the owners of this resource want from the stewards who manage it e) what is the responsibility of the stewards to the owners?
21. If you professionals in DENR, the stewards of our common property resources, found yourselves in a teaching situation ... with a child, or a layperson, or an international visitor, or with family members... how would you explain why air quality regulations are being lowered in North Carolina?

---

**From:** Therese Vick [therese.vick@gmail.com]  
**Sent:** Monday, October 14, 2013 5:24 PM  
**To:** Burleson, Joelle  
**Subject:** Comments TAP  
**Attachments:** TVickBREDLDAQTAPADDITIONALCOMMENT10142013.docx

Ms. Joelle Burleson

North Carolina Division of Air Quality

1641 Mail Service Center

Raleigh, NC 27699-1641

October 14, 2013

Re: Proposed amendments to Toxic Air Procedures Rules

Dear Ms. Burleson:

Please accept the following in addition to my comments at the September 19, 2013 hearing in Raleigh.

Toxic air pollution is of concern for many communities in North Carolina who could not attend a mid-afternoon hearing in downtown Raleigh. In the interest of full public participation, it is imperative that the Division of Air Quality hold hearings in all the regions managed by the North Carolina Department of Environment and Natural Resources, at a time when potentially affected citizens can attend.

Sincerely,

A rectangular box with a red 'x' in the top-left corner, indicating a redacted signature.

Therese Vick

North Carolina Health Sustainable Communities Campaign Coordinator

--

Therese Vick

North Carolina Healthy Sustainable Communities Campaign Coordinator

Blue Ridge Environmental Defense League

[therese.vick@gmail.com](mailto:therese.vick@gmail.com)

919-345-3673

[www.bredl.org](http://www.bredl.org)

@tvickBREDL Twitter

<https://www.facebook.com/BlueRidgeEnvironmentalDefenseLeague?ref=hl>

[From Where I Sit: Reports From The North Carolina Mining and Energy Commission Meetings](#)

*Be kind to all you meet, each of us carries a burden that others cannot see—*



# Blue Ridge Environmental Defense League

[www.BREDL.org](http://www.BREDL.org) 4617 Pearl Rd. Raleigh N.C. 27610 (919) 345-3673 [therese.vick@gmail.com](mailto:therese.vick@gmail.com)

Ms. Joelle Burleson

North Carolina Division of Air Quality

1641 Mail Service Center

Raleigh, NC 27699-1641

October 14, 2013

Re: Proposed amendments to Toxic Air Procedures Rules

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Sincerely,



Therese Vick

North Carolina Health Sustainable Communities Campaign Coordinator

Deborah Kornegay  
POB 218  
Calypso, NC 28325  
October 1, 2013

Joelle Burleson  
Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

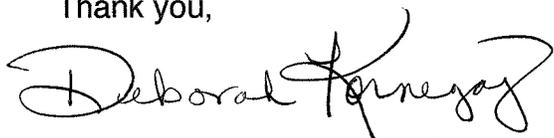
Dear Ms. Burleson:

I am writing in opposition to the changes in the state air toxics rule enacted by the 2012 General Assembly.

The citizens of North Carolina expect DENR to protect them from toxic air pollutants. Allowing technology-based (rather than health-based) limits for such toxics is not enough. Many of these chemicals have been identified by the International Agency for Research on Cancer as Group 1 Carcinogens. In addition, there are other health concerns that have far-reaching consequences. For example, a recently published study states "Long-term exposure to low to moderate arsenic levels was associated with cardiovascular disease incidence and mortality" (Annals of Internal Medicine 2013;159). In my county, heart disease is the leading cause of death (Duplin County 2012 Community Health Assessment). The results of a study published in Journal Watch (June 19, 2013) links prenatal exposure to "...lead, manganese, mercury, methylene chloride, and overall metals was associated with increased risk for autism spectrum disorders.."

Please do all you can to protect the citizens of North Carolina from toxic air pollutants that are harmful to human health.

Thank you,

A handwritten signature in black ink that reads "Deborah Kornegay". The signature is written in a cursive, flowing style.

Deborah Kornegay, RN, FNP(retired), MSN

NC Division of Air Quality

Air Toxics Public Hearing

September 19<sup>th</sup>, 2013

Comments by Rebecca Cheatham, Medical Advocates for Healthy Air

My name is Rebecca Cheatham. I am the Manager of Medical Advocates for Healthy Air, a program of Clean Air Carolina. Medical Advocates is a group of medical and health professionals committed to education and advocacy around the issues of air quality and health.

I am speaking today on behalf of our 400+ members who are concerned with current threats to our state's air quality. These professionals see first-hand the impacts poor air can have on health, and are alarmed at the proposed changes to Air Quality regulations in North Carolina.

If the DAQ will not evaluate emission of neighboring industry when issuing new permits, will raise output limits for facilities with vertical, unobstructed smokestacks, will not define "unacceptable risk" for pollutants nor require facilities to prove their emissions do not meet these undefined "unacceptable risks," will allow industrial boilers to burn chemically treated wood, we will have uncontrolled, unmonitored, and unmeasured amounts of toxic air pollutants released into the air. And with increased pollution, we can be sure there will be increased health effects.

Dr. Kotch already referred to Phillipe Grandjean's work, but I want to reiterate some of his key points. He points out that "the growing brain is extremely vulnerable during early development in the womb and during infancy. In the complex process of building a brain, the slightest disruption can cause incomplete or abnormal brain development that will likely be irreversible."

Currently we know that arsenic, mercury, and over 200 other hazardous air pollutants damage human neurological development. Why, then, would we KNOWINGLY allow more of these chemicals to be emitted into the air our children breathe? And these toxics don't just float off into the wind; Arsenic, for one, never degrades. And once it's in the air, it falls to the ground and the water, which we use on our crops and livestock, which we then eat.

Over the years, it has become clear that many of our daily chemicals are toxic to brain development. Take lead, for example. No one, nowadays, questions that lead is devastating to neurological development. Yet decades ago the lead and paint industries fought bitterly against regulations. Imagine if they had won?

In addition to my work with Medical Advocates, I am also the mother of two children: one has asthma, the other has neurological disabilities. I went to elementary, middle, high school and college in North Carolina. I have lived in Durham, Raleigh, Wilmington, Charlotte, Benson and Greensboro. I know and love our state, and I want my children to love it too, and not feel that it has failed to protect them. Right now we are counting on you.

William J. Blackley, MD  
Fellow American Academy of Family Practice  
105 Knollwood Drive  
Elkin, North Carolina 28621

19 September 2013

Re: Amendments to North Carolina's Air Toxic Program

Dear Members of the NC Department of Environment and Natural Resources and the Division of Air Quality,

Thank you for your consideration of my remarks. I have spent the last five years studying air pollution and its impact on health risks and health costs on humans.

Changes to North Carolina air quality rules should improve health quality and reduce costs for North Carolina citizens rather than worsen health risks and cost.

Exempting pollutants like arsenic make no public health sense at all since increased levels of arsenic in North Carolina soil, water and air would inevitably increase the risks known to be associated with increased arsenic levels in humans.

- Arsenic can cause serious effects in neurologic (including dementia at low doses), respiratory, hematologic, cardiovascular, gastrointestinal and other systems.
- Arsenic is a carcinogen in multiple organ systems including but not limited to lung, bladder, skin, etc.

Why would exempting arsenic in North Carolina be particularly worrisome?

- Tuber crops like sweet potatoes can take up arsenic. How would an increase level of arsenic in our sweet potatoes affect our farming industry and Gerber Baby Foods? Our children could be exposed to more arsenic.
- Poultry farmers can use arsenic in chicken ostensibly as a treatment, a growth stimulator and to pink up the meat. Growers

can produce a lot more chickens if they feed them arsenic but the chicken will contain arsenic in the portions eaten by citizens. This is a bad result.

- Poultry litter that contains arsenic is frequently spread on the soil and this is eventually leached into our streams and our fish contaminated.
- Biomass incinerators emit arsenic when they burn arsenic treated wood or chicken litter laced with arsenic from the feed. Those toxic emissions are spread all over the county side and spare no citizens.
- All citizens are at increased risk if arsenic is exempted.

It makes good sense take into consideration multiple pollution sources in a given area when setting permits for new industry. Why? It is the combination of emissions that an athlete on the field, a child playing outside or an old person out for a walk will breathe.

- Multiple toxic emissions come from smokestacks, including but not limited to dioxins, fine particulate matter, arsenic, furans, nanoparticles, nitrogen oxide, etc.
- These toxic chemicals can be cumulative, for example, dioxins, once ingested, can never be eliminated from a male. They can be eliminated from a female . . . when the female is pregnant and the dioxins are passed on to the fetus at six times the level in the mother.
- Any level of dioxins, including background levels, increase the risk of cancer in humans. Dioxins also increase the risk of neurologic problems in children, endometriosis, polycystic ovary disease, diabetes mellitus, hyper and hypothyroidism, cardiovascular disease, etc.
- Nanoparticles and particulate matter emitted from smokestacks cause a huge range of serious medical problems with the cardiovascular and pulmonary systems of humans.
- Having clean air (that does not increase disease risk and health costs) should be a right of North Carolina citizens and not abandoned to simply to reduce the cost of industry.

What sense does it make to increase the threshold amounts of emissions from tall smokestacks? The emissions may blow away from the

immediate vicinity but some North Carolina family is going to be down wind of the toxic emissions.

If any of this loosening of regulations relates to hydraulic fracturing it is my judgment based on scientific studies that this would add an entirely new risk to our citizens, especially in an increased risk to fetuses and newborn children within a 1.5 mile radius of a hydraulic fracturing gas production site and an increased risk to cancer to all citizens living within a half mile of a hydraulic fracturing gas production site.

My comments are just the tip of the iceberg of increased medical risks and costs associated with reducing air emission regulations. I hope you will not permit this to happen.

At present I am recovering from back surgery and cannot attend the 19 September hearing.

I hope you would schedule a full public hearing for medical persons and epidemiologists to address these issues before making a change in policy that would relax standards and damage citizens.

I would appreciate a response to my concerns from the Air Quality Committee.

Sincerely,

William J. Blackley, MD  
Fellow American Academy of Family Practice

152 Edwina Kornegay RD.  
Mt. Olive NC 28365  
October 8, 2013

Joelle Burleson  
Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

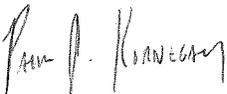
Dear Ms. Burleson:

I am writing to oppose the changes enacted by the 2012 General Assembly to the state air toxics rules.

Protection of the public health should be the number one priority of DENR. Allowing technology-based (rather than health-based) limits for chemicals that are toxic to human health is not enough. Many of these chemicals have been classified as Group 1 Carcinogens by the International Agency for Research on Cancer.

Please do all you can to protect the citizens of North Carolina from toxic air pollutants.

Thank you,

  
Paul R. Kornegay

October 10, 2013

Joelle Burleson  
Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

Dear Ms. Burleson:

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Protection of the public health should be the number one priority of DENR. Allowing technology-based (rather than health-based) limits for chemicals that are toxic to human health is not enough. Many of these chemicals have been classified as Group 1 Carcinogens by the International Agency for Research on Cancer.

Please do all you can to protect the citizens of North Carolina from toxic air pollutants.

Thank you,

  
Chad Kornegay

Joelle Burleson  
Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

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Please do all you can to protect the citizens of North Carolina from toxic air pollutants.

Thank you,

*Kelly Kongas*

*10-8-13*

Joelle Burleson  
Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

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Please do all you can to protect the citizens of North Carolina from toxic air pollutants.

Thank you,

*Cindy Strickland*  
10-8-13

POB 373  
Calypto, NC 28325  
October 8, 2013

Joelle Burleson  
Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

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Please do all you can to protect the citizens of North Carolina from toxic air pollutants.

Thank you,

*Hazel Kornegay*  
Hazel Kornegay

DOB 218  
Calypso, NC 28325  
October 8, 2013

Joelle Burleson  
Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

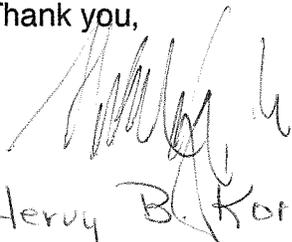
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Please do all you can to protect the citizens of North Carolina from toxic air pollutants.

Thank you,



Henry B. Kornegay Sr., M.D.

Joelle Burleson  
Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

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Please do all you can to protect the citizens of North Carolina from toxic air pollutants.

Thank you,

*Eva R. Hill*  
*P O Box 959*  
*Mount Olive, NC 28365*

**From:** Delano R Hill [delanorhill@att.net]  
**Sent:** Tuesday, September 24, 2013 9:35 AM  
**To:** Burlison, Joelle  
**Subject:** Burning Poultry Litter  
**Attachments:** image001.jpg; image004.jpg

Duplin County has more than sufficient lung damaging materials in the air without burning poultry litter. Please do not allow the burning of poultry litter in Duplin County. Future generations will suffer. Remember, just because you cannot see the damaging particles, does not indicate they are not in the air. There is sufficient evidence and research to not allow the burning of poultry litter.

*Delano*

Delano R. Hill, CLU, ChFC  
PO Box 959  
Mount Olive, NC 28365  
919-658-3969 (h)  
919-222-4015 (c)



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**"One's financial future is limited by his or her limited planning" (DRH)**

***"Anyone who dies without life insurance should have to come back to see the mess they've created." (Will Rogers)***

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**From:** Delano R Hill [delanorhill@att.net]  
**Sent:** Tuesday, September 24, 2013 10:32 AM  
**To:** Newland, Brad  
**Cc:** Burlison, Joelle  
**Subject:** Burning Poultry Litter  
**Attachments:** image001.jpg; image003.jpg

Exempting facilities from state air toxics rules emissions create unacceptable health risks. This exemption demonstrates another method of introducing damaging and hazardous air pollutants and is a poor policy for our state and Duplin County, where I live. Studies have proven that such facilities as now proposed for Duplin County to burn Poultry Litter and would create emissions that are unsafe now and for future generations. You, as directors of the state Division of Air Quality, have the sworn duty to **protect** our air quality. Please prevent these facilities from burning Poultry Litter in our state.

*Delano Hill*

Delano R. Hill, CLU, ChFC  
PO Box 959  
Mount Olive, NC 28365  
919-658-3969 (h)  
919-222-4015 (c)



**From:** Delano R Hill [delanorhill@att.net]  
**Sent:** Tuesday, September 24, 2013 10:39 AM  
**To:** Burlison, Joelle  
**Subject:** burning poultry litter  
**Attachments:** image001.jpg; image004.jpg

Exempting facilities from state air toxics rules emissions create unacceptable health risks. This exemption only demonstrates another method of introducing damaging and hazardous air pollutants and is a poor policy for our state and Duplin County, where I live.

Studies have proven that such facilities as now proposed for Duplin County to burn Poultry Litter would create emissions that are unsafe now and for future generations.

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Sincerely,

*Delano*

Delano R. Hill, CLU, ChFC  
PO Box 959  
Mount Olive, NC 28365  
919-658-3969 (h)  
919-222-4015 (c)



[www.tfrinvest.com](http://www.tfrinvest.com)

**"One's financial future is limited by his or her limited planning" (DRH)**

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Joelle Burleson  
Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

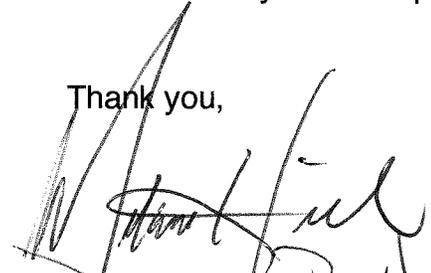
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Please do all you can to protect the citizens of North Carolina from toxic air pollutants.

Thank you,

  
DELANO R HILL  
PO BOX 959  
MOUNT OLIVE, NC  
28365

---

**From:** Greco, Chuck [Chuck.Greco@mecklenburgcountync.gov]  
**Sent:** Monday, October 14, 2013 11:49 AM  
**To:** Burleson, Joelle  
**Cc:** Abraczinskas, Michael; Rhodes, Leslie; Rayfield, Jason  
**Subject:** Comments on Proposed Toxics Rules

Joelle,

Please consider the following recommendations and comments regarding proposed revisions to the State toxics rules. Email or call me at 704-336-5587 if you have any questions or wish to discuss.

1. 1. Expand the exemption for gas fired combustion sources [2Q .0702(a)(25)], to include sources that burn liquid fuel during periods of gas curtailment, supply interruptions, startups or periodic testing. This is consistent with the definition contained in 40 CFR 63 Subpart JJJJJ.

Example: As currently proposed, the rules would not exempt a 35mmBTU/hr natural gas boiler with No. 2 fuel oil back-up. The boiler would not qualify for either of the proposed exemptions from the state toxics rules:

- a. 2Q .0702(a)(27): exempts sources subject to 40 CFR 61, 40 CFR 63, or a case-by-case MACT permit; the boiler is not subject to 40 CFR 63, or
- b. 2Q .0702(a)(25): exempts natural gas and propane combustion sources base on total aggregate heat input and there being no other sources of benzene emissions; the boiler does not exclusively fire natural gas

2. 2. Clarify which sources must be included in the aggregate mmBTU/hr calculation in 2Q .0702(a)(25).

Should all combustion sources at a facility be included, even those exempt under 2Q .0702(a)(18), or only new combustion sources permitted on or after July 10, 2010?;

3. 3. Clarify which sources must be included in calculating the aggregate horsepower in 2Q .0702(a)(26).

Should all emergency engines be included, even those exempt under 2Q .0702(a)(18) or only new emergency engines permitted on or after July10, 2010?

Thanks for your consideration of these comments.

Chuck Greco  
Air Quality Supervisor  
Mecklenburg County Air Quality  
(704) 336-5587  
[Chuck.Greco@MecklenburgCountyNC.gov](mailto:Chuck.Greco@MecklenburgCountyNC.gov)  
Chuck Greco

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**From:** Kate Dunnagan [katedunnagan@gmail.com]  
**Sent:** Monday, October 14, 2013 12:15 PM  
**To:** Burleson, Joelle  
**Subject:** request public hearing

Hello Joelle,

I am writing you today to submit a public comment regarding the revisions to North Carolina's health-based air toxics regulations. Permitting more air pollution in this state would be detrimental to the citizens of today and tomorrow. I request that NC DENR hold more public hearings regarding these possible regulatory changes, in locations across the state that will be more geographically accessible, such as Charlotte, Asheville, Winston-Salem, Wilmington, Greenville, etc. Please give North Carolinians a fair chance to participate democratically on this public health issue.

Sincerely

Kate Dunnagan

Email: [katedunnagan@gmail.com](mailto:katedunnagan@gmail.com)

Development Director

Blue Ridge Environmental Defense League

<http://www.bredl.org/>

1208 Pamlico Dr.

Greensboro, NC 27408

phone: (919) 417-4939

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**From:** Steve Shore [steve@ncpeds.org]  
**Sent:** Monday, October 14, 2013 1:46 PM  
**To:** Burleson, Joelle  
**Subject:** Comments on Air Toxics Rules

October 14, 2013

Via e-mail: [joelle.burleson@ncdenr.gov](mailto:joelle.burleson@ncdenr.gov)

Ms. Joelle Burleson  
North Carolina Division of Air Quality

Re: Comments regarding proposed amendments to the Toxic Air rules

Dear Ms. Burleson:

As President of the North Carolina Pediatric Society (“NCPS”), I am writing to comment on the Division of Air Quality’s proposed changes to existing air quality legislation. On behalf of our 1,900 pediatrician members, I ask that the Division of Air Quality (“DAQ”) reconsider the proposal to raise output limits for facilities with vertical, unobstructed smokestacks. I also ask the DAQ to create definitions of “unacceptable risks” for pollutants and require facilities to prove that their emissions do not meet these “unacceptable risks.” Further, the NCPS opposes the plan to allow industrial boilers to burn chemically treated wood.

Former Republican Gov. Jim Martin signed into law an air toxics program in 1989. State leaders gave the program a clear and simple purpose: prohibit industries from emitting levels of toxic pollution in the air beyond their property lines. As designed in 1989, the North Carolina Air Toxics Program: (a) ensured facilities with close proximity to neighborhoods and schools were not harming their residents; and (b) protected the public from “hot spots” that have been shown to occur, even when industries were supposedly implementing clean air standards. The program worked, from 1998 to 2010, as reported toxic air emissions were down by more than one-third. In 2012 the Air Toxics program was dismantled, as large numbers of permitted facilities were made exempt from the program.

As the Department of Air Quality plans to implement 2012’s revised Air Toxics law, the NCPS fears these changes do not take into account the adverse health impact on many North Carolina communities. With science conclusively linking exposure to toxic air pollution to cradle-to-grave health problems—including fetal neurological defects, pediatric and adult respiratory disease, cardiac disease, cancer, and premature death—now is *not* the time to further erode the air toxics program.

Children are more vulnerable to air pollution than adults for a number of reasons: children breathe faster, they are more physically active, and they spend more time outside. Eighty percent (80%) of lung tissue is formed between infancy and adolescence, and developing lung tissue is *extremely susceptible* to injury from air pollutants. Air pollution has been linked not only to exacerbating asthma, but also to *causing* it. The American Lung Association estimates there are more than 195,000 children in North Carolina who have asthma, the *leading cause of school absenteeism* and the *most common chronic disease in our children*. Treating asthma is costly to families, schools, and the health care system. And the cost asthmatic children pay, in terms of lost childhood experiences, cannot be quantified.

Equally concerning is the neurological damage linked to toxic air pollution. Prenatal exposure to air toxics has been tied to developmental disorders including autism spectrum disorders (ASD)<sup>1</sup> and attention deficit-hyperactivity disorders (ADHD)<sup>1</sup>. These developmental disabilities are devastating to families, and expensive and highly burdensome for schools and the medical community. Childhood neurological disorders affect families across all socio-economic and educational levels.

Speaking for pediatricians across the state, I request that the Division of Air Quality refrain from further eroding the protective regulations already in place in North Carolina. The health and well-being of our children and our communities *depends on healthy air*.

Thank you for your consideration.

John W. Rusher, MD, President

NC Pediatric Society, 1100 Wake Forest Road, Suite 200, Raleigh, NC 27604 919/839-1156

<sup>1</sup> “Perinatal Air Pollutant Exposures and Autism Spectrum Disorder in the Children of Nurses’ Health Study II Participants,” Environmental Health Perspectives, June 2013.

Sent from the computer of:

Steve Shore, MSW, Executive Director  
NC Chapter AAP/NC Pediatric Society  
1100 Wake Forest Road, Suite 200  
Raleigh, NC 27604    voice 919-839-1156  
fax 919-839-1158    [www.ncpeds.org](http://www.ncpeds.org)

**From:** Dave Walsh [iamdavewalsh@gmail.com]  
**Sent:** Thursday, September 19, 2013 7:48 AM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program.

I am an asthmatic and with over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Dave Walsh  
6925 Valley Haven Dr.  
Charlotte, NC 28211

**From:** Bill Gupton [wmgupton@aol.com]  
**Sent:** Thursday, September 19, 2013 6:10 AM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program. With over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Bill Gupton  
6725 Morganford Rd.  
Charlotte, NC 28211

**From:** Elizabeth O'Nan [pace@mcdowell.main.nc.us]  
**Sent:** Wednesday, September 18, 2013 11:33 PM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program. With over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Elizabeth O'Nan  
396 Sargar Cove Road  
Marion, NC 28752

**From:** Julie Gros [jhg@carolina.rr.com]  
**Sent:** Wednesday, September 18, 2013 11:15 PM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program. With over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Julie Gros  
63 Macon Ave  
Ste B103  
Asheville, NC 28801

**From:** Muriel (mimi) Vollum, Ed.D [mimivollum@bellsouth.net]  
**Sent:** Wednesday, September 18, 2013 10:37 PM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program. With over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Muriel (mimi) Vollum, Ed.D  
3109 Selwyn Farms Lane  
Charlotte, NC 28209

**From:** Greg Shiffer [gregshiffer@yahoo.com]  
**Sent:** Wednesday, September 18, 2013 8:50 PM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program. With over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Greg Shiffer  
3012 polo view lane  
Matthews, NC 28105

**From:** Fred & Alice Stanback Jr. [stanbackf@aol.com]  
**Sent:** Wednesday, September 18, 2013 8:48 PM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program. With over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Fred & Alice Stanback Jr.  
507 W. Innes Street #270  
Salisbury, NC 28144

**From:** Jessica Schorr-Saxe [jsaxe@earthlink.net]  
**Sent:** Saturday, September 21, 2013 10:45 AM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program. With over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Jessica Schorr-Saxe  
2216 Dilworth Rd. W.  
Charlotte, NC 28203

**From:** Chris North [chris@ncwf.org]  
**Sent:** Friday, September 20, 2013 11:39 AM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program. With over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Chris North  
3301 Archdale Dr.  
Charlotte, NC 28210

**From:** Alicia Kaiser [aliciakaiser@hotmail.com]  
**Sent:** Tuesday, September 24, 2013 10:16 PM  
**To:** Burleson, Joelle  
**Subject:** Re: Amendments to the Toxic Air Procedures

I am writing to urge the NC Division of Air Quality to protect the public from harmful air pollution and not buckle to industry pressure by weakening our state's Air Toxics Program. With over 195,000 children in NC suffering with asthma, it's crucial to safeguard the air we breathe - not damage it.

Thank you for your consideration.

Alicia Kaiser  
8 Club St  
Asheville, NC 28801

**From:** Helen Livingston [livingston.helen@gmail.com]  
**Sent:** Sunday, October 13, 2013 1:09 PM  
**To:** Burleson, Joelle  
**Subject:** Additional hearings for air toxics regulation revisions

Dear Ms. Burleson,

Please extend the hearings time and the locations so that the areas most affected can learn about the potential revisions to air toxics regulations, which will negatively impact their health and wellbeing.

Please do not let pressure from industry keep DENR from their job of informing and protecting citizens about this very serious change to air quality regulations.

Sincerely,

Helen Livingston  
Laurinburg

**From:** Sam-Betty Tesh [wtesh@surry.net]  
**Sent:** Thursday, September 19, 2013 1:40 PM  
**To:** Burleson, Joelle  
**Subject:** Public Hearing on Air Quality Rules

Please, please do not let NC's DNER regulations be weakened by this governor or legislature. If anything, they should be strengthened! We do not trust big business to "do the right thing." They will only do the "profitable thing." Regulations keep them honest.

Sam and Betty Tesh  
326 Gramar Road  
State Road, NC 28676  
[wtesh@surry.net](mailto:wtesh@surry.net)

**From:** Kristen Dubay [Kldubay@hotmail.com]  
**Sent:** Thursday, September 19, 2013 2:11 PM  
**To:** Burleson, Joelle  
**Subject:** No weakening Air Toxics program!!

As a mother and concerned citizen, I am very worried about the proposed changes to the Air Toxics program which would weaken current pollution standards.

We eat food from North Carolina farms and my children play outside daily. Greater arsenic in the air ends up on our crops and then in our bodies, which is extremely harmful. Not too mention the air quality concerns for those with asthma.

I am greatly saddened the NC Division of Air QUALITY would even consider weakening regulations to allow more pollution.

Prayerfully and seriously consider your duty to protect the health of our families here in North Carolina.

Sincerely,  
Kristen Dubay

Kristen Dubay  
3017 Bexley Avenue  
Durham, NC 27707

**From:** Keely Wood [keely@bionaturae.com]  
**Sent:** Thursday, September 19, 2013 10:17 AM  
**To:** Burlison, Joelle  
**Cc:** Therese Vick  
**Subject:** Natural gas exploration and air quality

My 2 questions for DENR on air quality and the future of natural gas exploration, Fracking. Rules and regulations are currently being written on fracking. 150-500 ft is the recommended footage between a building and a drill pad.

1. Natural Gas Exploration and air testing.

Compressor stations have been documented to cause many environmental problems including air, water and noise pollution, plus soil contamination. The residents of Dish, TX started to have health problems after 11 compressor stations were built. When then Mayor Calvin Tillman couldn't get the Texas authorities to investigate why people in his town were getting sick, he hired a private environmental consultant to help him figure out what was going on. The air study showed extremely high levels of both carcinogens and neurotoxins. Ultimately the top toxicologist at the Texas Commission on Environmental Quality expressed concern that the presence of benzene, a potentially cancer-causing toxin detected near the compressors, could pose long-term health risks. In addition, Dish residents experienced ruptured ear drums, which came from the constant low frequency roar of the compressors. **Constant leaking emissions <http://www.youtube.com/watch?v=ulvj1MTK9c4> can be viewed thru our you tube. Will constant air testing be done on all compressors and drill wells when natural gas exploration begins?**

2. Natural Gas and a request for a Health Impact Assessment

One of the only documents that we were able to find that studied health impact was a health impact assessment done by Garfield County, CO at the request of the residents of Battlement Mesa, CO. [This assessment](#) concluded that air pollution will likely "be high enough to cause short-term and long-term disease, especially for residents living near wells. Health effects may include respiratory disease, neurological problems, birth defects and cancer." It goes on to say, "Natural gas development and production operations and the diesel engines used to support them have the potential to release many hydrocarbons, carbonyls, and other contaminants into the air. People can be exposed to these contaminants as they breathe ambient air in and outside of their homes. Some of these contaminants, such as benzene, diesel exhaust, and PM2.5, are human carcinogens. Others, such as carbonyls, alkanes, ground-level ozone, and 1,2,4- trimethylbenzene, can act as irritants of the eyes, skin, and respiratory tract or cause neurological effects. In addition, hydrocarbons, carbonyls, and nitrogen oxides serve as precursors for ground level ozone formation...In addition to the effects that each of these substances can produce by itself, there is also the possibility of complex health reactions occurring as a result of the interaction of multiple substances. The current state of the science is limited in ability to assess exposures to these complex mixtures of air toxics, especially, synergistic and antagonistic interactions at low levels. Preliminary studies that indicate complex mixtures can act additively or synergistically to increase effects on human health. For example, studies of healthy adults indicate that continuous exposure to sulfur dioxide or nitrogen dioxide increases ozone absorption. Studies of asthmatics suggest that ozone enhances response to allergen challenge. Other studies have reported injury to lungs with exposure to the combination of ozone and PM is larger than when exposed to either alone."

*As a resident of Lee County the hot bed of future gas exploration, a health Impact assessment needs to be done. Lee County is a poor county and health issue brought on by gas exploration will be ultimately paid by the state.*

Keely Wood

Lee County resident

Euro USA Trading Co. Inc/bionaturae & Jovial

Eastern & Central Sales Manager

919-708-5221

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[www.bionaturae.com](http://www.bionaturae.com)

**From:** Keely Wood [keely@bionaturae.com]  
**Sent:** Friday, September 20, 2013 9:52 AM  
**To:** Burleson, Joelle  
**Subject:** NC AIR QUALITY

Why would the state even consider decreasing the Air quality standards when Natural Gas Exploration is about to begin? Between the compressors, the tanker truck traffic ( 400-600 trucks per well), 24-30 days of drilling per well giving off methane & other pollutants, toxic fracking fluids in pools, our state needs to be hiring qualified people to protect the public.

Where is the common sense?

Keely Wood

Lee County resident

Euro USATrading Co.Inc/bionaturae & **Jovial**  
Eastern & Central Sales Manager  
919-708-5221

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Learn about our new Organic Olive oil

<http://youtu.be/PcBqiFjq3v0>

[www.bionaturae.com](http://www.bionaturae.com)

**From:** Matt Lamb [matt@smithgardnerinc.com]  
**Sent:** Tuesday, September 17, 2013 12:05 PM  
**To:** Burleson, Joelle  
**Cc:** joan@smithgardnerinc.com; Jeryl Covington; Stacey Smith  
**Subject:** Question regarding demonstration of compliance

Ms. Burleson:

Please include this email in the comments for the Sept. 19 meeting. I plan to attend.

According to the public hearing notice, The proposed rules would exempt most facilities from state air toxics rules if they **demonstrate compliance** with federal rules for controlling hazardous air pollutants. How then would a North Carolina facility demonstrate compliance with federal rules in order to exempt itself from the state air toxics rules? Title V permitted facilities submit annual compliance certifications that the provisions of the permit were met, but in cases of intermittent or non-compliance, are state air toxic rules triggered?

**Matt Lamb**  
Sr. Scientist

**SMITH + GARDNER**

14 N. Boylan Avenue  
Raleigh, NC 27603

**P (919) 828.0577**  
**F (919) 828.3899**  
**C (919) 801.3548**

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**From:** Matt Lamb [matt@smithgardnerinc.com]  
**Sent:** Wednesday, September 18, 2013 8:54 AM  
**To:** Burleson, Joelle  
**Cc:** joan@smithgardnerinc.com; 'Jeryl Covington'; 'Stacey Smith'  
**Subject:** RE: Question regarding demonstration of compliance

Ms. Burleson:

If I can append to my question below...

There are several regulated industries in North Carolina that are currently required to perform toxic air pollutant modeling, but are not required to comply with federal rules. Would these facilities still be required to comply with the air toxics rules as written?

**Matt Lamb**  
Sr. Scientist

**SMITH + GARDNER**

14 N. Boylan Avenue  
Raleigh, NC 27603

**P** (919) 828.0577  
**F** (919) 828.3899  
**C** (919) 801.3548

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**From:** Matt Lamb [<mailto:matt@smithgardnerinc.com>]  
**Sent:** Tuesday, September 17, 2013 12:05 PM  
**To:** [joelle.burleson@ncdenr.gov](mailto:joelle.burleson@ncdenr.gov)  
**Cc:** [joan@smithgardnerinc.com](mailto:joan@smithgardnerinc.com); Jeryl Covington; Stacey Smith  
**Subject:** Question regarding demonstration of compliance

Ms. Burleson:

Please include this email in the comments for the Sept. 19 meeting. I plan to attend.

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**Matt Lamb**  
Sr. Scientist

**SMITH + GARDNER**

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**F** (919) 828.3899  
**C** (919) 801.3548

Transcribed Comment by Noah Read

My name is Noah Read. I'm a Mason and I live in Alamance County. I too have mainly general comments. I've given up a day at work to come here and tell you why I am discouraged by the agency's new air quality priorities. The new priorities are supposed to lead to efficiency but efficient enforcement prioritizes protection, prevention and relationships with the whole community. Your agency does not create efficiency by advocating these responsibilities. Instead of leading, you let industry guide the regulatory process. Instead of leading, now the federal government sets our standards for our air quality, making their minimum standards our maximum standards. Instead of leading, you rely on citizens to form environmental neighborhood watches. Your agency claims to want to reduce regulatory burdens, but for me and my children and my neighbors, you are not reducing our burdens. You're passing the burdens for those who dispose their waste in our air to the men who breathe that air. If I want my neighbors to tolerate my waste, the least I would do is inform them of my activities and the risks involved. This is not a burden. This is a responsibility. I would not wait to see if they noticed or if regulators noticed before taking precautions. My burden should be my taxes paid for enforcement. So these days as my taxes go up and industry's goes down, please reduce my burden by taking full responsibility for regulation. Finally, you say you want to focus your resources where there's an issue, but this is an approach that leaves North Carolina vulnerable. By waiting to act, you're encouraging public risks for private gain. There are no acceptable risks if taken at other's expense. The legislature indiscriminately revoked state environmental protections. Are those dangers now deemed safe? I suggest not. Unacceptable risks does not become acceptable just by ignoring them. By coming here today, I'm taking a long-term approach and I encourage you to do the same. Thank you.

Transcribed comment by Jean Bryson

My name is Jean Bryson. I live in Sampson County. I'm a retired farmer and I still sell food wholesale, mostly to out-of-state subjects. One of the things I'm concerned about when you're talking about what we do in the air is you're also going to find out that this stuff makes it way to the ground. Some of the things that get in our soils leave the soils very, very slowly. It didn't fall from the ground, but one of the best examples of slowly I can give you is; there's too much lead in many of the soils in Sampson County that you can't grow carrots for baby food. This lead got in the soil in about 1950, 63 years ago. I asked the scientist from State College how long will be before it would probably be alright to grow carrots for baby food. The answer was, "I can't exactly tell you, but I can tell you this, no one living on the face of this earth as we speak, will live to see it". If a baby lives to be 80, we're talking about 143 years. So, we can really be talking about a long, long time that will have consequences of what we do today. Whatever we put in the air, most of it is going to come back down to the soil. We have to be careful what we do. It will affect our health and it will affect our food for many, many years to come. One of the things that you're talking about loosening up is arsenic. Please be aware that just very minute amounts of arsenic can affect a diabetic situation. If you think about the number of diabetics we have in North Carolina as we speak, the number of people who are borderline diabetics, and some of these people who are diabetics are in a situation where their diabetic situation is almost uncontrollable. When you put this arsenic in the air, what affect is it going to have on their life? Thank you.

Transcribed Comment by Julius Kerr

I am Julius Kerr, a retired and disabled veteran. I'm a native of Raleigh, North Carolina and I've lived here most of my life and in Alamance County. I'm a member of the Neighborhood Environment Watch and I speak for my members today, for myself and for my family. I am also a volunteer with Blue Ridge Environmental Defense League. I think we the people have the right to clean air. The air in my community is polluted by industry. There are several industries that need to be controlled. I have many serious health problems and I wonder if the pollution has helped to cause my condition or at least aggravate it. I have a hard time getting around but I am here today to speak up for our environmental rights. I promise you it wasn't easy to get here. I hope you will think about the burden it puts on folks like me just to get here to speak. I'm especially concerned for my children and for the citizens of Alamance County. Our two daughters, our four grandchildren, live here, and our first great-grandchild will be born next month in Alamance County. I represent myself today but I also speak for those who could not be here and we will be sending you written comments and photos of many of the concerned citizens who are asking the same questions. Please do not pollute the air. Thank you for allowing me to speak.

Transcribed Comment by Beverly Kerr

Hello. I'm Beverly Kerr, member of Neighborhood Environment Watch in Alamance County. I'm also a member of the NAACP and AARP and several other local organizations. I'm also an employee of Blue Ridge Environmental Defense League. I know that budget cuts, less staff and more work for already overworked staff make it hard to get things done to protect the environment and North Carolina citizens. I also have heard that polluters are now considered valued customers and public health concerns are taking a back seat in North Carolina. I'm disappointed. I'm embarrassed about this and maybe you are too. I want to tell you how this is hitting me personally. Recently in Alamance County, I requested a public hearing along with quite a few other folks regarding New South Lumber in Graham. This polluting industry is near my home and my childcare business. Our request for a public hearing was denied. We lost the opportunity to give this disturbing issue the attention it deserves. I'm certain people do not realize that industries are allowed to increase their toxic air emissions. I call on you to make it a big part of your work to alert the public and give them the chance to express their concerns and ask their questions. Don't deny affected communities a public hearing when dangerous air emissions are involved. Don't let industry talk you into downplaying real hazards. You know industry can improve their pollution control systems, increase their stack heights, and you can place limits on their operations to make it happen. You know? I feel so betrayed when I found out that my other polluting neighbor, South Atlantic Galvanizing in Graham, was secretly meeting with Department of Air Quality and making plans to withhold their air emissions information, information that should be made available to the public. Why are you meeting with industry and discussing ways around toxic air regulations? Why aren't you protecting the children and the elderly? Consider the poor and the minority communities who suffer so much already from dirty industry. Please put people over pollution. Thank you.

Transcribed Comment by Myra Blake

Good afternoon. My name is Myra Blake and I'm speaking on behalf of Southern Environmental Law Center. I'm here today to talk about the agency's proposed changes that would weaken the air toxics program. The air toxics program was established in 1990 for the sole purpose of protecting public health. The state program fills gaps left by the federal hazardous air pollution program. In the North Carolina Division of Air Quality's own words, federal programs are not intended to comprehensively address all air toxics emissions, but were instead designed in anticipation that the state and local air toxics programs would address local issues and federal program limitations. The air toxics program complements the federal program in two key respects. First, while the federal program focuses on technology-based standards, the state program institutes health-based standards to ensure that levels of pollution in the ambient air are safe. The state program is unique in that it is the only program focused on limiting public exposure to air toxics in North Carolina, even when toxics are generated by well controlled facilities. Second, the air toxics program covers pollutants that are not covered by the federal program, but are pollutants of concern here in North Carolina. These pollutants include ammonia, bromine, hydrogen sulfite, and nitric acid which can cause acute and chronic health effects. The air toxics program is the only source of protection against emissions of these air pollutants. The air toxics program fulfills these requirements by requiring polluters to model their emissions to show that they do not exceed health-based standards. In the summer of 2012, the North Carolina legislature began to take bricks out of the foundation of the air toxics program. In response to pressure from a handful of corporations, the state passed legislation would exempt some of the largest polluters from the program. It also shifts the burden of modeling emissions from polluters to the state agency, which is already strapped for time and resources. The agency can require a facility to curb its emissions if it finds that the facility presents unacceptable risks to human health, but this term is not defined and the determination is made behind closed doors. Now the agency has proposed a number of additional changes to further cripple the air toxics program and has been shirking its duty to stand up to polluters and properly implement the existing program. First, the agency proposes to further relax the thresholds for some of the largest emitters. What this means is that these facilities would be able to emit more toxics without the agency even checking to see if this pollution might exceed the health-based standards. Importantly, the agency ignores the possibility that the facilities might cause a problem in combination with other facilities. The regulations clearly state that if a toxics standard is exceeded because of emissions of two or more facilities, and human health may be adversely affected, then the agency shall require the facilities to apply additional controls or to otherwise reduce emissions. The agency has been evading this requirement for years and instead it is as if each individual polluter is the only pollution source in the state. The agency needs to address this area head on instead of compounding the oversight by making changes that don't account for combined emissions. Second, the agency proposes wholesale exemptions for groups of polluters including boilers that burn chemically treated and painted wood, certain natural gas boilers and emergency engines. It is unwise and unnecessary to exempt these

facilities from public health protections without making any site-specific determinations. Finally, the agency does not take into account multiple exposure pathways and instead limits its consideration to the risk of inhalation, but inhalation is not the primary source of exposure for many pollutants, such as, mercury and arsenic. The agency should not make sweeping changes to the air toxics program without fully considering the impacts that toxics can have on people's health. In the face of legislative efforts to weaken the air toxics program, you'd expect the state agency charged with protecting public health, to take action to control the damage and strengthen existing protections, but the Division of Air Quality has done just the opposite here. We therefore respectfully request that the Environmental Management Commission disapprove the proposed changes. Thank you for your time.

Transcribed Comment by Terry Taylor

My name is Terry Taylor and I am a member of the Medical Advocates for Healthy Air. I'm a registered nurse. I've been working in emergency rooms off and on for thirty years. I'm retired now. The last place I worked was in the mountains of North Carolina. I'm particularly concerned with the DAQ's intention not to take into consideration neighboring facilities emitting toxic pollution when evaluating new emission permits. The Asheville area, particularly Buncombe, Rutherford and Haywood counties, has long been a region of major air pollution including toxic emissions from the Blue Ridge Paper Factory, Duke Power's coal burning electric plant in Arden, and the Blue Ridge Metals Company. Some of our region's schools rank in the top 1% of schools most exposed to air toxics. It is incredible to me that new industry could come to the region potentially adding unknown, unmeasured air toxics to our current burden. North Canton Elementary is a school in Canton. They are in the first percentile and that means only 251 out of 127,000 have worse air quality. The chemicals most responsible for the toxicity outside this school are sulfuric acid, acetylaldehyde, magnesium, chlorine dioxide and formaldehyde. Folks like me are the ones responsible working overtime and double shifts to take care of people impacted by air toxics. Illnesses from air pollution and air toxics are already a significant burden to our citizens. I beg you to not increase the load of these people, your neighbors. I so wish you could see the faces of so many people coming into ERs over the years more and more, it's more common, wheezing horribly, tortured looks in their eyes. Many of them have to be in abated. Many of them die anyway. To look in the faces of a child, of an adult, they come in wheezing and they sound like this (wheezing noises). It's horrible and it's increasing and I beg you to do something about it.

Transcribed Comment by Leslie Rupracht

Good afternoon. My name is Leslie Rupracht and I'd like to speak today as someone personally affected by air quality issues in North Carolina. First, I would like to say that I recently left an eight year job in banking and took a huge salary cut to join an environmental non-profit organization whose mission I truly believe in because they are here to protect North Carolina's air and the people who breathe it. I have lived in Charlotte for nearly seventeen years. I moved here from Syracuse, one of the cloudiest cities in the U.S. I wanted to live where the climate is temperate and there would be more year round days with weather ideal for outdoor activities especially rollerblading, walking and hiking. These activities were important forms of exercise for me. I enjoyed these activities regularly while in Syracuse which is hard to imagine in a city that has 200 inches of snow per year and a lot more rain than Charlotte. It seemed an obvious choice to live in Charlotte and to be able to continue to engage in an active lifestyle. However, twenty years ago, I was diagnosed with fibromyalgia and chronic fatigue well before most people ever heard of these auto-immune illnesses. It is critical for those with fibromyalgia to get regular exercise to decrease stress and the adverse effects of a sedentary lifestyle. Let me state that in my seventeen years in North Carolina I've had precious few opportunities to rollerblade and hike due to poor air quality exasperating my fatigue and malaise causing difficulty breathing when engaging in outdoor activities, especially in the summer. Even walking from parking deck to office over the last eight years had become an extreme labor during the warmer months. As a result, my symptoms have worsened over the years. I ask myself if I, as a forty-five year old woman with no asthma, have difficulty breathing while trying to walk and exercise outside, how difficult must it be for North Carolina's children with asthma to participate in sports or even gym class without great difficulty? And I ask myself how difficult must it be for adults with COPD to breathe in Charlotte and other parts of our state impacted by air pollution? These questions are not rhetorical and must be addressed by the DAQ before regulations are changed that will make it even more difficult to breathe in North Carolina. Please put health first and put North Carolinians first. Thank you.

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CHAPTER VI  
INDEX OF ATTACHMENTS

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**ENVIRONMENTAL MANAGEMENT COMMISSION  
FISCAL NOTE FOR PROPOSED AMENDMENTS TO AIR TOXICS RULES**

<b>Rule Amendments:</b>	15A NCAC 02D .1104 Toxic Air Pollutant Guidelines 15A NCAC 02Q .0701 Applicability 15A NCAC 02Q .0702 Exemptions 15A NCAC 02Q .0703 Definitions 15A NCAC 02Q .0704 New Facilities 15A NCAC 02Q .0706 Modifications 15A NCAC 02Q .0709 Demonstrations 15A NCAC 02Q .0711 Emission Rates Requiring a Permit
<b>Rule Repeals:</b>	15A NCAC 02Q .0705 Existing Facilities and SIC Calls 15A NCAC 02Q .0714 Wastewater Treatment Systems at Pulp and Paper Mills
<b>Rule Topic:</b>	Amendments to Air Toxics Rules to Address S.L. 2012-91 (519)
<b>DENR Division:</b>	Division of Air Quality
<b>Agency Contact:</b>	Joelle Burleson, Rule Development Branch Supervisor Division of Air Quality (DAQ) (919) 707-8720 <a href="mailto:Joelle.Burleson@ncdenr.gov">Joelle.Burleson@ncdenr.gov</a>
<b>Analyst:</b>	Patrick Knowlson, DAQ (919) 707-8711 <a href="mailto:Patrick.Knowlson@ncdenr.gov">Patrick.Knowlson@ncdenr.gov</a>
<b>Impact Summary:</b>	State government: Yes Local government: Yes Substantial impact: No
<b>Statutory Authority:</b>	G.S. 143-215.3(a)(1); 143-215.107(a)(1), (3), (4), (5); 143-215.108; 143B-282; S.L. 2012-91.
<b>Necessity:</b>	To revise the North Carolina Air Toxics Rules to Address S.L. 2012-91 requirements and resultant recommendations.

## **I. 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. Section 1 of the law exempts sources subject to federal maximum achievable control technology (MACT), generally available control technology (GACT) or case-by-case emission limits for toxic air

pollutants established under Section 112(j) of the Clean Air Act, and codifies the Director's Call provision of the state air toxics rules. Section 2 of the law requires rule amendments consistent with Section 1.

Section 3 of the Session Law requires the DAQ to review the existing air toxics rules and make recommendations 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. These recommendations were provided in a report to the Environmental Review Commission (ERC) on December 1, 2012. The report included six recommendations based on a review conducted in consultation with interested parties:

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 unobstructed and vertically oriented,
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,
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,
4. Do not retain the Standard Industrial Classification (SIC) Call rule,
5. Clarify the use of actual rate of emissions in the air toxics rules, and
6. Remove the term "unadulterated wood" from the air toxics rules.

Section 4 of the Session Law requires the DAQ to report to the ERC on implementation of the Session Law including an analysis of air toxic emission changes and a summary of results of the Division's analysis of air quality impacts. The reports are due to the ERC each December 1<sup>st</sup> of 2012, 2013, and 2014. The first report, *Implementation of Session Law 2012-91*, has been provided to the ERC and can be found on DAQ's website at: [http://www.ncair.org/rules/toxics/Air\\_Toxics\\_Report\\_Section4.pdf](http://www.ncair.org/rules/toxics/Air_Toxics_Report_Section4.pdf).

Rules in Section 15A 02Q .0700 will need to be revised to incorporate the statutory exemption and the Section 3 report recommendations. Other rules that reference or are related to these provisions may also need to be revised to reflect the changes. See proposed rule amendments in Appendix A.

Table 1, Fiscal Impact Summary, estimates fiscal impacts, mostly in the form of regulatory relief that results from avoided cost to privately owned facilities and federal government facilities due to these rule amendments. The regulatory relief is in the form of a partial reduction in fees from consulting firms to collect data and perform a modeling demonstration for their exempt sources. The same regulatory relief may also affect state or local government facilities. There are additional costs for the Division of Air Quality representing an increase in staff time due to additional modeling demonstrations to determine unnecessary risk to public health. This cost will be only partially offset by a decrease in staff time from a reduction in modeling effort for the natural gas and propane fired boilers, emergency generators, and facilities with non-obstructed, vertically oriented emission release points.

**Table 1. Fiscal Impact Summary**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government Impact</b>	(\$7,500)	(\$3,000)	(\$4,500)	(\$6,000)	(\$4,500)
<i>State Facility Impact</i>	(\$7,500)	\$0	(\$1,500)	(\$3,000)	(\$1,500)
<i>Division of Air Quality</i>	\$6,400	\$6,400	\$6,400	\$6,400	\$6,400
<b>State Government Impact</b>	(\$1,100)	\$6,400	\$4,900	\$3,400	\$4,900
<b>Private &amp; Federal Impact</b>	(\$132,000)	(\$144,000)	(\$141,000)	(\$138,000)	(\$141,000)
<b>Total Impact (absolute value)</b>	\$153,400	\$153,400	\$153,400	\$153,400	\$153,400

## II. Background

The state air toxics rules administered by the 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.

The rules set Acceptable Ambient Level (AAL), where "acceptable" means "below the concentration that would produce adverse health effects in sensitive subgroups of the general population."<sup>1</sup> The rules require the regulated community to reduce emissions of toxic air pollutants below those levels that are predicted to exceed the AAL beyond their property line. The DAQ air toxics program uses computer-based air dispersion models to compare the AAL to the maximum ambient air concentration due to toxic air pollutant emissions.

Currently, the Secretary of the Department of Environment and Natural Resources maintains a scientific body of experts known as the Science Advisory Board (SAB),<sup>2</sup> which is responsible for continually reviewing the scientific information that forms the basis of each AAL. Determining what exposure level to a toxic air pollutant is acceptable is challenging. First, health assessment professionals carefully study what is known about a pollutant to determine if it is a carcinogen or not. Next, they identify the lowest level known to harm people and then possibly apply several safety factors that 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.

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

<sup>1</sup> North Carolina Academy of Sciences (1986). Report and Recommendations of the Air Toxics Panel of the North Carolina Academy of Sciences. <http://daq.state.nc.us/toxics/riskintro.pdf>

<sup>2</sup> The SAB 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.

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) and Generally Available Control Technology (GACT) are based on emission levels that are already being achieved by the better-controlled and lower-emitting sources in an industry. 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.

### **III. Necessity for Rule Change**

There are three parts to the necessity of these rule changes:

#### **1. Section 1 of Session Law 2012-91**

In 2012, the General Assembly amended the statutes that authorize the state air toxics rules. 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 MACT or GACT.
- 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.

Often times, installing the technologies required under the federal rules allows a facility to also meet the state health-based standard, which evaluates predicted ambient concentrations at a facility's property boundaries, so no further action is required. If the predicted concentrations however still exceed the public health guideline at the property boundary, the state program works with the facility to identify other measures the facility can implement to lower the level of toxic air pollutants.

The Session Law, however, requires the 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 the 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. The DAQ makes this determination by performing demonstration modeling.

The Session Law also requires the DAQ to review all permit applications for new sources or for modifications to existing facilities in which there are toxics emissions increases to ensure the protection of public health. This is performed through dispersion modeling.

## **2. Section 3 of Session Law 2012-91**

Section 3 requires the 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 mandated review resulted in a set of six additional recommendations contained in the December 2012 report. See a detailed description of these changes and their purpose in the section below.

## **3. Correction of the Asbestos AAL and TPER**

A calculation error was recently found in the original determination of the acceptable ambient level (AAL) for asbestos made in the early 1990s. In September 2011, the SAB members observed a mathematical mistake during a recent review of AAL documentation that led to an error of five orders of magnitude (by not using the total average deaths per 100,000). The original AAL value of  $2.8 \times 10^{-11}$  fibers per milliliter (f/ml) should be corrected to  $2.8 \times 10^{-6}$  f/mL. SAB members noted the corrected AAL value is in the same order of magnitude and therefore much closer to both the U.S. EPA ( $4 \times 10^{-6}$  f/ml) and the California Office of Health Hazard Assessment ( $6.7 \times 10^{-6}$  f/ml) values than the original AAL in the North Carolina rules.

The proposed correction would not affect health standards since a relaxation in the AAL would still ensure the presence of asbestos is below levels that would be damaging to health.

This change involves amending two rules: 15A NCAC 02D .1104, Toxic Air Pollutant Guidelines and 02Q .0711, The Emission Rates Requiring a Permit (also referred to as the “toxics permit emission rate” - TPER).

## **IV. DAQ Recommendations**

Upon the enactment of S.L. 2012-91, the 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 the 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, the 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 the 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, the 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, the 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 the 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, the DAQ received 18 written comments.

After carefully considering all of the input received since S.L. 2012-91 became law, the 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 the DAQ's 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 greater than 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 smoke stack. The 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 existing 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 the DAQ does not change the AAL; the health-based standard would remain the same. The DAQ estimates that at a minimum, one-third of all facilities subject to the air toxics rules could use this alternative set of TPERs. The DAQ anticipates that use of these alternative 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, the 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, the 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, DAQ considered how USEPA has treated natural gas and propane fired boilers in two federal air toxics rules. Neither the GACT rule for industrial and institutional boilers nor the 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.

**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 for emergency engines and 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, the 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.

#### **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. The 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 final report which contains the recommendations and written comments is titled *Review of the North Carolina Air Toxics Rules* and can be found on the DAQ's website at [http://www.ncair.org/rules/toxics/Air\\_Toxics\\_Report\\_Section3.pdf](http://www.ncair.org/rules/toxics/Air_Toxics_Report_Section3.pdf).

### **V. Proposed Rule Changes**

The DAQ initiated 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. A summary of the rules that are proposed to be amended or repealed as follows:

**Table 2: Summary of Rule Changes Pursuant to S.L. 2012-91**

<b>Rule Change</b>	<b>Session Law 2012-91</b>	<b>Reason</b>
<b>15A NCAC 02Q .0701, Applicability</b>		
Delete (a)(2)	Section 1	Repeal of 02Q .0705.
Delete (b)	Section 1	Most combustion sources are MACT or GACT which S.L. removed applicability to air toxics.
Delete (c)	Section 1	The applicability language for MACTs is moved to exemptions under 02Q .0702.
<b>15A NCAC 02Q .0702, Exemptions</b>		
Amend (a)(18)	Section 1	Reporting to EMC language removed since air toxic rules would not apply to most combustion sources.
Add (a)(25)	Section 3, Recommendation 2	Exempt boilers less than 450 million mmbtu/hr would be below benzene TPER.
Add (a)(26)	Section 3, Recommendation 3	Exempt emergency engines less than 4843 HP would be below formaldehyde TPER.
Add (a)(27)	Section 1	Add G.S. 143-215.107(a)(5) exemption.
<b>15A NCAC 02Q .0703, Definitions</b>		
Amend (6)	Section 3, Recommendation 6	Remove “unadulterated” since distinction between wood types is not needed.
Delete (23)	Section 3, Recommendation 6	Remove “unadulterated wood” definition since distinction between wood types is not needed.
<b>15A NCAC 02Q .0704, New Facilities</b>		
Delete (b)(2)	Section 1	Air toxics rules do not apply to MACT or GACT unless unacceptable risk.
Delete (b)(3)	Section 3, Recommendation 4	Removal of SIC call.
Delete existing (c)	Section 1	Repeal of 02Q .0705.
Add new (c)	NA	Provide clarity for when a permit is required.
Add (d)	Section 1	Specify what sources are included in toxics evaluation.
<b>15A NCAC 02Q .0705, Existing Facilities And SIC Calls</b>		
Repeal rule	Section 1 and Section 3, Recommendation 4	Last MACT or GACT permit application requirements not needed due to S.L. SIC call language also not needed.
<b>15A NCAC 02Q .0706, Modifications</b>		
Delete (a)(2)	Section 1	Air toxics rules do not apply to MACT or GACT unless unacceptable risk.
Delete (a)(3)	Section 3, Recommendation 4	Removal of SIC call.
Amend (c)	Section 1	Most combustion sources are MACT or GACT which S.L. removed applicability to air toxics. Remaining combustions sources would be negligible.
<b>15A NCAC 02Q .0709, Demonstrations</b>		
Amend (e)(1)	Section 1	Clarify that evaluation does not include exempt sources.
Amend (e)(2)	Section 1	Clarify that evaluation does not include exempt sources.
<b>15A NCAC 02Q .0711, Emission Rates Requiring A Permit</b>		
Amend (a)	Section 3, Recommendation 1 and 5	Clarify existing TPER table applies to obstructed or non-vertical emission points. Clarify actual rate of emissions be used when comparing to TPERs.
Amend (a)	Asbestos rule change	Correct asbestos TPER.
Add (b)	Section 3, Recommendation 1	Additional set of TPERs where all emission points are unobstructed and vertically oriented.
<b>15A NCAC 02Q .0714, Wastewater Treatment Systems At Pulp And Paper Mills</b>		
Repeal rule	NA	Requirements are obsolete. Rule not needed.
<b>15A NCAC 02D .1104, Toxic Air Pollutant Guidelines</b>		
Amend		Correct asbestos AAL by factor of 10 <sup>-5</sup>

## VI. Changes from the Regulatory Baseline

The current suite of State Air Toxics Rules forms the basis of the regulatory baseline. The legislation provides justification of the necessity for the primary rule changes to conform to the statutory intent of S.L. 2012-91. The baseline for the change in the asbestos AAL and TPER correction is the current annual AAL of  $2.8 \times 10^{-11}$  fibers per milliliter (f/mL) and the current TPER of  $1.9 \times 10^{-6}$  pounds per year.

### Section 1 of S.L 2012-91

Under the current toxic air pollutant procedures in Section 02Q .0700, all facilities emitting a toxic air pollutant are required to 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. The demonstration includes all sources of toxic air pollutants at the facility except for the exemptions in the current Rule 02Q .0702.

S.L. 2012-91 further exempts from state air toxics emissions rules those sources of emissions that are:

- (A) subject to an applicable requirement under 40 CFR Part 61, as amended;
- (B) an affected source under 40 CFR Part 63, as amended; or
- (C) subject to a case-by-case MACT permit requirement issued by the Division pursuant to Paragraph (j) of 42 U.S.C. Section 7412, as amended.

Facilities would still be required to submit demonstrations that model the toxic air pollutant emissions from sources that were not exempted by S.L. 2012-91. The Division of Air Quality would be required to determine if there is an unacceptable risk to human health when the exempt sources are included in the demonstration. The finding may be based on modeling, epidemiological studies, actual monitoring data or other information that indicates an unacceptable risk.

The DAQ began tracking permit actions specifically impacted by the exemptions and process provided in Section 1 of S.L. 2012-91. Starting with the day the bill became law (June 28, 2012), through April 31, 2013, the DAQ issued 819 new or modified air quality permits, of which only 85 involved a request that could result in an increase in the emission of toxic air pollutants. Of the 85 facilities that submitted toxic air pollutant permit applications, 31 of the facilities had sources exempted by S.L. 2012-91. Each of those 31 permit applications were reviewed to determine if the emission of toxic air pollutants from the facility would present an unacceptable risk to human health and none of sources were determined to pose such a risk.

From 2002 through 2011, the DAQ received on average 94 applications per year that could result in an increase in the emission of toxic air pollutants from the facility. During that time period, the total number of applications ranged from 71 in 2012 to 118 applications in 2007. In 2012, 31 of 85 (or 36%) of facilities that submitted a toxic air pollutant permit had sources exempted by S.L. 2012-91. The DAQ did not track the number of S.L. 2012-91 sources before the Session Law became effective. For the purpose of this fiscal note, it is assumed that the average number

of sources submitting applications in the next 5 years is 94 per year and the percentage of facilities with exempt sources will remain the same – 36%. Therefore, the DAQ expects that a maximum of 34 facilities could avoid modeling demonstrations of their exempt sources. Also, the DAQ will be required to determine if there is an unacceptable risk to human health when those 34 exempt sources are included in the demonstration.

The additional six recommendations that emerged from the Section 3 review will be incrementally compared to the Section 1 which provides categorical exemption from State Air toxics permitting requirements for MACT or GACT sources.

### **Recommendation 1 – Additional Set of TPERs for Unobstructed Vertical Stacks**

The DAQ developed a separate set of screening thresholds for analyzing toxic air pollutants emitted from unobstructed vertical stacks at a facility. The Permitting Staff of the DAQ reviewed applications received during 2012 to determine how many facilities there were where all stacks were unobstructed and vertically oriented. The DAQ estimated that one-third of all facilities subject to the air toxics rules could use this additional set of TPERs. The DAQ did not track facilities with only unobstructed, vertically oriented stacks before S.L. 2012-91 became effective. Therefore it is assumed that the same percentage of facilities will be able to use the new set of TPERs into the next five years. This results in 31 facilities annually may be able to use the new 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. According to the Permitting Section, approximately 50%, or 16, of the facilities will have emission rates below the new TPERs, which will allow the facility avoid complex dispersion modeling.

### **Recommendation 2 - Exempt natural gas and propane combustion sources**

Using emissions inventory data from 2011, the DAQ identified 391 out of 805 facilities that have natural gas boilers emitting benzene in 2010 (see table below). Of those 391 facilities, the DAQ determined that 155 had natural gas boilers that were the only source of benzene, 144 of which had natural gas boilers sized less than 450 mmBtu/hr. It is worth noting that benzene emissions from facilities where natural gas boilers were the only source were 142.1lbs, while from facilities with multiple sources were 327.8lbs. Total benzene emissions from other sources were 39,035.2lbs. Expecting that the percentage from Table 3 to hold for the next five years, it is assumed approximately 17 facilities on an annual basis will be able to use the proposed natural gas boiler exemption.

**Table 3: Natural Gas Boilers**

	<b>Number</b>	<b>Percent</b>
<b>Total facilities</b>	<b>805</b>	<b>100%</b>
Facilities with NG boilers that emitted benzene	391	49%
Facilities where only source were NG boilers that emitted benzene	155	19%
Facilities where only source were NG boilers , less than 450 mmBtu/hr	144	18%

During the comment phase of the stakeholder process, it was suggested that the exemption extend to all natural gas and propane-fired combustion sources as defined in 15A NCAC 02Q .0703(6). This would add sources such as space heaters and process heaters to the exemption list. The limits to the exemption would remain the same: 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. Both the emission inventory and permit databases were queried for space heaters and process heaters. Less than one percent of facilities were found to include a new or modified process heater on their permit. As the rule is currently written, existing combustion sources are already on the exemption list. Only new or modified combustion sources after July 10, 2010 were not exempted and the new proposed amendment would exempt the new or modified natural gas and propane-fired combustion sources. Adding the other combustion sources to the proposed original natural gas and propane-fired boiler exemption will not alter the fiscal calculations that were computed above for the boilers.

### **Recommendation 3 - Exempt emergency engines**

Using emissions inventory data, 496 facilities with emergency engines emitted formaldehyde emissions in 2010 (see table below). Of those 496 facilities, DAQ determined that 148 of those facilities had emergency engines that were the only source of formaldehyde. Note, formaldehyde emissions from facilities where emergency engines were the only source were 49.1lbs, while from facilities with multiple sources were 250.4lbs. Total formaldehyde emission from other sources was 409,666.5lbs.

Based on the DAQ's recent survey results, 89% of emergency engines are sized less than 4843 hp. Using this distribution, it is estimated that 132 facilities operate emergency engines less than 4843 hp that are the only source of formaldehyde emissions.

**Table 4: Emergency Engines**

	<b>Number</b>	<b>Percent</b>
<b>Total facilities</b>	<b>805</b>	<b>100%</b>
Facilities with Emergency Engines with formaldehyde emissions	496	62%
Facilities with sole source Emergency Engines that emitted formaldehyde	148	18%
Facilities with sole source Emergency Engines <4843 hp	132	16%

The DAQ received 94 toxic air pollutant applications annually on average from 2002 through 2011. Assuming the percentages above stay constant for the following five years, this analysis assumes that approximately 15 facilities on an annual basis will be able to use the proposed emergency engine exemption.

### **Recommendation 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. Therefore, the rule that contains the SIC call language is proposed for repeal. There is not any change in baseline since the Director has the ability to call in all the facilities using the Director's call as would have been called under the SIC call. There may be some qualitative efficiency savings by selectively calling in facilities with a Director's call instead of a whole group of facilities by a SIC call.

#### **Recommendation 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 when actual emissions is used where a reference to permitted rate of emissions exists. The 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). There is not any change in baseline from the current rule since actual emission rates are currently being used in TPER calculations.

#### **Recommendation 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.

#### **Asbestos**

Existing rule numerical values for the asbestos AAL in 15A NCAC 02D .1104 and the associated asbestos toxic pollutant permitting emission rate (TPER) in 02Q .0711 are proposed to be modified. The asbestos AAL should be  $2.8 \times 10^{-6}$  fibers per milliliter (f/mL) and not the  $2.8 \times 10^{-11}$  f/mL currently listed in 15A NCAC 02D .1104, Toxic Air Pollutant Guidelines. The associated asbestos TPER in 02Q .0711, Emission Rates Requiring a Permit, is proposed to be  $5.7 \times 10^{-3}$  lb/year. There are no current or foreseeable future facilities that emit asbestos.

### **VII. Estimating the Fiscal Impacts to Affected Sources**

#### **Section 1 of S.L 2012-91**

In Section VI of this report, the DAQ estimated that approximately 34 facilities may avoid modeling demonstrations of their exempt sources. Modeling costs involve staff time to collect data for each source at the facility and staff time to conduct the modeling. Staff time for each affected facility may be its own staff time or the time of a consultant hired to complete the work.

Section 1 of S.L. 2012-91 eliminates the requirement for affected facilities to model their exempt sources. It does not reduce the amount of staff time to collect relevant data from each exempt source since the facility will still be required to supply that data to the DAQ so that it can make an acceptable risk determination. Therefore, each facility will have a reduction in costs from staff time to conduct the modeling.

The DAQ's data show that 92% of facilities with exempt sources to be owned by the private sector, 4% by local governments, 2% by state government and 1% by the federal government (see more detailed ownership information in Appendix B). For the purpose of this fiscal note, it is assumed that there is one impacted local government facility per year, one state government facility every two years and one federal government facility every three years.

**Table 5. Number of Impacted Facilities – Section 1 of S.L. 2012-91**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government</b>	1	1	1	1	1
<b>State Government</b>	1	0	1	0	1
<b>Federal Government</b>	1	0	0	1	0
<b>Private Sector</b>	31	33	32	32	32
<b>Total Impact</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>

To run the modeling demonstration, time is needed to create the input files, run the model and review the results. According to private consultants, the total cost reduction for elimination of staff time would be \$1,500 per facility. Given the uncertain nature of this estimate, it is assumed inflation is zero.

The DAQ will be required to determine if there is an unacceptable risk to human health when those 34 exempt sources are included in the demonstration. The DAQ will not have any additional staff time to collect the data needed to conduct the modeling. The DAQ Permitting Section estimates each modeling demonstration will take an additional 16 hours by a staff meteorologist to run the demonstration with the facility's exempt sources added back into the model instead of reviewing the modeling demonstration submitted by an affected source under the current rules. The usual 8 hours of review time remains the same as before the proposed rule amendments. Using the NC Office of State Personnel Employee Compensation Calculator,<sup>3</sup> a compensation for a meteorologist is approximately \$40 per hour. The additional DAQ staff time cost would be \$640 per impacted facility. This estimate is assumed constant given the low rate of increase in state employee salaries. For state-owned facilities, the fiscal impact would be the reduction of cost for conducting a modeling demonstration. It is assumed the state-owned facility would use the services of a private consultant. The total reduction for a state-owned facility would be \$1,500 per facility. For the purpose of this section, the state-owned facility and the DAQ fiscal impacts are listed separately in the table below.

<sup>3</sup> NC Office of State Personnel Employee Compensation Calculator.  
<http://www.osp.state.nc.us/Reward/benefits/Compensation%20Calculator.htm>

**Table 6. Fiscal Impact Summary – Section 1 of S.L. 2012-91**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government Impact</b>	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)
<b>State Facility Impact</b>	(\$1,500)	\$0	(\$1,500)	\$0	(\$1,500)
<b>Private &amp; Federal Impact</b>	(\$48,000)	(\$49,500)	(\$48,000)	(\$49,500)	(\$48,000)
<b>TOTAL Savings</b>	<b>(\$51,000)</b>	<b>(\$51,000)</b>	<b>(\$51,000)</b>	<b>(\$51,000)</b>	<b>(\$51,000)</b>
<b>Division of Air Quality</b>	\$21,760	\$21,760	\$21,760	\$21,760	\$21,760
<b>Total Impact (absolute value)</b>	<b>\$72,760</b>	<b>\$72,760</b>	<b>\$72,760</b>	<b>\$71,260</b>	<b>\$72,760</b>

**Recommendation 1 – Additional Set of TPERs for Unobstructed Vertical Stacks**

In Section VI of this report, the DAQ estimated that approximately 16 facilities may avoid modeling demonstrations of their exempt sources. Modeling costs involve staff time to collect data for each source at the facility and staff time to conduct the modeling. Staff time for each affected facility may be its own staff time or the time of a consultant hired to complete the work. Recommendation 1 adds a separate set of screening thresholds for analyzing toxic air pollutants emitted from unobstructed vertical stacks at a facility and eliminates the requirement for affected facilities to do complex dispersion modeling of sources with TPERs below the screening thresholds. Each facility will have a reduction in costs from staff time to collect the data for the dispersion model and to conduct the modeling.

The DAQ's data show that 94% of facilities to be owned by the private sector, 2% by local governments, 1% by state government and 1% by the federal government. For the purpose of this fiscal note, it is assumed that there is one impacted local government facility every three years, one state government facility every six years and one federal government facility every six years.

**Table 7. Number of Impacted Facilities – Recommendation 1**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government</b>	1	0	0	1	0
<b>State Government</b>	1	0	0	0	0
<b>Federal Government</b>	1	0	0	0	0
<b>Private Sector</b>	13	16	16	15	16
<b>Total Impact</b>	16	16	16	16	16

According to private consultants, the total cost reduction for elimination of staff time would be \$3,000 in avoided costs to collect modeling data and run the modeling demonstration.

A modeling demonstration submitted to the Permitting Section of DAQ would require 8 hours of staff time to review. Affected facilities would not be required to submit a modeling demonstration for review by the DAQ. Using the NC Office of State Personnel Employee Compensation Calculator, a compensation for a meteorologist is approximately \$40 per hour. The reduced staff time by the DAQ would be \$320 per facility. For state-owned facilities, the fiscal impact would be the reduction of cost for conducting a modeling demonstration. It is

assumed the state-owned facility would use the services of a private consultant. The total reduction for a state-owned facility would be \$3,000 per facility. For the purpose of this section, the state-owned facility and the DAQ's fiscal impacts are listed separately in the table below.

**Table 8. Fiscal Impact Summary – Recommendation 1**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government Impact</b>	(\$3,000)	\$0	\$0	(\$3,000)	\$0
<b>State Facility Impact</b>	(\$3,000)	\$0	\$0	\$0	\$0
<b>Division of Air Quality</b>	(\$5,120)	(\$5,120)	(\$5,120)	(\$5,120)	(\$5,120)
<b>Private &amp; Federal Impact</b>	(\$42,000)	(\$48,000)	(\$48,000)	(\$45,000)	(\$48,000)
<b>Total Impact (absolute value)</b>	<b>\$53,120</b>	<b>\$53,120</b>	<b>\$53,120</b>	<b>\$53,120</b>	<b>\$53,120</b>

### **Recommendation 2 - Exempt natural gas and propane fired combustion sources**

In Section VI of this report, the DAQ estimated that approximately 17 facilities on an annual basis will be able to use the proposed natural gas boiler exemption. Based on the nature of these combustion sources, it is very plausible that all of the boilers at the facilities are subject to either a MACT (Subpart DDDDD) or GACT (Subpart JJJJJ) federal regulation. Therefore, this analysis assumes that all 17 facilities would already be exempt under Section 1 of S.L. 2012-91, which eliminates the requirement for affected facilities to model their exempt sources. Modeling costs involve staff time to collect data for each source at the facility and staff time to conduct the modeling. Staff time for each affected facility may be its own staff time or the time of a consultant hired to complete the work. Section 1 of S.L. 2012-91 eliminates the requirement for affected facilities to model their exempt sources. The fiscal impact from not being required to conduct their modeling demonstration was captured in the Section 1 fiscal impact calculations. Recommendation 2 exempts natural gas and propane fired boilers which eliminates the staff time required to collect relevant data needed for a modeling demonstration from each exempt source. Therefore, each facility will have a reduction in costs from staff time to collect modeling data.

The DAQ's data show that 92% of facilities with exempt sources to be owned by the private sector, 4% by local governments, 2% by state government and 1% by the federal government. For the purpose of this fiscal note, it is assumed that there is one impacted local government facility per year, one state government facility every three years and one federal government facility every five years.

**Table 9. Number of Impacted Facilities – Recommendation 2**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government</b>	1	1	1	1	1
<b>State Government</b>	1	0	0	1	0
<b>Federal Government</b>	1	0	0	0	0
<b>Private Sector</b>	17	19	19	18	19
<b>Total Impact</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>

This recommendation eliminates the staff time required to collect the data needed to conduct a modeling demonstration. The staff time for a modeling demonstration was accounted for under Section 1. According to private consultants, the total cost reduction for elimination of staff time would be \$1,500 per facility.

A modeling demonstration submitted to the Permitting Section of DAQ would require 8 hours of staff time to review. Affected facilities would not be required to submit a modeling demonstration for review by the DAQ. Using the NC Office of State Personnel Employee Compensation Calculator, a compensation for a meteorologist is approximately \$40 per hour. The reduced staff time by the DAQ would be \$320 per facility.

For state-owned facilities, the fiscal impact would be the reduction of cost for elimination of data collection to conduct a modeling demonstration. It is assumed the state-owned facility would also use the services of a private consultant, therefore their savings would also be \$1,500 per facility. For the purpose of this section, the state-owned facility and the DAQ fiscal impacts are listed separately in the table below.

**Table 10. Fiscal Impact Summary – Recommendation 2**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government Impact</b>	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)
<b>State Facility Impact</b>	(\$1,500)	\$0	\$0	(\$1,500)	\$0
<b>Division of Air Quality</b>	(\$5,440)	(\$5,440)	(\$5,440)	(\$5,440)	(\$5,440)
<b>Private &amp; Federal Impact</b>	(\$22,500)	(\$24,000)	(\$24,000)	(\$22,500)	(\$24,000)
<b>Total Impact (absolute value)</b>	<b>\$30,940</b>	<b>\$30,940</b>	<b>\$30,940</b>	<b>\$30,940</b>	<b>\$30,940</b>

### **Recommendation 3 - Exempt emergency engines**

In Section VI of this report, the DAQ estimated that approximately 15 facilities on an annual basis will be able to use the proposed emergency exemption. Based on the nature of these emergency engines, it is assumed that all of emergency engines at the facilities are subject to either a MACT (Subpart ZZZZ) or GACT (Subpart ZZZZ) federal regulation, which eliminates the requirement for affected facilities to model their exempt sources under Section 1 of S.L. 2012-91. Modeling costs involve staff time to collect data for each source at the facility and staff time to conduct the modeling. Staff time for each affected facility may be its own staff time or the time of a consultant hired to complete the work. Section 1 of S.L. 2012-91 eliminates the requirement for affected facilities to model their exempt sources. The fiscal impact from not being required to conduct their modeling demonstration was captured in the Section 1 fiscal impact calculations. Recommendation 3 to exempt emergency engines eliminates the staff time required to collect relevant data needed for a modeling demonstration from each exempt source. Therefore, each facility will have a reduction in costs from staff time to collect modeling data.

The DAQ's data show that 92% of facilities with exempt sources to be owned by the private sector, 4% by local governments, 2% by state government and 1% by the federal government. For the purpose of this fiscal note, it is assumed that there is one impacted local government

facility every two years, one state government facility every three years and one federal government facility every six years.

**Table 11. Number of Impacted Facilities – Recommendation 3**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government</b>	1	0	1	0	1
<b>State Government</b>	1	0	0	1	0
<b>Federal Government</b>	1	0	0	0	0
<b>Private Sector</b>	12	15	14	14	14
<b>Total Impact</b>	15	15	15	15	15

This recommendation eliminates the staff time required to collect the data needed to conduct a modeling demonstration. According to private consultants, the total cost reduction for elimination of staff time would be \$1,500 per facility.

A modeling demonstration submitted to the Permitting Section of DAQ would require 8 hours of staff time to review. Affected facilities would not be required to submit a modeling demonstration for review by the DAQ. Using the NC Office of State Personnel Employee Compensation Calculator, a compensation for a meteorologist is approximately \$40 per hour. The reduced staff time by the DAQ would be \$320 per facility.

For state-owned facilities, the fiscal impact would be the reduction of cost for elimination of data collection to conduct a modeling demonstration. It is assumed the state-owned facility would also use the services of a private consultant, thus their savings would also be \$1,500 per facility. For the purpose of this section, the state-owned facility and the DAQ's fiscal impacts are listed separately in the table below.

**Table 12. Fiscal Impact Summary – Recommendation 3**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government Impact</b>	(\$1,500)	\$0	(\$1,500)	\$0	(\$1,500)
<b>State Facility Impact</b>	(\$1,500)	\$0	\$0	(\$1,500)	\$0
<b>Division of Air Quality</b>	(\$4,800)	(\$4,800)	(\$4,800)	(\$4,800)	(\$4,800)
<b>Private &amp; Federal Impact</b>	(\$19,500)	(\$22,500)	(\$21,000)	(\$21,000)	(\$21,000)
<b>Total Impact (absolute value)</b>	<b>\$27,300</b>	<b>\$27,300</b>	<b>\$27,300</b>	<b>\$27,300</b>	<b>\$27,300</b>

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

Under Section VI of this report, the DAQ determined that there is not any change in baseline between the current rules and the repeal of the rule that contains the SIC call. Therefore, there will not be any fiscal impact due to this part of the rule amendments.

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

Under Section VI of this report, the DAQ determined that there is not any change in baseline between the current rule 15A NCAC 02Q .0711 and the amended rule where the language is clarified that actual emissions are used for the TPER calculation. Therefore, there will not be any fiscal impact due to this clarification.

### **Recommendation 6 - Remove the term “unadulterated wood” from the air toxics rules.**

EPA’s final rule that was promulgated on March 21, 2011 identifies which non-hazardous secondary materials are, or are not, solid wastes when burned in combustion units. The rule amendment removes the distinction between types of wood when defining combustion sources. The proposed amendment would reduce unnecessary regulatory burden by removing uncertainty with the federal regulatory program. There would not be any fiscal impact due to this clarification.

### **Asbestos**

The DAQ has determined that there are not any facilities in the North Carolina that emit asbestos, so there will not be any fiscal impact for the error corrections related to asbestos.

### **Combined Fiscal Impact Due to Rule Amendments**

The fiscal impacts from Tables 6, 8, 10 and 12 have been combined and are listed in Table 13 below.

**Table 13. Fiscal Impact Summary – Combined Fiscal Impact**

	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>
<b>Local Government Impact</b>	(\$7,500)	(\$3,000)	(\$4,500)	(\$6,000)	(\$4,500)
<i>State Facility Impact</i>	(\$7,500)	\$0	(\$1,500)	(\$3,000)	(\$1,500)
<i>Division of Air Quality</i>	\$6,400	\$6,400	\$6,400	\$6,400	\$6,400
<b>State Government Impact</b>	(\$1,100)	\$6,400	\$4,900	\$3,400	\$4,900
<b>Private &amp; Federal Impact</b>	(\$132,000)	(\$144,000)	(\$141,000)	(\$138,000)	(\$141,000)
<b>Total Impact (absolute value)</b>	\$153,400	\$153,400	\$153,400	\$153,400	\$153,400

The combined fiscal impact represents the impacts of the Section 1 of the Session Law 2013-91 and each Recommendation under Section 3 of the Session Law. Each fiscal impact was calculated separately and summed to find a combined fiscal impact. It represents the maximum impact due to the rule amendments. The impacts of Section 1 and Section 3 recommendations are not separable. There is the possibility that a facility can use more than one of the recommendations to avoid being subject to a requirement under the toxic air pollutant rules. For example, a facility may be subject to one of the coating MACTs, have both an exempt natural gas boiler and emergency engine onsite and have vertical, unobstructed stacks. In this example, the facility could reduce or eliminate their toxic air pollutant permitting requirements using the

exemptions in Section 1 and Recommendations 1, 2 and 3 of Section 3. Therefore, there can be some overestimation of the calculated reduced burden to an affected facility.

There may be some efficiencies and associated fiscal impacts that are not quantifiable. For instance, facilities that can take advantage of an exemption may be able to add a new source more quickly. When an exemption allows a facility to avoid toxic air pollutant permitting requirements, there may be a reduction in staff time at a facility for activities necessary to comply with those requirements. Examples of avoided activities and associated time include discussions with senior management to contract, communicate and interact with a consultant, and a streamlined permit process which may reduce production delays. The time saved may allow the facility to make changes more quickly and avoid some opportunity costs.

### **VIII. Uncertainty in Fiscal Impacts**

There are some uncertainties in the assumptions used to calculate the fiscal impact of the rule amendments to the toxic air pollutant rules. The calculations were based on an average-sized facility that may have one exempt source under S.L. 2012-91. Impacted facilities may range in size from major sources that have a Title V permit to a small area source subject to a generally available control technology (GACT) standard. A facility's size and complexity may impact the contracted services paid to a consultant. The fee reduction was determined from discussions with four consultants that have done past modeling demonstrations for a facility's permit application submittal to the DAQ. A fee reduction is dependent on how much staff time is eliminated by the rule amendment. The staff time reduction may be affected by the number of exempt and non-exempt sources at a facility and past modeling of existing sources.

There is also some uncertainty in the facility population. The calculations were based on 10 months of data since Session Law 2012-91 went into effect. The facilities were not tracked for non-exempt and exempt sources before the Session Law effective date. The 10 months of data were assumed to be representative of the permit applications received on an annual basis.

### **VIX. Public Health**

The rule amendments shift the burden of modeling demonstrations from industry to the DAQ. The amendments also add a new set of TPERs for non-obstructed, vertically oriented emission release points and exemptions for natural gas and propane fired boilers and emergency generators. Each proposed rule amendment does not change the ambient air level (AAL) for any toxic air pollutant emitted from an affected facility. The AAL is a health based standard and is designed to protect public health by minimizing exposure to and the resulting risk from toxic air pollutants emitted from a facility. The rule amendments are generally an administrative change by shifting some of the regulatory burden from facilities and rely upon the DAQ's expertise to determine when there is an unacceptable risk. S.L. 2012-91 requires the rules to reduce unnecessary regulatory burden and increase the efficient use of Division resources while maintaining protection of public health.

### Appendix A

15A NCAC 02D .1104 is proposed for amendment as follows:

#### 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	$2.3 \times 10^{-7}$			
asbestos (1332-21-4)	<del><math>2.8 \times 10^{-4}</math></del> $2.8 \times 10^{-6}$ fibers/ml			
aziridine (151-56-4)		0.006		
benzene (71-43-2)	$1.2 \times 10^{-4}$			
benzidine and salts (92-87-5)	$1.5 \times 10^{-8}$			
benzo(a)pyrene (50-32-8)	$3.3 \times 10^{-5}$			
benzyl chloride (100-44-7)			0.5	
beryllium (7440-41-7)	$4.1 \times 10^{-6}$			
beryllium chloride (7787-47-5)	$4.1 \times 10^{-6}$			
beryllium fluoride (7787-49-7)	$4.1 \times 10^{-6}$			
beryllium nitrate (13597-99-4)	$4.1 \times 10^{-6}$			
bioavailable chromate pigments, as	$8.3 \times 10^{-8}$			

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
chromium (VI) equivalent				
bis-chloromethyl ether (542-88-1)	$3.7 \times 10^{-7}$			
bromine (7726-95-6)				0.2
1,3-butadiene (106-99-0)	$4.4 \times 10^{-4}$			
cadmium (7440-43-9)	$5.5 \times 10^{-6}$			
cadmium acetate (543-90-8)	$5.5 \times 10^{-6}$			
cadmium bromide (7789-42-6)	$5.5 \times 10^{-6}$			
carbon disulfide (75-15-0)		0.186		
carbon tetrachloride (56-23-5)	$6.7 \times 10^{-3}$			
chlorine (7782-50-5)		0.0375		0.9
chlorobenzene (108-90-7)		2.2		
chloroform (67-66-3)	$4.3 \times 10^{-3}$			
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		
epichlorohydrin (106-89-8)	$8.3 \times 10^{-2}$			
ethyl acetate (141-78-6)			140	
ethylenediamine (107-15-3)		0.3	2.5	
ethylene dibromide (106-93-4)	$4.0 \times 10^{-4}$			
ethylene dichloride (107-06-2)	$3.8 \times 10^{-3}$			
ethylene glycol monoethyl ether (110-80-5)		0.12	1.9	
ethylene oxide (75-21-8)	$2.7 \times 10^{-5}$			
ethyl mercaptan (75-08-1)			0.1	
fluorides		0.016	0.25	
formaldehyde (50-00-0)				0.15

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
hexachlorocyclopentadiene (77-47-4)		0.0006	0.01	
hexachlorodibenzo-p-dioxin (57653-85-7)	$7.6 \times 10^{-8}$			
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)	$2.4 \times 10^{-2}$		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)	$2.1 \times 10^{-6}$			
nitric acid (7697-37-2)				1
nitrobenzene (98-95-3)		0.06	0.5	
n-nitrosodimethylamine (62-75-9)	$5.0 \times 10^{-5}$			

Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
non-specific chromium (VI) compounds, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
pentachlorophenol (87-86-5)		0.003	0.025	
perchloroethylene (127-18-4)	$1.9 \times 10^{-1}$			
phenol (108-95-2)			0.95	
phosgene (75-44-5)		0.0025		
phosphine (7803-51-2)				0.13
polychlorinated biphenyls (1336-36-3)	$8.3 \times 10^{-5}$			
soluble chromate compounds, as chromium (VI) equivalent		$6.2 \times 10^{-4}$		
styrene (100-42-5)			10.6	
sulfuric acid (7664-93-9)		0.012	0.1	
tetrachlorodibenzo-p-dioxin (1746-01-6)	$3.0 \times 10^{-9}$			
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)	$6.3 \times 10^{-3}$			
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)	$5.9 \times 10^{-2}$			
trichlorofluoromethane (75-69-4)			560	
1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)				950
vinyl chloride (75-01-4)	$3.8 \times 10^{-4}$			
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 02Q .0701 is proposed for amendment as follows:

### **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)~~(2) 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 is proposed for amendment as follows:

**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)~~ natural gas and propane fired boilers with an aggregate allowable heat input value less than 450 million Btu per hour that are the only source of benzene at the facility;
- ~~(26)~~ emergency engines with an aggregate total horsepower less than 4843 horsepower that are the only source of formaldehyde at the facility;
- ~~(27)~~ an air emission source that is any of the following:
  - (A) subject to an applicable requirement under 40 CFR Part 61, as amended;
  - (B) an affected source under 40 CFR Part 63, as amended; or
  - (C) subject to a case-by-case MACT permit requirement issued by the Division pursuant to Paragraph (j) of 42 U.S.C. Section 7412, as amended;
- ~~(25)~~~~(28)~~ 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)~~~~(29)~~ 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)~~~~(30)~~ 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)~~(31) 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)(a)(28)~~ through ~~(a)(28)(a)(31)~~ 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)(a)(27)~~ 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 is proposed for amendment as follows:

### **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 credible 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 ( $\text{NiCl}_2$ , CAS No. 7718-54-9), sulfate ( $\text{NiSO}_4$ , CAS No. 7786-81-4), and nitrate ( $\text{Ni}(\text{NO}_3)_2$ , 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 is proposed for amendment as follows:

#### **15A NCAC 02Q .0704 NEW FACILITIES**

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

(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;~~ 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.~~

(c) The owner or operator of the facility shall submit a permit application to comply with 15A NCAC 02D .1100 if emissions of any toxic air pollutant exceed the levels contained in Rule .0711 of this Section.

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

*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, 1998;*

*Amended Eff. \_\_\_\_\_.*

15A NCAC 02Q .0705 is proposed for repeal as follows:

**15A NCAC 02Q .0705 EXISTING FACILITIES AND SIC CALLS (Repealed)**

~~(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(e) 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~~, 1998;  
Repealed Eff. \_\_\_\_\_.

15A NCAC 02Q .0706 is proposed for amendment as follows:

**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;~~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 .0709 is proposed for amendment as follows:

**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~~evaluation, excluding sources exempt from evaluation in Rule .0702 of this Section, 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~~evaluation, excluding sources exempt from evaluation in Rule .0702 of this Section, 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 .0711 is proposed for amendment as follows:

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

(a) A permit to emit toxic air pollutants is required for any facility where one or more emission release points are obstructed or non-vertically oriented 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	Chronic Toxicants	Acute Systemic Toxicants	Acute Irritants
	lb/yr	lb/day	lb/hr	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 <sup>4</sup>	<del>0.016</del> <u>0.053</u>			
asbestos (1332-21-4)	<del><math>1.9 \times 10^{-6}</math></del> <u><math>5.7 \times 10^{-3}</math></u>			
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			

<sup>4</sup> New arsenic TPER based on new AAL going to EMC in July 2013 for EMC adoption.

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) A permit to emit toxic air pollutants is required for any facility where all emission release points are unobstructed and vertically oriented whose actual rate of emissions from all sources are greater than any one of the following toxic air pollutant permitting emissions rates:

<u>Pollutant (CAS Number)</u>	<u>Carcinogens</u>	<u>Chronic Toxicants</u>	<u>Acute Systemic Toxicants</u>	<u>Acute Irritants</u>
	-	-	-	-
	<u>lb/yr</u>	<u>lb/day</u>	<u>lb/hr</u>	<u>lb/hr</u>
<u>acetaldehyde (75-07-0)</u>				<u>28.43</u>
<u>acetic acid (64-19-7)</u>				<u>3.90</u>
<u>acrolein (107-02-8)</u>				<u>0.08</u>
<u>acrylonitrile (107-13-1)</u>		<u>1.3</u>	<u>1.05</u>	
<u>ammonia (7664-41-7)</u>				<u>2.84</u>
<u>aniline (62-53-3)</u>			<u>1.05</u>	
<u>arsenic and inorganic arsenic compounds</u>	<u>0.194</u>			
<u>asbestos (1332-21-4)</u>	<u>7.748 x 10<sup>-3</sup></u>			
<u>aziridine (151-56-4)</u>		<u>0.3</u>		

benzene (71-43-2)	<u>11.069</u>			
benzidine and salts (92-87-5)	<u>1.384 x 10<sup>-3</sup></u>			
benzo(a)pyrene (50-32-8)	<u>3.044</u>			
benzyl chloride (100-44-7)			<u>0.53</u>	
beryllium (7440-41-7)	<u>0.378</u>			
beryllium chloride (7787-47-5)	<u>0.378</u>			
beryllium fluoride (7787-49-7)	<u>0.378</u>			
beryllium nitrate (13597-99-4)	<u>0.378</u>			
bioavailable chromate pigments, as chromium (VI) equivalent	<u>0.008</u>			
bis-chloromethyl ether (542-88-1)	<u>0.034</u>			
bromine (7726-95-6)				<u>0.21</u>
1,3-butadiene (106-99-0)	<u>40.585</u>			
cadmium (7440-43-9)	<u>0.507</u>			
cadmium acetate (543-90-8)	<u>0.507</u>			
cadmium bromide (7789-42-6)	<u>0.507</u>			
carbon disulfide (75-15-0)		<u>7.8</u>		
carbon tetrachloride (56-23-5)	<u>618.006</u>			
chlorine (7782-50-5)		<u>1.6</u>		<u>0.95</u>
chlorobenzene (108-90-7)		<u>92.7</u>		
chloroform (67-66-3)	<u>396.631</u>			
chloroprene (126-99-8)		<u>18.5</u>	<u>3.69</u>	
cresol (1319-77-3)			<u>2.32</u>	
p-dichlorobenzene (106-46-7)				<u>69.50</u>
dichlorodifluoromethane (75-71-8)		<u>10445.4</u>		
dichlorofluoromethane (75-43-4)		<u>21.1</u>		
di(2-ethylhexyl)phthalate (117-81-7)		<u>1.3</u>		
dimethyl sulfate (77-78-1)		<u>0.1</u>		
1,4-dioxane (123-91-1)		<u>23.6</u>		
epichlorohydrin (106-89-8)	<u>7655.891</u>			
ethyl acetate (141-78-6)			<u>147.41</u>	
ethylenediamine (107-15-3)		<u>12.6</u>	<u>2.63</u>	
ethylene dibromide (106-93-4)	<u>36.896</u>			
ethylene dichloride (107-06-2)	<u>350.511</u>			
ethylene glycol monoethyl ether (110-80-5)		<u>5.1</u>		<u>2.00</u>
ethylene oxide (75-21-8)	<u>2.490</u>			

<u>ethyl mercaptan (75-08-1)</u>			<u>0.11</u>	
<u>fluorides</u>		<u>0.7</u>	<u>0.26</u>	
<u>formaldehyde (50-00-0)</u>				<u>0.16</u>
<u>hexachlorocyclopentadiene (77-47-4)</u>		<u>2.5 x 10<sup>-2</sup></u>	<u>0.01</u>	
<u>hexachlorodibenzo-p-dioxin (57653- 85-7)</u>	<u>0.007</u>			
<u>n-hexane (110-54-3)</u>		<u>46.3</u>		
<u>hexane isomers except n-hexane</u>				<u>379.07</u>
<u>hydrazine (302-01-2)</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>hydrogen chloride (7647-01-0)</u>				<u>0.74</u>
<u>hydrogen cyanide (74-90-8)</u>		<u>5.9</u>	<u>1.16</u>	
<u>hydrogen fluoride (7664-39-3)</u>		<u>1.3</u>		<u>0.26</u>
<u>hydrogen sulfide (7783-06-4)</u>		<u>5.1</u>		
<u>maleic anhydride (108-31-6)</u>		<u>0.5</u>	<u>0.11</u>	
<u>manganese and compounds</u>		<u>1.3</u>		
<u>manganese cyclopentadienyl tricarbonyl (12079-65-1)</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>manganese tetroxide (1317-35-7)</u>		<u>0.3</u>		
<u>mercury, alkyl</u>		<u>2.5 x 10<sup>-3</sup></u>		
<u>mercury, aryl and inorganic compounds</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>mercury, vapor (7439-97-6)</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>methyl chloroform (71-55-6)</u>		<u>505.4</u>		<u>257.98</u>
<u>methylene chloride (75-09-2)</u>	<u>2213.752</u>		<u>1.79</u>	
<u>methyl ethyl ketone (78-93-3)</u>		<u>155.8</u>		<u>93.19</u>
<u>methyl isobutyl ketone (108-10-1)</u>		<u>107.8</u>		
<u>methyl mercaptan (74-93-1)</u>			<u>0.05</u>	
<u>nickel carbonyl (13463-39-3)</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>nickel metal (7440-02-0)</u>		<u>0.3</u>		
<u>nickel, soluble compounds, as nickel</u>		<u>2.5 x 10<sup>-2</sup></u>		
<u>nickel subsulfide (12035-72-2)</u>	<u>0.194</u>			
<u>nitric acid (7697-37-2)</u>				<u>1.05</u>
<u>nitrobenzene (98-95-3)</u>		<u>2.5</u>	<u>0.53</u>	
<u>n-nitrosodimethylamine (62-75-9)</u>	<u>4.612</u>			
<u>non-specific chromium (VI) compounds, as chromium (VI) equivalent</u>	<u>0.008</u>			
<u>pentachlorophenol (87-86-5)</u>		<u>0.1</u>	<u>0.03</u>	
<u>perchloroethylene (127-18-4)</u>	<u>17525.534</u>			

<u>phenol (108-95-2)</u>			<u>1.00</u>	
<u>phosgene (75-44-5)</u>		<u>0.1</u>		
<u>phosphine (7803-51-2)</u>				<u>0.14</u>
<u>polychlorinated biphenyls (1336-36-3)</u>	<u>7.656</u>			
<u>soluble chromate compounds, as chromium (VI) equivalent</u>		<u><math>2.6 \times 10^{-2}</math></u>		
<u>styrene (100-42-5)</u>			<u>11.16</u>	
<u>sulfuric acid (7664-93-9)</u>		<u>0.5</u>	<u>0.11</u>	
<u>tetrachlorodibenzo-p-dioxin (1746-01-6)</u>	<u><math>2.767 \times 10^{-4}</math></u>			
<u>1,1,1,2-tetrachloro-2,2,- difluoroethane (76-11-9)</u>		<u>2190.2</u>		
<u>1,1,2,2-tetrachloro-1,2- difluoroethane (76-12-0)</u>		<u>2190.2</u>		
<u>1,1,2,2-tetrachloroethane (79-34-5)</u>	<u>581.110</u>			
<u>toluene (108-88-3)</u>				<u>58.97</u>
<u>toluene diisocyanate,2,4-(584-84-9) and 2,6-(91-08-7) isomers</u>		<u><math>8.4 \times 10^{-3}</math></u>		
<u>trichloroethylene (79-01-6)</u>	<u>5442.140</u>			
<u>trichlorofluoromethane (75-69-4)</u>			<u>589.66</u>	
<u>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</u>				<u>1000.32</u>
<u>vinyl chloride (75-01-4)</u>	<u>35.051</u>			
<u>vinylidene chloride (75-35-4)</u>		<u>5.1</u>		
<u>xylene (1330-20-7)</u>		<u>113.7</u>		<u>68.44</u>

~~(b)~~(c) 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)~~: (a) or (b) as applicable. 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 .0714 is proposed for repeal as follows:

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

**(REPEALED)**

~~(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.~~
- ~~(e) 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, ~~2005-2005~~;  
Repealed Eff. .

## Appendix B

## Facility Ownership Distribution Based on IBEAM Data

<b>Ownership - Facilites with MACT Part 63</b>	<b><u>Small</u></b>	<b><u>SM</u></b>	<b><u>Title V</u></b>	<b><u>Total</u></b>	<b><u>%</u></b>
Owned by the State	5	10	3	18	2%
Owned by the Municipality	14	4	2	20	3%
Owned by the County	3	1	4	8	1%
Owned by Federal Government	2	3	4	9	1%
Facility Not Government Owned	325	224	184	733	92%
Unknown	<u>3</u>	<u>3</u>	<u>2</u>	<u>8</u>	1%
<b>Subtotal</b>	<b>352</b>	<b>245</b>	<b>199</b>	<b>796</b>	
<b>Percent of Subtotal =&gt;</b>	44%	31%	25%	<b>% MACT=</b>	36%

<b>Ownership - Facilites with No MACT</b>	<b><u>Small</u></b>	<b><u>SM</u></b>	<b><u>Title V</u></b>	<b><u>Total</u></b>	<b><u>%</u></b>
Owned by the State	4	2	0	6	0%
Owned by the Municipality	12	1	0	13	1%
Owned by the County	12	0	3	15	1%
Owned by Federal Government	1	1	0	2	0%
Facility Not Government Owned	998	284	81	1,363	95%
Unknown	<u>16</u>	<u>13</u>	<u>1</u>	<u>30</u>	2%
<b>Subtotal</b>	<b>1,043</b>	<b>301</b>	<b>85</b>	<b>1,429</b>	
<b>Percent of Subtotal =&gt;</b>	73%	21%	6%	<b>% NoMACT=</b>	64%

<b>Ownership - All Facilites</b>	<b><u>Small</u></b>	<b><u>SM</u></b>	<b><u>Title V</u></b>	<b><u>Total</u></b>	<b><u>%</u></b>
Owned by the State	9	12	3	24	1%
Owned by the Municipality	26	5	2	33	1%
Owned by the County	15	1	7	23	1%
Owned by Federal Government	3	4	4	11	0%
Facility Not Government Owned	1,323	508	265	2,096	94%
Unknown	<u>19</u>	<u>16</u>	<u>3</u>	<u>38</u>	2%
<b>Total</b>	<b>1,395</b>	<b>546</b>	<b>284</b>	<b>2,225</b>	
<b>Percent of Total</b>	63%	25%	13%		

*SM = "Synthetic Minor"*

**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 21<sup>st</sup> 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 28<sup>th</sup> day of June, 2012

**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 21<sup>st</sup> 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 28<sup>th</sup> 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<sub>2</sub>, CAS No. 7718-54-9), sulfate (NiSO<sub>4</sub>, CAS No. 7786-81-4), and nitrate (Ni(NO<sub>3</sub>)<sub>2</sub>, 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	$2.3 \times 10^{-7}$			
asbestos (1332-21-4)	$2.8 \times 10^{-11}$ fibers/ml			
aziridine (151-56-4)		0.006		
benzene (71-43-2)	$1.2 \times 10^{-4}$			
benzidine and salts (92-87-5)	$1.5 \times 10^{-8}$			
benzo(a)pyrene (50-32-8)	$3.3 \times 10^{-5}$			
benzyl chloride (100-44-7)			0.5	
beryllium (7440-41-7)	$4.1 \times 10^{-6}$			
beryllium chloride (7787-47-5)	$4.1 \times 10^{-6}$			
beryllium fluoride (7787-49-7)	$4.1 \times 10^{-6}$			
beryllium nitrate (13597-99-4)	$4.1 \times 10^{-6}$			
bioavailable chromate pigments, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
bis-chloromethyl ether (542-88-1)	$3.7 \times 10^{-7}$			
bromine (7726-95-6)				0.2
1,3-butadiene (106-99-0)	$4.4 \times 10^{-4}$			
cadmium (7440-43-9)	$5.5 \times 10^{-6}$			
cadmium acetate (543-90-8)	$5.5 \times 10^{-6}$			
cadmium bromide (7789-42-6)	$5.5 \times 10^{-6}$			
carbon disulfide (75-15-0)		0.186		
carbon tetrachloride (56-23-5)	$6.7 \times 10^{-3}$			
chlorine (7782-50-5)		0.0375		0.9
chlorobenzene (108-90-7)		2.2		
chloroform (67-66-3)	$4.3 \times 10^{-3}$			
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)	$8.3 \times 10^{-2}$			
ethyl acetate (141-78-6)			140	
ethylenediamine (107-15-3)		0.3	2.5	
ethylene dibromide (106-93-4)	$4.0 \times 10^{-4}$			
ethylene dichloride (107-06-2)	$3.8 \times 10^{-3}$			
ethylene glycol monoethyl ether (110-80-5)		0.12	1.9	
ethylene oxide (75-21-8)	$2.7 \times 10^{-5}$			
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)	$7.6 \times 10^{-8}$			
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)	$2.4 \times 10^{-2}$		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)	$2.1 \times 10^{-6}$			
nitric acid (7697-37-2)				1
nitrobenzene (98-95-3)		0.06	0.5	
n-nitrosodimethylamine (62-75-9)	$5.0 \times 10^{-5}$			
non-specific chromium (VI) compounds, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
pentachlorophenol (87-86-5)		0.003	0.025	
perchloroethylene (127-18-4)	$1.9 \times 10^{-1}$			

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)	$8.3 \times 10^{-5}$			
soluble chromate compounds, as chromium (VI) equivalent		$6.2 \times 10^{-4}$		
styrene (100-42-5)			10.6	
sulfuric acid (7664-93-9)		0.012	0.1	
tetrachlorodibenzo-p-dioxin (1746-01-6)	$3.0 \times 10^{-9}$			
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)	$6.3 \times 10^{-3}$			
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)	$5.9 \times 10^{-2}$			
trichlorofluoromethane (75-69-4)			560	
1,1,2-trichloro-1,2,2- trifluoroethane (76-13-1)				950
vinyl chloride (75-01-4)	$3.8 \times 10^{-4}$			
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 or 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<sub>2</sub>, CAS No. 7718-54-9), sulfate (NiSO<sub>4</sub>, CAS No. 7786-81-4), and nitrate (Ni(NO<sub>3</sub>)<sub>2</sub>, 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 public 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	Chronic Toxicants	Acute Systemic Toxicants	Acute Irritants
	lb/yr	lb/day	lb/hr	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 X 10 <sup>-6</sup>			
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

	<p>and unauthorized. DAQ must:</p> <ul style="list-style-type: none"> <li>• Define unacceptable risk.</li> <li>• Collect sufficient data from a facility to determine risks.</li> <li>• Specify models and averaging times.</li> <li>• Clarify that facilities with non-exempt sources must still comply with the air toxics program.</li> <li>• Provide procedures for determining when an existing MACT-regulated facility presents an unacceptable risk.</li> <li>• Evaluate sources near vulnerable populations.</li> </ul> <p>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.</p>
Blue Ridge Environmental Defense League (BREDL)	<p>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.</p>
Mecklenburg County Land Use and Environmental Services Agency – Air Quality	<p>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:</p> <ul style="list-style-type: none"> <li>• Re-evaluating toxic permitting emission rates (TPERs).</li> <li>• Exempt emergency engines.</li> <li>• Exempt natural gas and propane combustion units.</li> <li>• Register rather than permit sources less than certain emissions thresholds.</li> <li>• Do not retain SIC call.</li> </ul> <p>Mecklenburg County does not support a broad</p>

	<p>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.</p>
<p>Jackson Paper</p>	<p>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.</p>
<p>American Home Furnishings Alliance (AHFA)</p>	<p>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).</p>



**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.

Duke Energy Comments on Review of NC Toxic Air Pollutant Rules  
Page 2

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,

A handwritten signature in cursive script that reads "Mick Greeson".

Mick Greeson  
Director, Environmental Affairs – North Carolina

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](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 burdensome 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



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

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;

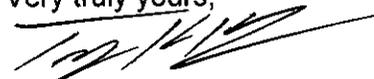
Nucor appreciates the time the Division of Air Quality (DAQ) has spent reviewing the State Air Toxics Program pursuant to Session Law 2012-91. The options provided during the September 25th Stakeholders Meeting provide a range of changes that would reduce unnecessary regulatory burdens and increase the 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

## 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](mailto: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.”<sup>1</sup> 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.”<sup>2</sup>

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<sup>1</sup> See Control of Toxic Air Pollutants, 15A N.C.A.C. 2D .1101 (2012).

<sup>2</sup> 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](http://www.wral.com/asset/news/state/nccapitol/2011/09/28/10196478/Holman_presentation.PDF), Attachment A.

Sheila Holman  
October 9, 2012  
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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.<sup>3</sup> These pollutants include acetic acid, ammonia, bromine, fluoride, hydrogen sulfide, and nitric acid.<sup>4</sup> 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.<sup>5</sup> 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.<sup>6</sup> 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.<sup>7</sup> 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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<sup>3</sup> 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%202012,%202011/Handouts%20and%20Presentations/2011-1012%20ERC%20Submittal%20-%20Attachments.pdf>, Attachment B.

<sup>4</sup> *Id.*

<sup>5</sup> Control of Toxic Air Pollutants in North Carolina, *supra* note 3, at 6.

<sup>6</sup> *Id.* at 8.

<sup>7</sup> 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).

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## 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.<sup>8</sup>

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.<sup>9</sup> 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."<sup>10</sup> 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."<sup>11</sup> 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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<sup>8</sup> See 2012 N.C. Sess. Laws 91 § 1(a)(5)a.

<sup>9</sup> See *Charlotte-Mecklenburg Hosp. Auth. v. N.C. HHS*, 201 N.C. App. 70, 72-73 (N.C. Ct. App. 2009).

<sup>10</sup> 2012 N.C. Sess. Laws 91 § 1(a)(5)b.

<sup>11</sup> *Id.* § 1(a)(5).

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“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<sup>12</sup> in which methylmercury accumulates and concentrates, rather than through inhalation of mercury.<sup>13</sup> 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.<sup>14</sup> Mercury concerns are particularly salient in North Carolina, where all 13,123 water bodies in the state are listed as impaired for mercury.<sup>15</sup> 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.<sup>16</sup> The SAB conducts a number of assessments to determine the AALs, including an exposure assessment.<sup>17</sup> According to SAB guidelines, exposure assessments “generally take into account potential inhalation exposures only.”<sup>18</sup> The SAB *may* also consider dermal exposure and exposure due to deposition of airborne pollutants onto soil or water.<sup>19</sup> 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.”<sup>20</sup> The SAB explained that it lacked critical information on North Carolina freshwater systems, emission factors, and appropriate atmospheric models at that time.<sup>21</sup> The current AALs therefore do not consider environmental fate and transport or likely routes of environmental exposure to mercury.<sup>22</sup> 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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<sup>12</sup> EPA, Mercury Study Report to Congress, EPA-452/R-97-005 (Dec. 1997) (“Mercury Study”), Vol. 1,0-2.

<sup>13</sup> *Id.* at 2-5.

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

<sup>15</sup> See North Carolina Mercury Total Maximum Daily Load (“TMDL”) at 4 (July 5, 2012).

<sup>16</sup> 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>.

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> 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.

<sup>21</sup> *Id.* at 3.

<sup>22</sup> *Id.* at 14.

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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.”<sup>23</sup> 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.<sup>24</sup> 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.<sup>25</sup> 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.<sup>26</sup> 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

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<sup>23</sup> 15A N.C.A.C. 2D .1107(a).

<sup>24</sup> *See id.* 2D .1108.

<sup>25</sup> Toxic Air Pollutant Procedures, 15A NCAC 2Q .0709(a)(2)(A) (2012).

<sup>26</sup> 2012 N.C. Sess. Laws 91 § 1(a)(5)b.

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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.<sup>27</sup> 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.<sup>28</sup> 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

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<sup>27</sup> See 15A NCAC 2D .1106(g).

<sup>28</sup> *Id.* 2D .1106(e).

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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.<sup>29</sup> 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.

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<sup>29</sup> 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.<sup>30</sup> To do so, DAQ first determines the minimum emissions level – called a TPER – at which a facility could possibly exceed an AAL.<sup>31</sup> 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

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<sup>30</sup> 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.

<sup>31</sup> *Id.* 2Q .0711.

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contribute to an exceedance of an AAL.<sup>32</sup> 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

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<sup>32</sup> *Id.* 2Q .0709, .0711.

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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.<sup>33</sup> If so, the facilities must apply additional controls or “otherwise reduce emissions.”<sup>34</sup> 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.<sup>35</sup> 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.<sup>36</sup> 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

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<sup>33</sup> *Id.* 2D .1107(a), (c).

<sup>34</sup> *Id.* 2D .1107(a).

<sup>35</sup> 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.

<sup>36</sup> See Air Toxics Program, Acceptable Ambient Levels (AALs), [daq.state.nc.us/toxics/aaldisc.pdf](http://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.”)

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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.<sup>37</sup> 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.

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<sup>37</sup> See Southern Environmental Law Center Comments on PCS Phosphate Title V Permit Renewal, Attachment E.

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anthropogenic sources.<sup>38</sup> 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.<sup>39</sup> 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.<sup>40</sup>

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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<sup>38</sup> Mercury Study, *surpa* note 14, at Vol. I, 0-1.

<sup>39</sup> See Comments on PCS Phosphate, *surpa* note 39.

<sup>40</sup> 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](http://www.nytimes.com/2012/09/23/technology/data-centers-waste-vast-amounts-of-energy-belying-industry-image.html?pagewanted=all&_r=0).

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**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.<sup>41</sup> 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

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<sup>41</sup> 15A N.C.A.C. 2Q .0705(c).

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classification.<sup>42</sup> 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.<sup>43</sup> 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.<sup>44</sup> 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.<sup>45</sup>

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<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

<sup>45</sup> 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>.

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**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.<sup>46</sup> In this case, the Director shall require the source to apply “maximum feasible control” instead.<sup>47</sup> Sources that could potentially apply for this exemption are sources constructed before May 1, 1990, certain perchloroethylene dry cleaning facilities, and combustion sources<sup>48</sup> permitted before July 10, 2010.<sup>49</sup> 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.<sup>50</sup>

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.<sup>51</sup> If a facility presents an unacceptable risk, the Director must require the facility to submit a permit application that *eliminates* the unacceptable risk.<sup>52</sup> 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.

<sup>46</sup> 15A N.C.A.C. 2Q.0709(b).

<sup>47</sup> *Id.*

<sup>48</sup> 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.*

<sup>49</sup> 15A N.C.A.C. 2Q.0709(b).

<sup>50</sup> *Id.* 2Q .0703(13).

<sup>51</sup> See discussion above in section 2.

<sup>52</sup> See 2012 Sess. Laws 91 §1(a)(5)b.

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**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.

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Respectfully submitted,



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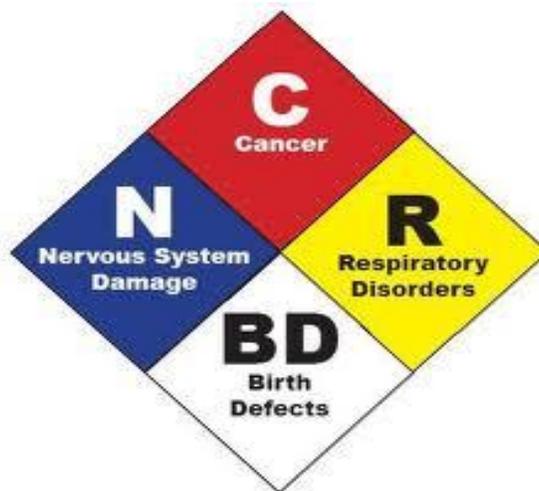
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# *“First, they came for...”*

The North Carolina Legislature’s Assault on  
the Public ©

*Blue Ridge Environmental Defense League*

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Lou Zeller  
Therese Vick

January 2012

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## Introduction

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German clergyman Martin Niemöller’s famous quote<sup>1</sup> 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.

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<sup>1</sup> <http://www.history.ucsb.edu/faculty/marcuse/niem.htm>

# The History of the North Carolina Air Toxics Program

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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.<sup>2</sup> 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.”<sup>3</sup>

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

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<sup>2</sup> NC General Statute § 143-215.107, Air quality standards and classifications

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

<sup>4</sup> 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."<sup>5</sup> 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.<sup>6</sup> 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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<sup>5</sup> 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.

<sup>6</sup> *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.<sup>7</sup> 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:

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<sup>7</sup> 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.”<sup>8</sup>

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

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<sup>8</sup> *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

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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.<sup>9</sup>

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<sup>10</sup> (AAL) for arsenic “9-fold.”<sup>11</sup> The

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<sup>9</sup> [Dartmouth Toxic Metals Superfund Research Project: Arsenic as an endocrine disruptor-Project leader Joshua W. Hamilton Ph.D. Senior Scientist](#)

<sup>10</sup> 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>

<sup>11</sup> [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].”<sup>12</sup> 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].*<sup>13</sup>

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

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<sup>12</sup> [Science Advisory Board on Toxic Air Pollutants](#)

<sup>13</sup> [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).<sup>14</sup> This recommendation was scheduled to be voted on by the Board November 30, 2011 at the 161<sup>st</sup> 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."<sup>15,16</sup> 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."<sup>17</sup>

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<sup>14</sup> [BREDL Comments Arsenic AAL](#)

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

<sup>16</sup> [One Hundred Fifty-Fourth Meeting of the Science Advisory Board on Toxic Air Pollutants-Proceedings of the October 27, 2010 Teleconference](#)

<sup>17</sup> ["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.”<sup>18</sup>

### “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<sup>19</sup> Advisory

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<sup>18</sup> [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](#)

<sup>19</sup> Historical Note: The “Science Advisory Board” was known as “The Scientific Advisory Board” prior to 2004.

Board is considering adjusting the Arsenic AAL.”<sup>20</sup> As troubling as 30% is, it pales in comparison to the almost 48% of the AAL modeled in an earlier draft.<sup>21</sup>

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].”<sup>22</sup>

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”,<sup>23</sup> and that

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<sup>20</sup> [North Carolina Division of Air Quality: PSD Preliminary Review Draft Revision 8 July 2011](#)

<sup>21</sup> “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](#)

<sup>22</sup> [Trinity Consultants News: Increased AAL for Arsenic](#)

<sup>23</sup> In a January 5, 2012 email to Therese Vick, Brendan Davey listed these three companies as exceeding the 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...”<sup>24</sup> 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.*”<sup>25</sup> 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.<sup>26</sup> 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.”<sup>27</sup> The modeling DAQ evaluated showed that:

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

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<sup>24</sup> [One Hundred Fifty-Fifth Meeting of the Science Advisory Board on Toxic Air Pollutants- Proceedings of the November 17, 2010 Teleconference](#)

<sup>25</sup> 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](#)

<sup>26</sup> ["NC poultry litter-fired generating plants under consideration"](#)

<sup>27</sup> [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.<sup>28</sup> 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?”<sup>29</sup>

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<sup>28</sup> [Preston Howard](#) ,[George Everett](#)

<sup>29</sup> 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<sup>30,31</sup>, a constant critic of the US Environmental Protection Agency's dioxin reassessment<sup>32,33,34,35,36</sup>, and, as recently as 2010, a consultant to the American

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<sup>30</sup> [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](#)

<sup>31</sup> [Legacy Tobacco Documents Library- Philip Morris Glossary of Names](#)

<sup>32</sup> [Letter to Dr. Kenneth Olden, Director, National Institute for Environmental Health Sciences, February 12, 1999](#)

<sup>33</sup> [Bo Walhjalt-"A Scientific Journal with Industrial Bias as its Specialty, December 2002"](#)

<sup>34</sup> [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](#)

<sup>35</sup> ["Scientific Debate Continues on Dioxin Risk"](#)

<sup>36</sup> [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.<sup>37</sup> The American Forest and Paper Association opposes US EPA's boiler regulations.<sup>38</sup> 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."<sup>39</sup> 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.<sup>40</sup> Dr. Stopford's connection to the CRA was not disclosed at the time his report was released.<sup>41</sup>

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

<sup>38</sup> Conference call January 20, 2011 [earthjustice.org](#)

<sup>39</sup> [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](#)

<sup>40</sup> ["Assessment of Test Results for Mercury in High Fructose Corn Syrup"](#)

<sup>41</sup> ["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.<sup>42</sup> The TCEQ has come under fire for refusing to allow climate change and human health effects language in a report on Galveston Bay,<sup>43</sup> is in a “to the death” battle with the US Environmental Protection Agency (EPA) over the State Implementation Plan (SIP),<sup>44</sup> 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.<sup>45</sup>

A controversial figure, TCEQ’s chief toxicologist, Dr. Michael Honeycutt is listed as an author on the arsenic report.<sup>46</sup> 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

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<sup>42</sup> [One Hundred Fifty-Seventh Meeting of the Science Advisory Board on Toxic Air Pollutants- Proceedings of the March 30, 2011 Teleconference](#)

<sup>43</sup> [Censored scientist John Anderson on how to restore sound policy-making to Texas and \(maybe\) save the Texas coast](#)

<sup>44</sup> [Correspondence between EPA and TCEQ regarding Texas Air Permitting Program](#)

<sup>45</sup> ["Poisoned Places: Toxic Air, Neglected Communities"](#)

<sup>46</sup> ["TCEQ-At it Again"](#)

standards are too stringent. Two glaring examples: Honeycutt testified against tougher ozone and particulate matter standards in 2011,<sup>47</sup> 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."<sup>48</sup>

"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.

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<sup>47</sup> ["Texas regulator critical of EPA"](#)

<sup>48</sup> [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**  
**- AIR QUALITY -**

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 plant, 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 dual-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

October 9, 2012

Options for Revision of the NC Air Toxics Regulations

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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  $2.1 \times 10^{-6}$  mg/m<sup>3</sup>.

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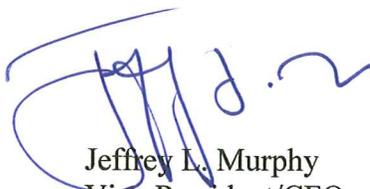
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We also support DAQ's efforts to identify additional areas where improvements to the program can be made to the air toxics program, including the following seven recommendations that were discussed at recent stakeholder meeting on September 25:

- 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](mailto: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](mailto:bperdue@ahfa.us).

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Perdue", with a long horizontal flourish extending to the right.

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

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](http://www.caninesforservice.org) | [www.walkforthosewhocant.org](http://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

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 backwards, 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

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

**Implementation of Session Law 2012-91**

**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 4 of Session  
Law 2012-91, House Bill 952.**

**December 1, 2012**

**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 4 of the session law requires a report on the implementation of the act to the Environmental Review Commission including an analysis of air toxic emissions changes and a summary of results of the DAQ's analysis of air quality impacts. This report addresses the Section 4 requirements.

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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 established 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 4 of S.L. 2012-91 requires DAQ to report on the implementation of the session law including an analysis of air toxics emissions changes and a summary of results of DAQ's analysis of air quality impacts. The review and data analysis contained in this report are pursuant to Section 4 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.

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.

### IMPLEMENTATION OF S.L. 2012-91

The DAQ began tracking permit actions specifically impacted by the exemptions and process provided in Section 1 of S.L. 2012-91. Starting with the day the bill became law (June 28, 2012), through October 28, 2012, the DAQ issued 115 new or modified air quality permits. Only 12 of those 115 (10.4%) permit actions involved a request that could result in an increase in the emission of toxic air pollutants. Each of those 12 permit applications were reviewed to determine if the emission of toxic air pollutants from the facility would present an unacceptable risk to human health. None of the 12 permit applications were determined to pose such a risk. In four cases, the proposed emission rates were compared to the toxic permitting emission rate found in 02Q .0700, and were found to be below those levels. In six of the cases, modeling had been done previously at these facilities that allowed DAQ to compare the previously modeled emission rate(s) to the emission rate(s) being proposed as a result of the requested modification. In all six of those cases, DAQ determined that the proposed modification would be below the AAL guidelines. Finally, in two cases, the permit applicant voluntarily provided a modeling analysis demonstrating the emissions changes would be below the AAL guidelines. DAQ confirmed the results of those modeling analyses. A summary of the results of the division's analysis of air quality impacts is provided in Table 1 below.

**Table 1: Analysis of air toxics permit applications: June 28, 2012 through October 28, 2012.**

<b>Toxic air emissions below thresholds for further analysis</b>	<b>Modeling done previously for the facility used to determine compliance</b>	<b>Facility voluntarily provided air toxics modeling showing compliance</b>	<b>Air toxics modeling over AAL resulting in Director's Call</b>
4	6	2	0

For each of the permit applications summarized above, DAQ also tracked the pollutants that were most commonly encountered in the analyses. Those pollutants are listed in Table 2 below.

**Table 2: Toxic air pollutants most frequently encountered during permit application reviews for the period June 28, 2012 through October 28, 2012.**

<b>Toxic air pollutant</b>	<b>Number of instances &gt;1</b>
Formaldehyde	5
Arsenic	4
Beryllium	4
Cadmium	4
Nickel	4
Manganese	4
Benzene	2
Fluorides	2

### ANALYSIS OF AIR TOXIC EMISSIONS CHANGES

Emissions of toxic air pollutants have decreased substantially over the last two decades due to a variety of federal and state emissions reduction measures. Not only have the federal and state rules designed to reduce toxic air pollution been implemented on stationary sources, but toxic air emissions also have dropped as emissions of smog forming pollutants have been reduced from sources like cars and trucks.

In North Carolina, the state rules identify 97 toxic air pollutants (TAPs) while the USEPA identifies 187 hazardous air pollutants (HAPs). There are 21 unique compounds on the state TAP list that are not on the federal HAP list. Regardless of what list these compounds are on, the reductions in these emissions have been noteworthy. Table 3 provides the three most recent years of air toxics emissions data. Figure 1 illustrates the longer term decreases in HAPs and TAPs in North Carolina over nearly two decades.

**Table 3. North Carolina air toxic emissions changes 2009-2011.**

	<b>2009</b>	<b>2010</b>	<b>2011</b>
TAP Only (pounds/yr)	38,142,325	36,385,525	31,712,917
HAP Only (pounds/yr)	32,774,769	32,604,346	27,977,691
HAP + TAP (pounds/yr)	48,493,673	46,497,405	41,410,502

TAP = 97 Toxic Air Pollutants regulated by NC State Air Toxics Rule

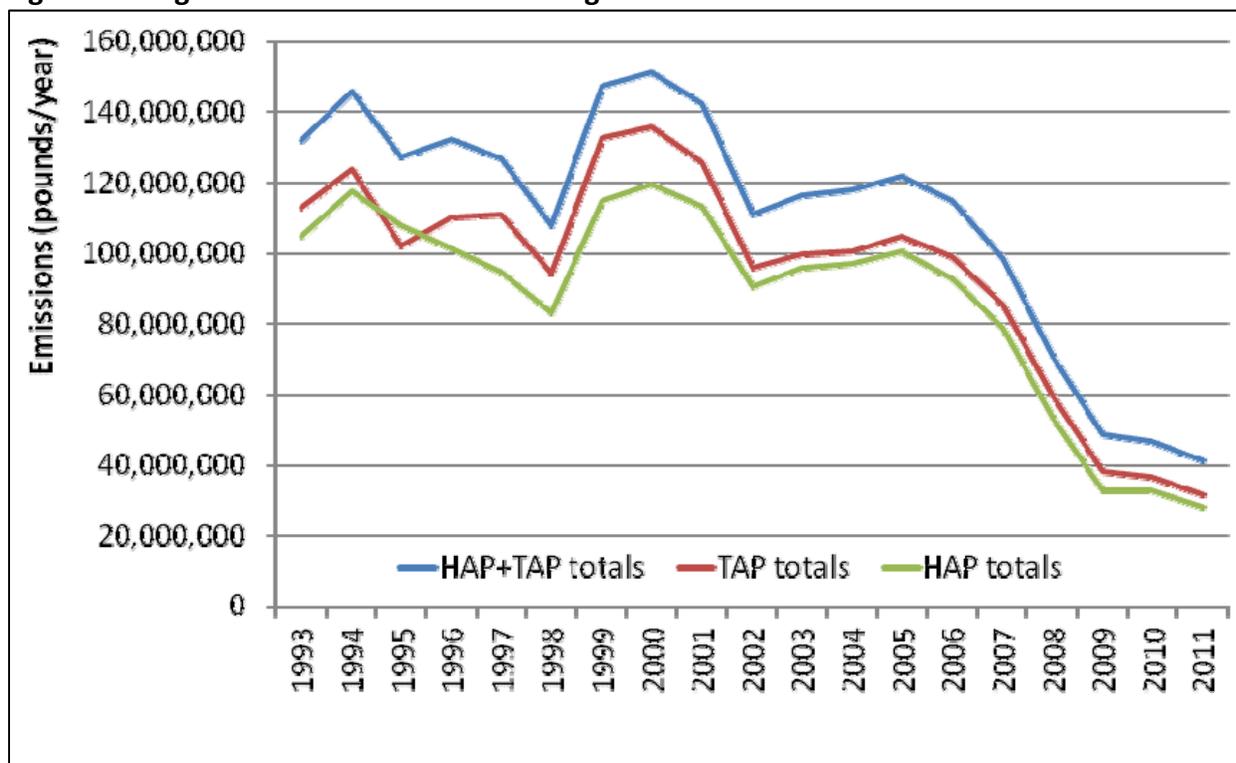
HAP = 187 Hazardous Air Pollutant regulated under 40 CFR Part 61 & 63

HAP + TAP = 111 unique HAPS added to the 97 TAPs.

Note: 2011 represents emissions reported for 2011 operating year or the most currently reported year.

Source: Annual toxic air emissions reported by North Carolina facilities to the DAQ.

Figure 1. Long-term air toxic emissions changes 1993-2011



Source: Annual toxic air emissions reported by North Carolina facilities to the DAQ.

In summary, the DAQ issued 115 new or modified air quality permits between June 28, 2012 and October 28, 2012. Only 12 of those 115 (10.4%) permit actions involved a request that could result in an increase in the emission of toxic air pollutants. Each of those 12 permit applications were reviewed to determine if the emission of toxic air pollutants from the facility would present an unacceptable risk to human health. None of the 12 permit applications were determined to pose such a risk. Additionally, a review of DAQ's emissions inventory for toxic air pollutants shows a continued downward trend, primarily as a result of federal and state emissions reduction measures. Toxic air emissions in North Carolina decreased by 62 percent between 1998 and 2011.

**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 21<sup>st</sup> 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 28<sup>th</sup> 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<sub>2</sub>, CAS No. 7718-54-9), sulfate (NiSO<sub>4</sub>, CAS No. 7786-81-4), and nitrate (Ni(NO<sub>3</sub>)<sub>2</sub>, 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	$2.3 \times 10^{-7}$			
asbestos (1332-21-4)	$2.8 \times 10^{-11}$ fibers/ml			
aziridine (151-56-4)		0.006		
benzene (71-43-2)	$1.2 \times 10^{-4}$			
benzidine and salts (92-87-5)	$1.5 \times 10^{-8}$			
benzo(a)pyrene (50-32-8)	$3.3 \times 10^{-5}$			
benzyl chloride (100-44-7)			0.5	
beryllium (7440-41-7)	$4.1 \times 10^{-6}$			
beryllium chloride (7787-47-5)	$4.1 \times 10^{-6}$			
beryllium fluoride (7787-49-7)	$4.1 \times 10^{-6}$			
beryllium nitrate (13597-99-4)	$4.1 \times 10^{-6}$			
bioavailable chromate pigments, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
bis-chloromethyl ether (542-88-1)	$3.7 \times 10^{-7}$			
bromine (7726-95-6)				0.2
1,3-butadiene (106-99-0)	$4.4 \times 10^{-4}$			
cadmium (7440-43-9)	$5.5 \times 10^{-6}$			
cadmium acetate (543-90-8)	$5.5 \times 10^{-6}$			
cadmium bromide (7789-42-6)	$5.5 \times 10^{-6}$			
carbon disulfide (75-15-0)		0.186		
carbon tetrachloride (56-23-5)	$6.7 \times 10^{-3}$			
chlorine (7782-50-5)		0.0375		0.9
chlorobenzene (108-90-7)		2.2		
chloroform (67-66-3)	$4.3 \times 10^{-3}$			
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)	$8.3 \times 10^{-2}$			
ethyl acetate (141-78-6)			140	
ethylenediamine (107-15-3)		0.3	2.5	
ethylene dibromide (106-93-4)	$4.0 \times 10^{-4}$			
ethylene dichloride (107-06-2)	$3.8 \times 10^{-3}$			
ethylene glycol monoethyl ether (110-80-5)		0.12	1.9	
ethylene oxide (75-21-8)	$2.7 \times 10^{-5}$			
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)	$7.6 \times 10^{-8}$			
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)	$2.4 \times 10^{-2}$		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)	$2.1 \times 10^{-6}$			
nitric acid (7697-37-2)				1
nitrobenzene (98-95-3)		0.06	0.5	
n-nitrosodimethylamine (62-75-9)	$5.0 \times 10^{-5}$			
non-specific chromium (VI) compounds, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
pentachlorophenol (87-86-5)		0.003	0.025	
perchloroethylene (127-18-4)	$1.9 \times 10^{-1}$			

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)	$8.3 \times 10^{-5}$			
soluble chromate compounds, as chromium (VI) equivalent		$6.2 \times 10^{-4}$		
styrene (100-42-5)			10.6	
sulfuric acid (7664-93-9)		0.012	0.1	
tetrachlorodibenzo-p-dioxin (1746-01-6)	$3.0 \times 10^{-9}$			
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)	$6.3 \times 10^{-3}$			
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)	$5.9 \times 10^{-2}$			
trichlorofluoromethane (75-69-4)			560	
1,1,2-trichloro-1,2,2- trifluoroethane (76-13-1)				950
vinyl chloride (75-01-4)	$3.8 \times 10^{-4}$			
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 or 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<sub>2</sub>, CAS No. 7718-54-9), sulfate (NiSO<sub>4</sub>, CAS No. 7786-81-4), and nitrate (Ni(NO<sub>3</sub>)<sub>2</sub>, 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 public 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	Chronic Toxicants	Acute Systemic Toxicants	Acute Irritants
	lb/yr	lb/day	lb/hr	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 X 10 <sup>-6</sup>			
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.*



## North Carolina Department of Environment and Natural Resources

### MEMORANDUM

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TO: Environmental Review Commission

FROM: J. Neal Robbins  
Director of Legislative and Intergovernmental Affairs

SUBJECT: Implementation of Session Law 2012-91

DATE: December 1, 2013

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Attached for your information is the Department of Environment and Natural Resources report on the implementation of Session Law (S.L.) 2012-91. This report is provided to you pursuant to Section 4 of S.L. 2012-91 which states: "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." The attached report is submitted to fulfill this requirement.

If you have any questions or need additional information, please contact me by phone at 919.707.8618 or via e-mail at [neal.robbs@ncdenr.gov](mailto:neal.robbs@ncdenr.gov).

cc: Mitch Gillespie, DENR Assistant Secretary for Environment  
Sheila Holman, Division of Air Quality Director

**Implementation of Session Law 2012-91**

**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 4 of Session  
Law 2012-91, House Bill 952.**

**December 1, 2013**

**EXECUTIVE SUMMARY**

Session Law 2012-91 exempts certain sources of toxic air pollutants from North Carolina's air toxics rules as long as the Division of Air Quality (DAQ) determines that the emissions from those facilities will not pose unacceptable risks to human health. Additionally, Section 4 of the session law requires a report on the implementation of the act to the Environmental Review Commission including an analysis of air toxic emissions changes and a summary of results of the DAQ's analysis of air quality impacts. This report addresses the Section 4 requirements.

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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 67 percent between 1998 and 2012. 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 established 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 4 of S.L. 2012-91 requires DAQ to report on the implementation of the session law including an analysis of air toxics emissions changes and a summary of results of DAQ's analysis of air quality impacts. The review and data analysis contained in this report are pursuant to Section 4 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.

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.

### IMPLEMENTATION OF S.L. 2012-91

The DAQ began tracking permit actions specifically impacted by the exemptions and process provided in Section 1 of S.L. 2012-91. Starting with the day the bill became law (June 28, 2012), through September 30, 2013, the DAQ and local air quality programs issued, renewed or revised 960 air quality permits. Only 36 of those 960 (3.8%) permit actions involved a request that could result in an increase in the emission of toxic air pollutants. Each of those 36 permit applications were reviewed to determine if the emission of toxic air pollutants from the facility would present an unacceptable risk to human health. None of the 36 permit applications were determined to pose such a risk. In nine cases, the proposed emission rates were compared to the toxic permitting emission rate found in 02Q .0700, and were found to be below those levels. In sixteen of the cases, modeling had been done previously at these facilities that allowed DAQ or the local air programs to compare the previously modeled emission rate(s) to the emission rate(s) being proposed as a result of the requested modification. In all sixteen of those cases, DAQ or the local programs determined that the proposed modification would be below the AAL guidelines. In seven cases, the permit applicant voluntarily provided a modeling analysis demonstrating the emissions changes would be below the AAL guidelines. The DAQ or the local programs confirmed the results of those modeling analyses. Finally, in 4 cases, the agency performed modeling showing no unacceptable risk. A summary of the results of the division's analysis of air quality impacts is provided in Table 1 below.

**Table 1: Analysis of air toxics permit applications: June 28, 2012 through September 30, 2013.**

<b>Toxic air emissions below thresholds for further analysis</b>	<b>Modeling done previously for the facility used to determine compliance</b>	<b>Facility voluntarily provided air toxics modeling showing compliance</b>	<b>Air toxics modeling over AAL resulting in Director's Call</b>	<b>Agency performed modeling showing no unacceptable risk.</b>
9	16	7	0	4

## ANALYSIS OF AIR TOXIC EMISSIONS CHANGES

Emissions of toxic air pollutants have decreased substantially over the last two decades due to a variety of federal and state emissions reduction measures. Not only have the federal and state rules designed to reduce toxic air pollution been implemented on stationary sources, but toxic air emissions also have dropped as emissions of smog forming pollutants have been reduced from sources like cars and trucks.

In North Carolina, the state rules identify 97 toxic air pollutants (TAPs) while the USEPA identifies 187 hazardous air pollutants (HAPs). There are 21 unique compounds on the state TAP list that are not on the federal HAP list. Regardless of what list these compounds are on, the reductions in these emissions have been noteworthy. Table 2 provides the four most recent years of air toxics emissions data. Figure 1 illustrates the longer term decreases in HAPs and TAPs in North Carolina over nearly two decades.

**Table 2. North Carolina air toxic emissions changes 2009-2012.**

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
TAP Only (pounds/yr)	38,142,325	36,385,525	31,712,917	26,564,788
HAP Only (pounds/yr)	32,774,769	32,604,346	27,977,691	23,036,671
HAP + TAP (pounds/yr)	48,493,673	46,497,405	41,410,502	35,979,935

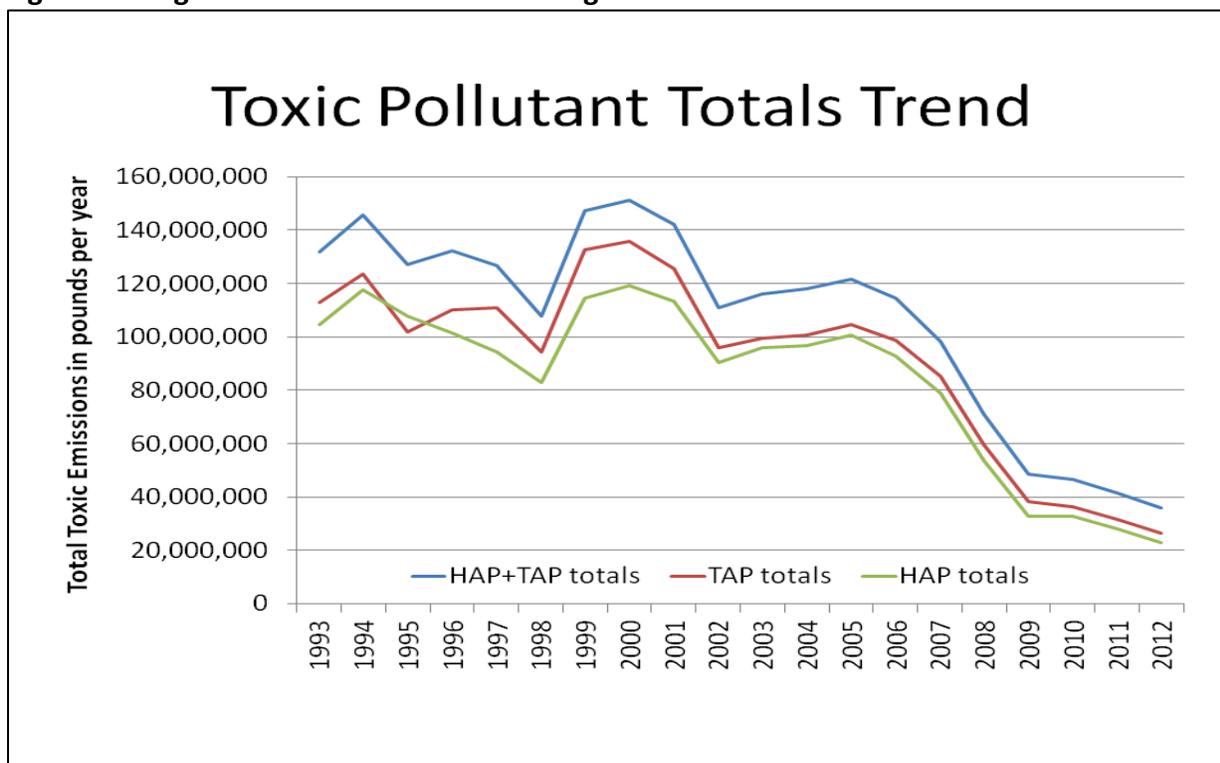
TAP = 97 Toxic Air Pollutants regulated by NC State Air Toxics Rule

HAP = 187 Hazardous Air Pollutant regulated under 40 CFR Part 61 & 63

HAP + TAP = 111 unique HAPS added to the 97 TAPs.

Note: 2012 represents emissions reported for 2012 operating year or the most currently reported year.

Source: Annual toxic air emissions reported by North Carolina facilities to the DAQ.

**Figure 1. Long-term air toxic emissions changes 1993-2012**

Source: Annual toxic air emissions reported by North Carolina facilities to the DAQ.

In summary, the DAQ issued, renewed or revised 960 air quality permits between June 28, 2012, and September 30, 2013. Only 36 (3.8%) of those 960 permit actions involved a request that could result in an increase in the emission of toxic air pollutants. All of those 36 permit applications were reviewed to determine if the emission of toxic air pollutants from the facility would present an unacceptable risk to human health. None of the 36 permit applications were determined to pose such a risk. Additionally, a review of DAQ's emissions inventory for toxic air pollutants shows a continued downward trend, primarily as a result of federal and state emissions reduction measures. Toxic air emissions in North Carolina decreased by 67 percent between 1998 and 2012.

**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 21<sup>st</sup> 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 28<sup>th</sup> 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<sub>2</sub>, CAS No. 7718-54-9), sulfate (NiSO<sub>4</sub>, CAS No. 7786-81-4), and nitrate (Ni(NO<sub>3</sub>)<sub>2</sub>, 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	$2.3 \times 10^{-7}$			
asbestos (1332-21-4)	$2.8 \times 10^{-11}$ fibers/ml			
aziridine (151-56-4)		0.006		
benzene (71-43-2)	$1.2 \times 10^{-4}$			
benzidine and salts (92-87-5)	$1.5 \times 10^{-8}$			
benzo(a)pyrene (50-32-8)	$3.3 \times 10^{-5}$			
benzyl chloride (100-44-7)			0.5	
beryllium (7440-41-7)	$4.1 \times 10^{-6}$			
beryllium chloride (7787-47-5)	$4.1 \times 10^{-6}$			
beryllium fluoride (7787-49-7)	$4.1 \times 10^{-6}$			
beryllium nitrate (13597-99-4)	$4.1 \times 10^{-6}$			
bioavailable chromate pigments, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
bis-chloromethyl ether (542-88-1)	$3.7 \times 10^{-7}$			
bromine (7726-95-6)				0.2
1,3-butadiene (106-99-0)	$4.4 \times 10^{-4}$			
cadmium (7440-43-9)	$5.5 \times 10^{-6}$			
cadmium acetate (543-90-8)	$5.5 \times 10^{-6}$			
cadmium bromide (7789-42-6)	$5.5 \times 10^{-6}$			
carbon disulfide (75-15-0)		0.186		
carbon tetrachloride (56-23-5)	$6.7 \times 10^{-3}$			
chlorine (7782-50-5)		0.0375		0.9
chlorobenzene (108-90-7)		2.2		
chloroform (67-66-3)	$4.3 \times 10^{-3}$			
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)	$8.3 \times 10^{-2}$			
ethyl acetate (141-78-6)			140	
ethylenediamine (107-15-3)		0.3	2.5	
ethylene dibromide (106-93-4)	$4.0 \times 10^{-4}$			
ethylene dichloride (107-06-2)	$3.8 \times 10^{-3}$			
ethylene glycol monoethyl ether (110-80-5)		0.12	1.9	
ethylene oxide (75-21-8)	$2.7 \times 10^{-5}$			
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)	$7.6 \times 10^{-8}$			
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)	$2.4 \times 10^{-2}$		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)	$2.1 \times 10^{-6}$			
nitric acid (7697-37-2)				1
nitrobenzene (98-95-3)		0.06	0.5	
n-nitrosodimethylamine (62-75-9)	$5.0 \times 10^{-5}$			
non-specific chromium (VI) compounds, as chromium (VI) equivalent	$8.3 \times 10^{-8}$			
pentachlorophenol (87-86-5)		0.003	0.025	
perchloroethylene (127-18-4)	$1.9 \times 10^{-1}$			

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)	$8.3 \times 10^{-5}$			
soluble chromate compounds, as chromium (VI) equivalent		$6.2 \times 10^{-4}$		
styrene (100-42-5)			10.6	
sulfuric acid (7664-93-9)		0.012	0.1	
tetrachlorodibenzo-p-dioxin (1746-01- 6)	$3.0 \times 10^{-9}$			
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)	$6.3 \times 10^{-3}$			
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)	$5.9 \times 10^{-2}$			
trichlorofluoromethane (75-69-4)			560	
1,1,2-trichloro-1,2,2- trifluoroethane (76-13-1)				950
vinyl chloride (75-01-4)	$3.8 \times 10^{-4}$			
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 or 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 ( $\text{NiCl}_2$ , CAS No. 7718-54-9), sulfate ( $\text{NiSO}_4$ , CAS No. 7786-81-4), and nitrate ( $\text{Ni}(\text{NO}_3)_2$ , 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 public 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	Chronic Toxicants	Acute Systemic Toxicants	Acute Irritants
	lb/yr	lb/day	lb/hr	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 X 10 <sup>-6</sup>			
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.*

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## Chapter VII

The following documentation of filing and notification is incorporated as part of this hearing record and is maintained on file:

1. ENR 101 Internal Approval Form.
2. Submission for Notice Form and material submitted to the Office of Administrative Hearings.
3. The public notice as it appears in *The North Carolina Register* Volume 28, Issue 04, pages 332-347.
4. Memorandum transmitting hearing notice and proposal to regional offices for public inspection.
5. Memorandum transmitting hearing notice and proposal to local programs.
6. Submission of Filing Forms and material filed with Office of Administrative Hearings.
7. Executive Order No. 70 Certification Form

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