

DRAFT

5/5/88

PROPOSED REGULATIONS
NRCD - ENVIRONMENTAL MANAGEMENT

2D .1100

SECTION .1100 - CONTROL OF TOXIC AIR POLLUTANTS

.1101 PURPOSE

This Section sets forth the regulations for the control of toxic air pollutants to protect human health.

History Note: Statutory Authority G.S. 143-215.3(a)(1);
143-215.107(a)(1),(3),(4),(5); 143B-282;
Eff. January 1, 1989.

.1102 APPLICABILITY

(a) The toxic air pollutant regulations in this Section apply to all facilities that emit a toxic air pollutant that are required to have permit under 15 NCAC 2H .0610.

(b) When a regulation in Section .0500, except for Paragraph (2) of Regulation .0517 or Regulations .0524 or .0525, or .0900 of this Subchapter and this Section regulates the same pollutant, the more restrictive regulation shall apply. When a source's emissions of the same chemical compound or class of compounds designated in Regulation .1104 of this Section is also controlled by Paragraph (2) of Regulation .0517 or Regulation .0524 or .0525 of this Subchapter, then the requirements of Paragraph (2) of Regulation .0517 or Regulations .0524 or .0525 of this Subchapter shall prevail.

History Note: Statutory Authority G.S. 143-215.3(a)(1);
143-215.107(a)(1),(3),(4),(5); 143B-282;
Eff. January 1, 1989.

.1103 DEFINITION

For the purpose of this Section, "Toxic Air Pollutant" means a substance that is listed in Regulation .1104 of this Section.

History Note: Statutory Authority G.S. 143-213;
143-215.3(a)(1); 143B-282;
Eff. January 1, 1989.

.1104 TOXIC AIR POLLUTANT LIMITATIONS

A facility shall not emit any of the following toxic air pollutants in such quantities that may cause or contribute beyond the premises 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 maximum acceptable ambient levels in milligrams per cubic meter at 77° F and 29.92 inches of mercury pressure (except for asbestos):

PROPOSED REGULATIONS
NRCD - ENVIRONMENTAL MANAGEMENT

20 .1100

	Annual	24-hour	1-hour	15-minute
(1) acetaldehyde				27
(2) acetic acid				3.7
(3) acrolein				0.08
(4) acrylonitrile	1.5×10^{-4}			
(5) ammonia				2.7
(6) ammonium bichromate	8.3×10^{-8}			
(7) ammonium chromate	8.3×10^{-8}			
(8) aniline			1	
(9) arsenic	2.3×10^{-7}			
(10) arsenic acid	2.3×10^{-7}			
(11) arsenic disulfide	2.3×10^{-7}			
(12) arsenic pentoxide	2.3×10^{-7}			
(13) arsenic trichloride	2.3×10^{-7}			
(14) arsenic trioxide	2.3×10^{-7}			
(15) arsenic trisulfide	2.3×10^{-7}			
(16) asbestos	2.8×10^{-11} fibers/ml			
(17) aziridine		0.006		
(18) benzidine and salts	1.5×10^{-8}			
(19) benzo(a)pyrene	3.3×10^{-5}			
(20) benzyl chloride			0.5	
(21) beryllium	4.1×10^{-6}			
(22) beryllium chloride	4.1×10^{-6}			
(23) beryllium fluoride	4.1×10^{-6}			
(24) beryllium nitrate	4.1×10^{-6}			
(25) bis-chloromethyl ether	3.7×10^{-7}			
(26) bromine				0.2
(27) 1,3-butadiene	1.7×10^{-4}			
(28) cadmium	5.5×10^{-6}			
(29) cadmium acetate	5.5×10^{-6}			
(30) cadmium bromide	5.5×10^{-6}			
(31) calcium arsenate	2.3×10^{-7}			
(32) calcium arsenite	2.3×10^{-7}			
(33) calcium chromate	8.3×10^{-8}			
(34) carbon disulfide		0.186		
(35) carbon tetrachloride	6.7×10^{-3}			
(36) chlorine		0.0375		0.9

NORTH CAROLINA ADMINISTRATIVE CODE

LAM 012419

DPMC-13774

PROPOSED REGULATIONS
NRCD ENVIRONMENTAL MANAGEMENT

2D .1100

	Annual	24-hour	1-hour	15-minute
(37) chlorobenzene		2.2		
(38) chloroform	4.3×10^{-3}			
(39) chloroprene		0.44	3.5	
(40) chromium (VI)	8.3×10^{-8}			
(41) chromic acid	8.3×10^{-8}			
(42) cresol			2.2	
(43) cupric acetoarsenite	2.3×10^{-7}			
(44) p-dichlorobenzene				66
(45) dichlorodifluoromethane		247		
(46) dichlorofluoromethane		0.5		
(47) di(2-ethylhexyl) phthalate		0.03		
(48) dimethyl sulfate		0.003		
(49) 1,4-dioxane		0.56		
(50) epichlorohydrin	8.3×10^{-2}			
(51) ethyl acetate			140	
(52) ethylenediamine		0.3	2.5	
(53) ethylene dibromide	4.0×10^{-4}			
(54) ethylene dichloride	3.8×10^{-3}			
(55) ethylene glycol monoethyl ether		0.12	1.9	
(56) ethylene oxide	2.7×10^{-5}			
(57) ethyl mercaptan			0.1	
(58) fluorides		0.016	0.25	
(59) formaldehyde				0.15
(60) hexachlorocyclo- pentadiene		0.0006	0.01	
(61) hexachlorodibenzo-	7.6×10^{-8}			
p-dioxin				
(62) n-hexane		1.1		
(63) hexane isomers				360
(64) hydrazine		0.0006		
(65) hydrogen chloride				0.7
(66) hydrogen cyanide		0.14	1.1	
(67) hydrogen fluoride		0.03		0.25
(68) hydrogen sulfide				2.1
(69) lead arsenate	2.3×10^{-7}			
(70) lithium chromate	8.3×10^{-8}			
(71) maleic anhydride		0.012	0.1	
(72) manganese and compounds		0.03		
(73) manganese cyclopentadienyl tricarbonyl		0.0006		
(74) manganese tetroxide		0.006		

LAM 012420

NORTH CAROLINA ADMINISTRATIVE CODE

DPMC-13775

PROPOSED REGULATIONS
NRCD ENVIRONMENTAL MANAGEMENT

2D .1100

	Annual	24-hour	1-hour	15-minute
(75) mercury, alkyl		0.00006		
(76) mercury, aryl and inorganic compounds		0.0006		
(77) mercury, vapor		0.0006		
(78) methyl chloroform		12		245
(79) methylene chloride	2.4×10^{-2}			
(80) methyl ethyl ketone		3.7		88.5
(81) methyl isobutyl ketone		2.5		30
(82) methyl mercaptan			0.05	
(83) nickel refinery dust	3.3×10^{-5}			
(84) nickel subsulfide	2.1×10^{-6}			
(85) nitric acid				1
(86) nitrobenzene		0.06	0.5	
(87) N-nitrosodimethylamine	5.0×10^{-5}			
(88) pentachlorophenol		0.006	0.025	
(89) perchloroethylene	1.9×10^{-1}			
(90) phenol			0.95	
(91) phosgene		0.0025		
(92) phosphine				0.13
(93) potassium arsenate	2.3×10^{-7}			
(94) potassium arsenite	2.3×10^{-7}			
(95) potassium bichromate	8.3×10^{-8}			
(96) potassium chromate	8.3×10^{-8}			
(97) polychlorinated biphenyls	8.3×10^{-5}			
(98) sodium arsenate	2.3×10^{-7}			
(99) sodium arsenite	2.3×10^{-7}			
(100) sodium bichromate	8.3×10^{-8}			
(101) sodium chromate	8.3×10^{-8}			
(102) strontium chromate	8.3×10^{-8}			
(103) sulfuric acid		0.012	0.1	
(104) styrene		1.3		42.5
(105) tetrachlorodibenzo-p-dioxin	3.0×10^{-9}			
(106) 1,1,1,2-tetrachloro-2,2-difluoroethane		52		

NORTH CAROLINA ADMINISTRATIVE CODE

LAM 012421

DPMC-13776

PROPOSED REGULATIONS
NRCD ENVIRONMENTAL MANAGEMENT

2D .1100

	Annual	24-hour	1-hour	15-minute
(107) 1,1,2,2-tetrachloro- 1,2-difluoroethane		52		
(108) 1,1,1,2-tetrachloroethane	6.3×10^{-3}			
(109) toluene		4.7		56
(110) toluene-2,4-diisocyanate		0.0005		0.015
(111) trichlorofluoromethane			560	
(112) 1,1,2-trichloro- 1,2,2-trifluoroethane				950
(113) trichloroethylene	5.9×10^{-2}			
(114) vinyl chloride	3.8×10^{-4}			
(115) vinylidene chloride		0.12		
(116) xylene		2.7		65

History Note: Statutory Authority G.S. 143-215.3(a)(1);
143-215.107(a)(3),(4),(5); 143B-282;
Eff. January 1, 1989.

.1105 FACILITY REPORTING, RECORDKEEPING

(a) The owner or operator of a facility emitting a toxic air pollutant shall maintain records detailing all activities related to any compliance schedule.

(b) The owner or operator of a facility emitting a toxic air pollutant shall maintain, in writing, data and/or reports relating to monitoring instruments or procedures that will, upon review, assist in documenting the compliance status of the facility or control equipment to the satisfaction of the commission.

(c) Copies of all records and reports under Paragraphs (a) and (b) of this Regulation shall be retained by the owner or operator for a period of two years after the date on which the record was made or the report submitted, except that the director may extend the retention period in particular instances.

(d) Copies of all records and reports under this Section shall be made available to the director within thirty days of written request by the director.

History Note: Statutory Authority G.S. 143-215.3(a)(1);
143-215.68; 143-215.107(a)(4),(5); 143B-282;
Eff. January 1, 1989.

NORTH CAROLINA ADMINISTRATIVE CODE

LAM 012422

DPMC-13777

.1106 DETERMINATION OF AMBIENT AIR CONCENTRATIONS

Ambient air concentrations shall be determined by using appropriate Environmental Protection Agency dispersion modeling procedures or other methods specified by the commission. Ambient air concentrations are to be evaluated for annual periods over a calendar year, for 24-hour periods from midnight to midnight, for one-hour periods beginning on the hour, and for 15-minute periods beginning on the hour or 15, 30, or 45 minutes after the hour. The identification of each toxic air pollutant emitted and its corresponding emission rate shall be determined using mass balancing analysis, source testing, or other methods acceptable to the commission.

History Note: Statutory Authority G.S. 143-215.3(a)(1);
143-215.107(a)(3),(5); 143B-282;
Eff. January 1, 1989.

.1107 MULTIPLE FACILITIES

If an exceedance of an acceptable ambient level for a 15-minute, one-hour, or 24-hour value in Regulation .1104 of this Section results from emissions of two or more facilities, then the commission may require the subject facilities to apply additional controls or to otherwise reduce emissions. The effects of other facilities shall not be considered when determining compliance with an acceptable ambient level for an annual value in Regulation .1104 of this Section.

History Note: Statutory Authority G.S. 143-215.3(a)(1);
143-215.107(a)(3),(5); 143B-282;
Eff. January 1, 1989.

.1108 MULTIPLE POLLUTANTS

If a facility or combination of facilities emits two or more toxic air pollutants which act in the same way to affect human health so that their effects may be additive or enhanced and which have an acceptable ambient level for a 15-minute, one-hour, or 24-hour value in Regulation .1104 of this Section, then the commission may require the subject facility or facilities to apply additional controls or to otherwise reduce emissions. Additive or enhanced effects shall not be considered when two or more toxic air pollutants have only an acceptable ambient level for an annual value in Regulation .1104 of this Section.

History Note: Statutory Authority G.S. 143-215.3(a)(1);
143-215.107(a)(3),(5); 143B-282;
Eff. January 1, 1989.

PROPOSED AMENDMENTS
NR&CD - ENVIRONMENTAL MANAGEMENT

2D .0500

.0524 NEW SOURCE PERFORMANCE STANDARDS

(a) Sources of the following types when subject to new source performance standards promulgated in 40 CFR Part 60 shall comply with the emission standards, monitoring and reporting requirements, maintenance requirements, notification and record keeping requirements, performance test requirements, test method and procedure provisions, and any other provisions, as required therein, rather than with any otherwise-applicable regulation in this Section or Section .0900 or .1100 of this Subchapter which would be in conflict therewith:

History Note: Filed as a Temporary Amendment Eff. January 3, 1988, for a period of 180 days to Expire on June 30, 1988; Statutory Authority G.S. 143-215.3 (a) (1); 143-215.68; 143-215.107 (a) (5); Eff. June 18, 1976; Amended Eff. January 1, 1989; July 1, 1988; March 1, 1988; October 1, 1987; July 1, 1987; April 1, 1986; May 1, 1985; July 1, 1984; November 1, 1982; June 1, 1981; June 1, 1980.

.0525 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

(a) Sources emitting pollutants of the following types when 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 any other provisions, as required therein, rather than with any otherwise-applicable regulation in this Section or Section .0900 or .1100 of this Subchapter which would be in conflict therewith:

History Note: Statutory Authority G.S. 143-215.3(a) (1); 143-215.107 (a) (5); 143-215.68; Eff. June 18, 1976; Amended Eff. January 1, 1989; March 1, 1988; October 1, 1987; July 1, 1987; May 1, 1985; November 1, 1984; June 1, 1981; June 1, 1980.

NORTH CAROLINA ADMINISTRATIVE CODE

LAM 012424

DPMC-13779

PROPOSED AMENDMENT
NRCD - ENVIRONMENTAL MANAGEMENT

2D .0500

.0535 MALFUNCTIONS, START-UP AND SHUT-DOWN

(a) For the purpose of this Regulation the following definitions apply:

- (1) "Excess Emissions" means an emission rate that exceeds any applicable emission limitation or standard allowed by any regulation in Sections .0500 or .0900 of this Subchapter or by a permit condition or that exceeds an emission limit established in a permit issued under 15 NCAC 2H .0610.

(b) This Regulation does not apply to sources to which Regulation .0524 or .0525 of this Section applies ~~or to which 40--GFR Part-60-or-61-applies.~~

(d) All electric utility boiler units subject to a regulation in this Section shall have a malfunction abatement plan approved by the director. In addition, the director may require any other source that he has determined to have had a history of excess emissions to have a malfunction abatement plan approved by the director. The malfunction plans of electric utility boiler units and of other sources required to have them shall be implemented when a malfunction or other breakdown occurs. The purpose of the malfunction abatement plan is to prevent, detect, and correct malfunctions or equipment failures that could result in excess emissions. A malfunction abatement plan shall contain as a minimum:

(f) When excess emissions last for more than four hours or, in the case of a source and a pollutant regulated under Section .1100 of this Subchapter, when excess emissions last for any length of time, the owner or operator of a source of excess emissions which last for more than four hours and which results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions shall:

History Note: Statutory Authority G.S. 143-215.3(a)(1);
143-215.107(a)(4); 143-215.107(a)(5);
Eff. March 1, 1983;
Amended Eff. January 1, 1989; April 1, 1986;
July 1, 1984.

.0610 PERMIT REQUIREMENTS FOR TOXIC AIR POLLUTANTS

(a) No person shall cause or allow any toxic air pollutant named in 15 NCAC 2D .1104 to be emitted into the atmosphere from any source without having received a permit from the commission in accordance with the following:

- (1) Except for sources whose emissions result from only combusting unadulterated fossil fuels or unadulterated wood, sources and modifications which require a permit or permit modification because of the applicability of sections in Subchapter 2D other than Section .1100 and which begin construction after June 30, 1988, shall have received a permit or permit modification to emit toxic air pollutants before beginning construction and shall be in compliance with their permit conditions when beginning operations.
- (2) The owner or operator of any other source shall have 180 days to apply for a permit or permit modification after receiving written notification from the division requesting that the owner or operator of the facility apply for a permit or permit modification to emit toxic air pollutants.

(b) The owner or operator of a source who is applying for a permit or permit modification to emit toxic air pollutants as required by Subparagraph (a)(1) of this Regulation or who receives notification in accordance with Subparagraph (a)(2) of this Regulation before commencing construction shall:

- (1) demonstrate to the satisfaction of the commission that the emissions of toxic air pollutants from the facility will not cause or contribute beyond the premises to a significant ambient air concentration that may adversely affect human health as listed in 15 NCAC 2D .1104; or
- (2) demonstrate to the satisfaction of the commission that the ambient concentration beyond the premises for the subject toxic air pollutant will not adversely affect human health even though the concentration is higher than the acceptable ambient level in 15 NCAC 2D .1104.

(c) The owner or operator of any source not covered under paragraph (b) of this Regulation who is applying for a permit or permit modification to emit toxic air pollutants shall:

- (1) demonstrate to the satisfaction of the commission that the emissions of toxic air pollutants from the facility do not or will not cause or contribute beyond the premises to a significant ambient air concentration that may adversely affect human health as listed in 15 NCAC 2D .1104;

LAM 012426

PROPOSED REGULATION
NRCD - ENVIRONMENTAL MANAGEMENT

- (2) submit a compliance schedule acceptable to the commission that will reduce the subject toxic air pollutant ambient concentration to a level that will not cause or contribute beyond the premises to a significant ambient air concentration that may adversely affect human health as listed in 15 NCAC 2D .1104; or
- (3) demonstrate to the satisfaction of the commission that the ambient concentration beyond the premises for the subject toxic air pollutant does not or will not adversely affect human health even though the concentration is higher than the acceptable ambient level in 15 NCAC 2D .1104.
- (d) If the owner or operator of a facility demonstrates by modeling that the contribution of any toxic air pollutant emitted from his facility to the ambient air beyond his premises is less than 50 percent of the acceptable ambient level for 15-minute, one-hour, or 24-hour values given in 15 NCAC 2D .1104, he does not have to provide any further demonstration to complete his permit application unless he is required by the commission to do so in conjunction with the administration of 15 NCAC 2D .1107 or .1108.
- (e) The owner or operator of a source shall obtain a permit modification prior to exceeding the maximum toxic air pollutant emission rates supplied to the commission in the permit application.
- (f) Farmers using fertilizers, pesticides, or other agricultural chemicals containing one or more of the compounds listed in 15 NCAC 2D .1104 and following agricultural practices acceptable to the North Carolina Department of Agriculture and the commission do not need a permit under this Regulation for the use of these compounds in those agricultural operations.

History Note: Statutory Authority G.S. 143-215.3(a)(1);
143-215.108; 143B-282;
Eff. January 1, 1989.