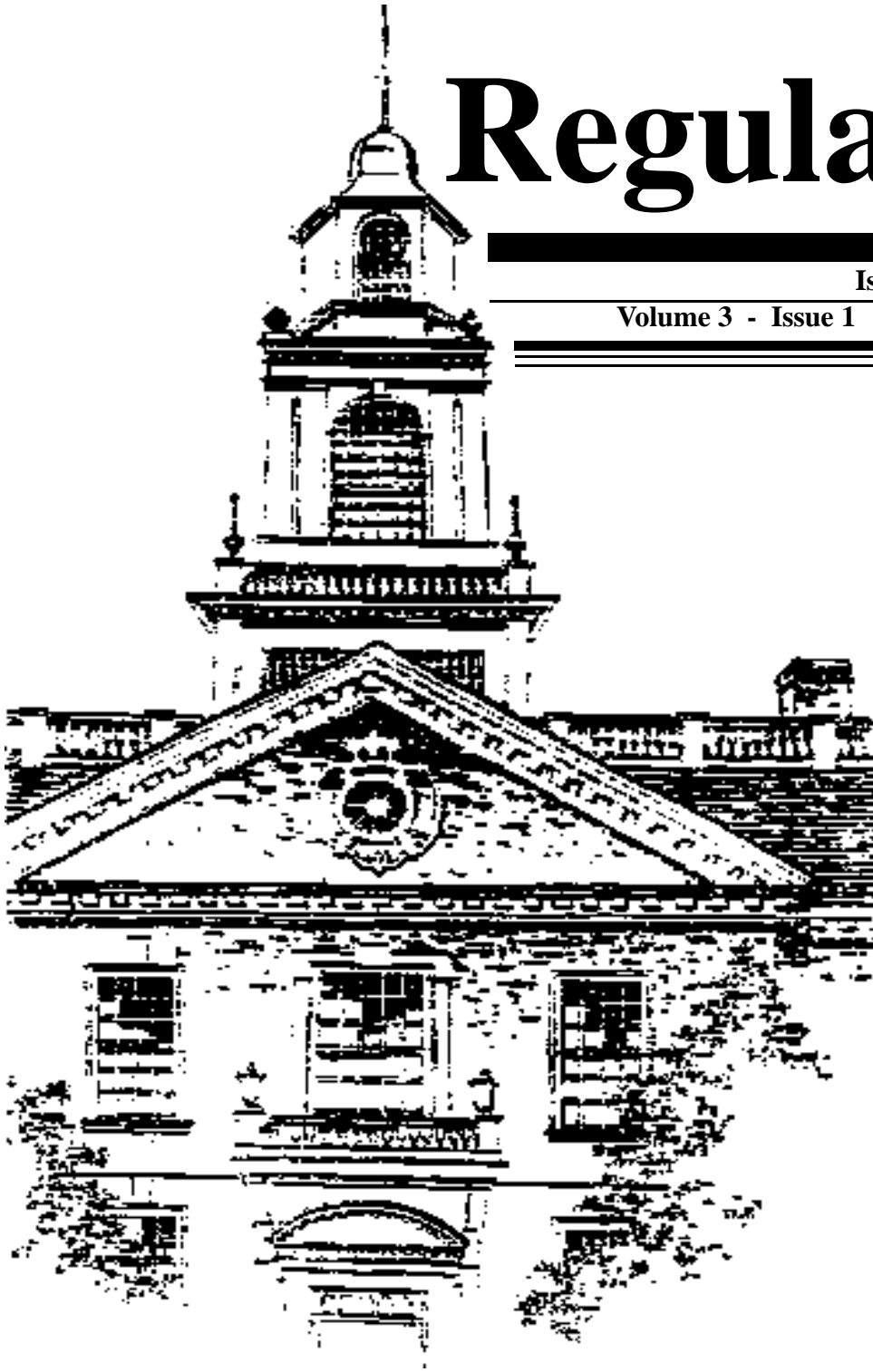

Delaware Register of Regulations



Issue Date: July 1, 1999

Volume 3 - Issue 1

Pages 1 - 115

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Pursuant to 29 Del. C. Chapter 11, Subchapter III, this issue of the Register contains all documents required to be published, and received on or before June 15, 1999.

INFORMATION ABOUT THE DELAWARE REGISTER OF REGULATIONS

DELAWARE REGISTER OF REGULATIONS

The Delaware Register of Regulations is an official State publication established by authority of 69 Del. Laws, c. 107 and is published on the first of each month throughout the year.

The Delaware Register will publish any regulations that are proposed to be adopted, amended or repealed and any emergency regulations promulgated.

The Register will also publish some or all of the following information:

- Governor's Executive Orders
- Governor's Appointments
- Attorney General's Opinions in full text
- Agency Hearing and Meeting Notices
- Other documents considered to be in the public interest.

CITATION TO THE DELAWARE REGISTER

The Delaware Register of Regulations is cited by volume, issue, page number and date. An example would be:

2:6 **Del. R.** 1000 - 1010 (December 1, 1998) refers to Volume 2, Issue 6, pages 1000 - 1010 of the Delaware Register issued on December 1, 1998.

SUBSCRIPTION INFORMATION

The cost of a yearly subscription (12 issues) for the Delaware Register of Regulations is \$120.00. Single copies are available at a cost of \$12.00 per issue, including postage. For more information contact the Division of Research at 302-739-4114 or 1-800-282-8545 in Delaware.

CITIZEN PARTICIPATION IN THE REGULATORY PROCESS

Delaware citizens and other interested parties may participate in the process by which administrative regulations are adopted, amended or repealed, and may initiate the process by which the validity and applicability of regulations is determined.

Under 29 **Del.C.** §10115 whenever an agency proposes to formulate, adopt, amend or repeal a regulation, it shall file notice and full text of such proposals, together with copies of the existing regulation being adopted, amended or repealed, with the Registrar for publication in the Register of Regulations pursuant to §1134 of this title. The notice shall describe the nature of the proceedings including a brief synopsis of the subject, substance, issues, possible terms of the agency action, a reference to the legal authority of the agency to act, and reference to any other regulations that may be impacted or affected by the proposal, and shall state the manner in which persons may present their views; if in writing, of the place to which and the final date by which such views may be submitted; or if at a public hearing, the date, time and place of the hearing. If a public hearing is to be held, such public hearing shall not be scheduled less than 20 days following publication of notice of the proposal in the Register of Regulations. If a public hearing will be held on the proposal, notice of the time, date, place and a summary of the nature of the proposal shall also be published in at least 2 Delaware newspapers of general circulation. The notice shall also be mailed to all persons who have made timely written requests of the agency for advance notice of its regulation-making proceedings.

The opportunity for public comment shall be held open for a minimum of 30 days after the proposal is published in the Register of Regulations. At the conclusion of all hearings and after receipt, within the time allowed, of all written materials, upon all the testimonial and written

INFORMATION ABOUT THE DELAWARE REGISTER OF REGULATIONS

evidence and information submitted, together with summaries of the evidence and information by subordinates, the agency shall determine whether a regulation should be adopted, amended or repealed and shall issue its conclusion in an order which shall include: (1) A brief summary of the evidence and information submitted; (2) A brief summary of its findings of fact with respect to the evidence and information, except where a rule of procedure is being adopted or amended; (3) A decision to adopt, amend or repeal a regulation or to take no action and the decision shall be supported by its findings on the evidence and information received; (4) The exact text and citation of such regulation adopted, amended or repealed; (5) The effective date of the order; (6) Any other findings or conclusions required by the law under which the agency has authority to act; and (7) The signature of at least a quorum of the agency members.

The effective date of an order which adopts, amends or repeals a regulation shall be not less than 10 days from the date the order adopting, amending or repealing a regulation has been published in its final form in the Register of Regulations, unless such adoption, amendment or repeal qualifies as an emergency under §10119.

Any person aggrieved by and claiming the unlawfulness of any regulation may bring an action in the Court for declaratory relief.

No action of an agency with respect to the making or consideration of a proposed adoption, amendment or repeal of a regulation shall be subject to review until final agency action on the proposal has been taken.

When any regulation is the subject of an enforcement action in the Court, the lawfulness of such regulation may be reviewed by the Court as a defense in the action.

Except as provided in the preceding section, no judicial review of a regulation is available unless a complaint therefor is filed in the Court within 30 days of the day the agency order with respect to the regulation was published in the Register of Regulations.

CLOSING DATES AND ISSUE DATES FOR THE DELAWARE REGISTER OF REGULATIONS

ISSUE _ DATE _	CLOSING _ DATE _	CLOSING _ TIME _
AUGUST 1	JULY 15	4:30 P.M.
SEPTEMBER 1	AUGUST 15	4:30 P.M.
OCTOBER 1	SEPTEMBER 15	4:30 P.M.
NOVEMBER 1	OCTOBER 15	4:30 P.M.
DECEMBER 1	NOVEMBER 15	4:30 P.M.

DIVISION OF RESEARCH STAFF:

William S. Montgomery, Director, Division of Research; **Walter G. Feindt**, Deputy Director; **Kathleen K. Amalfitano**, Secretary; **Jeffrey W. Hague**, Registrar of Regulations; **Maryanne McGonegal**, Research Analyst; **Ruth Ann Melson**, Legislative Librarian; **Deborah J. Messina**, Print Shop Supervisor; **Alex W. Mull**, Assistant Registrar; **Deborah A. Porter**, Administrative Secretary; **Virginia L. Potts**, Administrative Assistant; **Barbara Ryan**, Public Information Clerk; **Don Sellers**, Printer; **Thom Shiels**, Legislative Attorney; **Marguerite P. Smith**, Public Information Clerk; **Alice W. Stark**, Legislative Attorney; **Mary Jane Starkey**, Senior Secretary; **Marvin L. Stayton**, Printer; **Rochelle Yerkes**, Senior Secretary.

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**DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL
CONTROL**

DIVISION OF AIR AND WASTE MANAGEMENT

AIR QUALITY MANAGEMENT SECTION

Statutory Authority: 7 Delaware Code,

Chapter 60 (7 Del.C. Ch. 60)

Secretary's Order No. 99-A-0027

Re: Amendment to Delaware's 1999 Rate of Progress Plan for Kent and New Castle Counties for Demonstrating Compliance Toward Attainment of the National Ambient Air Quality Standard for Ground-Level Ozone

Date of Issuance: May 20, 1999

Effective Date of the Amendments: June 11, 1999

The following table was inadvertently omitted from the Final Regulation published in Volume 2, Issue 12 of the Delaware Register of Regulations. It should have appeared on page 2278.

Table 3-19 (Amended)

Sources Affected by OTC NOx MOU Phase II Regional Controls* and Projected Emission Reductions (in TPD)

Plant Name***	Point	Source SCC	1990 Emission (TPD)	1990 Emission Baseline (Ton/5month)	MOU Phase II Emission Allowance (Ton/5month)	1999 Current Control Projection (TPD)	1999 Control Strategy Projection (TPD)	NOx Emission Reduction** (TPD)
Delmarva Power Delaware City	002	2-01-001-01	0.003	0.6	2.0	0.003	0.013	-0.010
Delmarva Power	001	2-01-001-01	0.012	0.7	2.0	0.011	0.041	-0.030
Edge Moor New Castle County	002	1-01-002-12 1-01-004-04 1-01-005-01	4.552	655.8	242.0	4.134	2.016	2.118
	003	1-01-002-12 1-01-004-04 1-01-005-01 1-01-006-04	8.009	928.7	346.0	8.581	3.580	5.001
	004	1-01-004-01 1-01-005-01	12.138	1,436.0	650.0	17.865	6.589	11.276

ERRATA

		1-01-006-01						
Delmarva Power Hay Road	001	2-01-001-01	0.575	49.0	50.0	0.791	0.704	0.087
		2-01-002-01						
New Castle County	002	2-01-001-01	0.329	33.6	35.0	0.450	0.411	0.039
		2-01-002-01						
Dover Electric McKee Run Kent County	001	1-01-004-01	4.744	91.6	73.0	0.660	0.863	-0.203
		1-01-005-01	<u>0.903</u>					
		1-01-006-01						
	002	1-01-004-01	0.429	56.3	45.0	0.445	0.411	0.034
		1-01-005-01						
		1-01-006-01						
	003	1-01-004-01	2.980	411.7	186.0	3.577	1.615	1.962
		1-01-005-01						
		1-01-006-01						
First State Power Kent County	001	1-02-002-19	1.431	201.2	203.0	1.431	1.732	-0.301
		1-02-004-05						
Motiva Enterprises Delaware City	006	3-06-001-06	0.370	104.3	105.0	0.399	0.446	-0.047
		3-06-001-11						
New Castle County	019	3-06-001-06	0.137	20.1	21.0	0.147	0.171	-0.024
	034	3-06-001-06	0.470	69.5	71.0	0.507	0.576	-0.069
	067	1-01-004-01	1.354	229.0	94.0	1.321	0.667	0.654
		1-01-007-01						
	068	1-01-004-01	4.241	588.5	207.0	4.581	1.790	2.791
		1-01-007-01						
		1-01-008-01						
	069	1-01-004-01	4.301	647.4	228.0	4.646	1.818	2.828
		1-01-007-01						
		1-01-008-01						
	070	1-01-004-01	4.324	610.7	216.0	4.670	1.835	2.835
		1-01-007-01						

ERRATA

		1-01-008-01						
	074	3-06-001-06	0.263	116.7	118.0	0.284	0.318	-0.034
Total Reductions	(TPD)							28.907

* The OTC Phase II NO_x Control Strategy has been implemented in Delaware via Delaware Air Pollution Regulation 37. This table does not include four small sources of Delmarva Power (Christiana Substations 1 and 2, Madison Street Substation, and West Substation). The NO_x emissions from these four small sources were not included in Delaware's 1990 Base Year Emission Inventory because they were smaller than the 25 TPY threshold.

** A negative sign indicates an actual emission increase.

*** Plant names changes since 1990: (1) First State Power Point 001 was formerly Kraft General Foods Point 001. (2) Motiva Enterprises was formerly Star Enterprise. Motiva's Point 067 was formerly Delmarva Power's Point 001 at Delaware City.

Symbol Key

Roman type indicates the text existing prior to the regulation being promulgated. Underlined text indicates new text. Language which is ~~stricken~~ through indicates text being deleted.

Proposed Regulations

Under 29 Del.C. §10115 whenever an agency proposes to formulate, adopt, amend or repeal a regulation, it shall file notice and full text of such proposals, together with copies of the existing regulation being adopted, amended or repealed, with the Registrar for publication in the Register of Regulations pursuant to §1134 of this title. The notice shall describe the nature of the proceedings including a brief synopsis of the subject, substance, issues, possible terms of the agency action, a reference to the legal authority of the agency to act, and reference to any other regulations that may be impacted or affected by the proposal, and shall state the manner in which persons may present their views; if in writing, of the place to which and the final date by which such views may be submitted; or if at a public hearing, the date, time and place of the hearing. If a public hearing is to be held, such public hearing shall not be scheduled less than 20 days following publication of notice of the proposal in the Register of Regulations. If a public hearing will be held on the proposal, notice of the time, date, place and a summary of the nature of the proposal shall also be published in at least 2 Delaware newspapers of general circulation; The notice shall also be mailed to all persons who have made timely written requests of the agency for advance notice of its regulation-making proceedings.

**DEPARTMENT OF
ADMINISTRATIVE SERVICES
DIVISION OF PROFESSIONAL REGULATION
BOARD OF PHARMACY**

Statutory Authority: 24 Delaware Code,
Section 2509 (24 Del.C. 2509)

Notice of Re-Proposed Regulations

*** PLEASE NOTE THAT THE BOARD OF PHARMACY IS REPROPOSING THE REGULATION. THE ORIGINAL REPROPOSAL CAN BE FOUND IN THE MAY 1999 ISSUE OF THE REGISTER AT PAGE 1935 (2:11 DEL.R. 1935).**

PLEASE TAKE NOTICE, PURSUANT TO 29 Del.C. 2509, the Delaware Board of Pharmacy has developed and proposes to adopt comprehensive Rules and Regulations. The Board of Pharmacy proposes changes to Regulations V(A)(7) and V(D)(3)(c), Dispensing, Regulation VI-D, Pure Drug Regulations, and a new Regulation XIV-Administration of Injectable Medications in accord with the text that follows. The changes to Regulations V and VI require compliance with federal law and regulation and Regulation XIV is necessary to implement new statutory provisions for injections by pharmacists.

A public hearing will be held on the proposed Rules and Regulations on Wednesday, August 11, 1999 at 10:00 a.m. in the Jesse Cooper Building, Room 309 (Third Floor

Conference Room), Federal and Water Streets, Dover, DE 19901. The Board will receive and consider input in writing from any person on the proposed Rules and Regulations. Any written comments should be submitted to the Board of Pharmacy in care of Gradella E. Bunting at the above address or by calling (302) 739-4798.

This notice will be published in two newspapers of general circulation not less than twenty (20) days prior to the date of the hearing.

Regulation V. Dispensing. Paragraph A-7.

Compounding - The art of the extemporaneous preparation and manipulation of drugs as a result of a practitioner's prescription order or initiative based on the practitioner/patient/pharmacist relationship in the course of professional practice including the reconstitution of powders for administration and the preparation of drugs in anticipation of drug orders based on routine, regularly observed prescribing patterns. Pharmaceutical compounding must be in compliance with FFDC A Section 503A and any regulations promulgated by FDA concerning compounding, pertaining to this section.

Regulation V Dispensing, Paragraph D-3-c.

Compounding is the responsibility of the pharmacist or the pharmacy intern under the direct supervision of the pharmacist. All compounding must be in compliance with

FFDCA Section 503A and any regulations promulgated by FDA concerning compounding pertaining to this section. The pharmacist may utilize the assistance of supportive personnel if the following is performed:

Regulation VI. Pure Drug Regulations. Paragraph D

All biologicals, vaccines, drugs, chemicals, preparations and compounds must be packaged, labeled, stored and preserved in compliance with USP/NF and all other State and Federal standards. A pharmacist may, with the permission of the patient or the patient's agent, provide a "Customized Patient Medication Package" only to patients that are self-medicating. The containers shall meet all of the requirements of the USP/NF standard entitled, "Customized Patient Medication Package."

Regulation XIV. Administration of Injectable Medications.

A. Purpose

The purpose of this regulation is to implement provisions relating to the training, administration, and documentation of injectable medications, biologicals, and adult immunizations by pharmacists, pursuant to Chapter 25, Title 24 of the Delaware Code relating to Pharmacy.

B. Educational Requirements

1. In order to administer injectable medications, biologicals, and adult immunizations a licensed pharmacist shall provide proof that the following requirements have been satisfied:

a. The satisfactory completion of an academic and practical curriculum approved by the Board of Pharmacy which includes, but is not limited to, disease epidemiology, vaccine characteristics, injection technique, emergency response to adverse events, and related topics.

b. A current Cardio-Pulmonary Resuscitation (CPR) certificate acceptable to the Board of Pharmacy.

2. A registered pharmacist may only administer injections consistent with public health and safety and in a competent manner consistent with the academic curriculum and training completed.

3. Continued competency shall be maintained. A minimum of two hours (0.2 C.E.U.) of the thirty hour requirement for continuing education, every licensure period, must be dedicated to this area of practice.

4. Documentation of the satisfactory completion of the proper academic and practical training requirements shall be listed in a policy and procedures manual available for

inspection by the Board of Pharmacy. Maintaining such a policy and procedures manual shall be the responsibility of each registered pharmacist administering injections.

C. Practice Requirements

1. The pharmacist must maintain a manual with policies consistent with OSHA (Occupational Exposure to Bloodborne Pathogens) and procedures for dealing with acute adverse events.

2. Prescriptions and/or physician-approved written protocols will be maintained and available for inspection by the Board of Pharmacy.

3. The pharmacist, before administering an injectable medication, biological, or immunization, must counsel the patient and/or the patient's representative about contraindications and inform them in writing in specific and readily understood terms about the risks and benefits. A signed copy of the patient's consent shall be filed and available for inspection by the Board of Pharmacy.

4. The pharmacist must document all injections made and have such documentation available for inspection by the Board of Pharmacy. Documentation shall include:

a. Patient's name, address, phone number, date of birth, and gender.

b. Medication or vaccine administered, expiration date, lot number, site of administration, dose administered.

c. Date of original order and the date of administration(s).

d. The name of the prescribing practitioner and the pharmacist administering the dose.

5. The pharmacist must document fully and report all clinically significant adverse events to the primary-care provider and to the Vaccine Adverse Event Reporting System (VAERS) when appropriate.

6. The pharmacist shall provide documentation to each person receiving immunizations and when appropriate to the Immunization Section of the Department of Health and Social Services so the names of those individuals can be added to the Vaccination Registry.

7. All documentation and records required by this Regulation must be maintained for a period of not less than three years.

D. Classes and Indications of Approved Medications

Classes of medications shall include injectable medications, immunizations, and biologicals contained in the list of Approved Drug Products with Therapeutic Equivalence Evaluations or Drugs under clinical study when administered in accordance with indications approved by the Food & Drug Administration

E. Authorization

Only those registered pharmacists meeting the requirements of this Regulation shall administer injectable medications, biologicals, and adult immunizations. The Board of Pharmacy shall maintain a current list of those pharmacists so authorized. It is the responsibility of each registered pharmacist to maintain his or her current status on such list.

DEPARTMENT OF EDUCATION

Statutory Authority: 14 Delaware Code,
Section 122(D) (14 **Del.C.** 122(D))

EDUCATIONAL IMPACT ANALYSIS
CHILD NUTRITION

A. TYPE OF REGULATORY ACTION REQUESTED

Amendment to Existing Regulation

B. SYNOPSIS OF SUBJECT MATTER OF REGULATION

The Secretary of Education seeks the consent of the State Board of Education to adopt a new regulation requiring each local school district to have a policy on Child Nutrition. The regulation requires that the following six elements be addressed in the local district policy: Meals served to children will be nutritious and well balanced; the foods sold in addition to meals be selected to promote healthful eating habits and exclude those foods of minimal nutritional value; purchasing practices ensure the use of quality products; students have at least ten minutes for breakfast and twenty minutes for lunch after being served the meal; nutrition education be an integral part of the curriculum from preschool to twelfth grade; and food service personnel use training and resource materials developed by the Department of Education and the United States Department of Agriculture to motivate children in selecting healthy diets.

C. IMPACT CRITERIA

1. Will the regulation help improve student achievement as measured against state achievement standards?

The regulation addresses nutrition issues and does require that students be instructed in the concepts of good nutrition.

2. Will the regulation help ensure that all students

receive an equitable education?

The regulation addresses curriculum issues, not equity issues.

3. Will the regulation help to ensure that all students' health and safety are adequately protected?

The regulation addresses nutrition issues and does contribute to the health of all students through instruction on good nutrition habits.

4. Will the regulation help to ensure that all students' legal rights are respected?

The regulation addresses nutrition issues, not the legal rights of students.

5. Will the regulation preserve the necessary authority and flexibility of decision makers at the local board and school level?

The regulation will preserve the necessary authority and flexibility of decision makers at the local board and school level.

6. Will the regulation place unnecessary reporting or administrative requirements or mandates upon decision makers at the local board and school levels?

The regulation will not place unnecessary reporting or administrative requirements or mandates upon decision makers at the local board and school levels.

7. Will decision making authority and accountability for addressing the subject to be regulated be placed in the same entity?

The decision making authority and accountability for addressing the subject to be regulated will remain in the same entity.

8. Will the regulation be consistent with and not an impediment to the implementation of other state educational policies, in particular to state educational policies addressing achievement in the core academic subjects of mathematics, science, language arts and social studies?

The regulation will be consistent with and not an impediment to the implementation of other state educational policies.

9. Is there a less burdensome method for addressing the purpose of the regulation?

The regulation is required in order to have a uniform policy in all school districts.

10. What is the cost to the state and to the local school boards of compliance with the regulation?

There will be no additional costs to the state and to the local school boards.

800.21 Child Nutrition
July 1999

1.0 Each school district shall have a Child Nutrition Policy which at a minimum shall provide that:

1.1 Meals served to children will be nutritious and well balanced

1.2 The foods sold in addition in to meals be selected to promote healthful eating habits and exclude those foods of minimal nutritional value as defined by the Food and Nutrition Service, USDA 7 CFR Part 210, Appendix B.

1.3 Purchasing practices ensure the use of quality products.

1.4 Students have at least ten minutes for breakfast and twenty minutes for lunch after being served the meal.

1.5 Nutrition education be an integral part of the curriculum from preschool to twelfth grade.

1.6 Food service personnel use training and resource materials developed by the Department of Education and the United States Department of Agriculture to motivate children in selecting healthy diets.

**EDUCATIONAL IMPACT ANALYSIS PURSUANT
DSSAA CONSTITUTION AND BYLAWS**

A. TYPE OF REGULATORY ACTION REQUESTED
Amendment to Existing Regulation

B. SYNOPSIS OF SUBJECT MATTER OF REGULATION

The Secretary seeks the consent of the State Board of Education in adopting these recommended changes and revisions to the Constitution and Bylaws of the Delaware Secondary School Athletic Association (DSSAA). The attached changes are the result of an annual review of the Constitution and Bylaws Committee and the DSSAA Board of Directors. These two additional changes reflect items that clarify the amateur status rule and that codify the current practices regarding the sanctioning of all star contests and tournaments/meets and the inclusion of the new elements of the National Federation of State High School Associations sanctioning program for interstate tournaments/meets.

C. IMPACT CRITERIA

1. Will the amended regulations help improve student achievement as measured against state achievement standards ?

The amended regulations address athletic events participation issues, not curriculum issues.

2. Will the amended regulations help ensure that all students receive an equitable education?

The member schools are primarily responsible for administering the rules and regulations of the Delaware Secondary School Athletic Association. If properly applied, the rules and regulations provide “a level playing field” and an equal opportunity for all interested students to participate in interscholastic athletics. The DSSAA Board of Directors and the Executive Director will enforce the proposed regulations equitably without regard to athletic ability, race, gender, socio-economic status, or school affiliation.

3. Will the amended regulations help to ensure that all students' health and safety are adequately protected?

The amended regulations address amateur status and tournament participation, not health and safety issues.

4. Will the amended regulations help to ensure that all students' legal rights are respected?

Participation in interscholastic athletics is considered to be a privilege that is accorded to students who are in compliance with an accepted body of eligibility rules and regulations and not a legal right. Nevertheless, the DSSAA Bylaws permit schools to request waivers on behalf of their students and also provide an exhaustive appeals process. It is the opinion of the DSSAA attorney that none of the proposed revisions will infringe upon the legal rights of students enrolled at DSSAA member schools.

5. Will the amended regulations preserve the necessary authority and flexibility of decision makers at the local board and school level?

For the most part, DSSAA rules and regulations are proposed, revised, and approved by member school representatives because both the Constitution and Bylaws Committee and the Board of Directors are comprised of local school board members, superintendents, principals, and athletic directors/coaches. Therefore, school administrators only relinquish authority when they collectively believe that it is necessary and in the best interests of interscholastic athletics to do so. The proposed revisions do not deprive administrators of their decision making authority and, in fact, proposal #26 expands the discretionary authority of

school principals with regard to athletic-related expenditures.

6. Will the amended regulations place unnecessary reporting or administrative requirements or mandates upon decision makers at the local board and school levels?

The amended regulations will not create any undue reporting or administrative requirements for the member schools.

7. Will decision making authority and accountability for addressing the subject to be regulated be placed in the same entity?

The proposed changes do not shift any responsibilities with regard to the implementation and enforcement of DSSAA rules and regulations. In addition, the current decision making structure will not be altered in any way. The proposed revisions deal primarily with specific athletic-related situations and not with a fundamental change in the governance of DSSAA or the distribution of authority.

8. Will the regulations be consistent with and not an impediment to the implementation of other state educational policies, in particular to state educational policies addressing achievement in the core academic subjects of mathematics, science, language arts and social studies?

The amended regulations will be consistent with and not an impediment to the implementation of other state educational policies.

9. Is there a less burdensome method for addressing the purpose of these regulations?

The proposed changes will not create an administrative burden for DSSAA member schools. The proposals that represent substantive changes are carefully measured responses to specific situations or prevailing conditions that the DSSAA Board of Directors and the member schools felt the need to address.

10. What is the cost to the state and local school boards of compliance with these regulations?

The State Board of Education and local school boards will incur no additional costs as a result of the implementation of the attached proposals.

1000.4 CONSTITUTION AND BYLAWS PROPOSALS

Rule 1. Eligibility, Section 5. Amateur 5.

5. Receives cash or a cash equivalent (savings bond, certificate of deposit, etc.), merchandise or a merchandise

discount, (except for discount arranged by school for part of team uniform) a reduction or waiver of fees, a gift certificate, or other valuable consideration as a result of his/her participation in an organized team or individual competition, or an instructional camp, or clinic.

Accepting an event program and/or a complimentary t-shirt or event program item (t-shirt, hat, equipment bag, etc.) that is inscribed with a reference to the event, has a value of no more than \$25.00, and is provided to all of the participants shall not jeopardize his/her amateur status.

Rule 33. Sanctions - School Team Competition

~~A. During the DSSAA designated sport season, schools may obtain sanctions to participate only in competition involving school sponsored teams. In an interstate tournament or meet in which four (4) or more schools participate, sanctions must be obtained from the state associations involved and from the National Federation of State High School Associations. Sanctions shall be granted in accordance with the following criteria:~~

~~1. The competition shall not be for determining a regional or national champion.~~

~~2. The competition shall be sponsored by and all profits go to a nonprofit organization.~~

~~3. Nonsymbolic awards shall have a utilitarian value not to exceed \$25.00 and shall require the prior approval of the Executive Director.~~

~~School sanction forms are included in the DSSAA Book of Forms. These forms must be submitted to the DSSAA office in sufficient time to be forwarded to the National Federation of State High School Associations, i.e., at least thirty (30) days prior to the contest.~~

A. Member schools may participate in tournaments/meets involving four(4) or more schools only if the event has been sanctioned by DSSAA and, if applicable, by the National Federation of State High School Associations. Tournaments/meets shall be sanctioned in accordance with the following criteria:

1. The event shall not be for determining a regional or national champion.

2. The event shall be organized, promoted, and conducted by and all profits go to a nonprofit organization. Involvement by a commercial organization shall be limited to providing financial support.

3. Nonsymbolic competition awards shall have a value of not more than \$25.00 and shall require the prior approval of the Executive Director.

4. Non-school event organizers shall submit a full

financial report to the DSSAA office within ninety (90) calendar days of the date of the event.

5. The event organizer shall submit a list of out-of-state schools which have been invited to participate and such schools shall be subject to approval by the Executive Director.

6. Out-of-state schools which have been invited to participate and are not members of their state athletic association shall verify in writing that their athletes are in compliance with their state athletic association's eligibility rules and regulations.

7. The event organizer shall not accept financial support or sell advertising to companies involved in the production or distribution of alcohol and tobacco products.

8. The event organizer shall comply with all applicable NFHS sanctioning requirements.

**EDUCATIONAL IMPACT ANALYSIS PURSUANT
HEALTH EXAMINATIONS FOR SCHOOL
DISTRICT EMPLOYEES**

A. TYPE OF REGULATORY ACTION REQUESTED

Amendment to Existing Regulation

B. SYNOPSIS OF SUBJECT MATTER OF REGULATION

The Secretary seeks the consent of the State Board of Education to amend the regulation Health Examinations found on page 1-10 in the Handbook for Personnel Administration for Delaware School Districts. The amendment is necessary to update the language. The present regulation reads: "At initial employment in a school district, all employees shall file, together with other employment credentials, a physician's certification that he or she is free from any disease or physical defect or emotional instability that would interfere with the performance of duties and function of the school district." The amended regulation reads: "At initial employment in a school district, all employees shall file, together with other employment credentials, a physician's certification that he or she is free from any medical condition which would prevent the applicant from performing the essential functions of the applicant's job and which cannot be remedied through reasonable accommodations."

C. IMPACT CRITERIA

1. Will the amended regulation help improve student achievement as measured against state achievement

standards?

The amended regulation deals with health examinations for school district employees, not curriculum issues.

2. Will the amended regulation help ensure that all students receive an equitable education?

The amended regulation deals with health examinations for school district employees, not equity issues for students.

3. Will the amended regulation help to ensure that all students' health and safety are adequately protected?

The amended regulation deals with health examinations for school district employees which can effect the health and safety of students.

4. Will the amended regulation help to ensure that all students' legal rights are respected?

The amended regulation deals with health examinations for school district employees, not students' legal rights.

5. Will the amended regulation preserve the necessary authority and flexibility of decision makers at the local board and school level?

The amended regulation will preserve the necessary authority and flexibility of decision makers at the local board and school level.

6. Will the amended regulation place unnecessary reporting or administrative requirements or mandates upon decision makers at the local board and school levels?

The amended regulation will not place any unnecessary reporting or administrative requirements or mandates upon decision makers at the local board and school levels.

7. Will decision making authority and accountability for addressing the subject to be regulated be placed in the same entity?

The decision making authority and accountability for addressing the subject to be regulated will remain in the same entity.

8. Will the regulation be consistent with and not an impediment to the implementation of other state educational policies, in particular to state educational policies addressing achievement in the core academic subjects of mathematics, science, language arts and social studies?

The regulation will be consistent with and not an impediment to the implementation of other state educational policies.

9. Is there a less burdensome method for addressing the purpose of the regulation?

The regulation needs to be amended in order to update the language.

10. What is the cost to the state and to the local school boards of compliance with the amended regulation?

There is no cost to the state and to the local school boards for compliance with the amended regulation.

AS APPEARS IN THE HANDBOOK FOR PERSONNEL
ADMINISTRATION FOR DELAWARE SCHOOL
DISTRICTS

~~At initial employment in a school district, all employees shall file, together with other employment credentials, a physician's certification that he or she is free from any disease or physical defect or emotional instability that would interfere with the performance of duties and function of the school district.~~

AS AMENDED

800.21 Health Examinations for School District Employees

1.0 At initial employment in a school district, all employees shall file, together with other employment credentials, a physician's certification that he or she is free from any medical condition which would prevent the applicant from performing the essential functions of the applicant's job and which cannot be remedied through reasonable accommodations.

**DEPARTMENT OF HEALTH AND
SOCIAL SERVICES**

DIVISION OF PUBLIC HEALTH

OFFICE OF EMERGENCY MEDICAL SERVICES

Statutory Authority: 16 Delaware Code,
Section 122 (3)(c) (16 Del.C. 122 (3)(c))

NOTICE OF COMMENT PERIOD

**PROPOSED AMENDMENT TO STATE OF
DELAWARE TRAUMA SYSTEM RULES and
REGULATIONS**

The Office of Emergency Medical Services, Division of Public Health of the Department of Health and Social Services, will hold a public hearing to discuss the proposed amendment to the Delaware Trauma System Rules and Regulations on August 4, 1999 at 1:00 PM in the WIC Office Conference Room, Blue Hen Corporate Center Suite 4B, 655 Bay Road, Dover, Delaware.

The comment period ends at the close of business on August 4, 1999. All comments may be addressed to MarySue Jones, Trauma System Coordinator, at (302) 739-6637 or Office of EMS, Blue Hen Corporate Center Suite 4H, 655 Bay Road, Dover, Delaware 19901.

**SUMMARY OF PROPOSED AMENDMENT TO
REGULATIONS**

This amendment is proposed to the existing Delaware Trauma Center Designation Process section (IV.) of the Delaware Trauma System Rules and Regulations, pursuant to the Authority of Title 16, Section 122(3)(c) of the Delaware Code. It provides more detail to the processes of Revocation of Trauma Center Designation, Appeal by Trauma Center, and Reinstatement of Trauma Center Designation which were mentioned in this section of the existing Regulations.

This amendment was developed by the Trauma Center Designation Committee and approved by the Trauma System Committee prior to entering the regulatory process.

TRAUMA SYSTEM RULES and REGULATIONS

I. PURPOSE

The purpose of these Rules and Regulations is to establish and define the conditions under which the

Delaware Statewide Trauma System functions. The goal of this Trauma System is to assure that every person injured in Delaware receives the same high quality care, thus decreasing morbidity and mortality from injury.

II. AUTHORITY

These Rules and Regulations are promulgated pursuant to the authority of Title 16 Delaware Code, Chapter 97. Emergency Medical Services Systems.

III. DEFINITIONS

ACLS - The *Advanced Cardiac Life Support Course* of the American Heart Association.

Attending - A physician with practice privileges delineated by the hospital's medical staff.

ATLS - The *Advanced Trauma Life Support Course* of the American College of Surgeons.

Board certified - A physician certified by an appropriate specialty board recognized by the American Board of Medical Specialties or the American Osteopathic Association.

Bypass - A request by a hospital to an Emergency Medical Service that patient (s) be directed to another hospital's Emergency Department due to a shortage or unavailability of beds, equipment, personnel, or other essential resource.

Classification of injuries -

Minor injuries - Those patients with an Injury Severity Score less than 9.

Moderate injuries - Those patients with an Injury Severity Score between 9 and 15.

Major (severe) injuries - Those patients with an Injury Severity Score greater than 15.

Community Trauma Center - An acute care hospital that provides assessment, resuscitation, stabilization, and triage of all trauma patients, arranging for timely transfer of those patients requiring the additional resources of a Regional Trauma or Specialty Center and delivering definitive care to those whose needs match the resources of the Community Trauma Center.

Continuing medical education (CME) credit - Educational hours for physicians approved by the

Accreditation Council of Continuing Medical Education or an agency recognized by this council.

Credentialing process - A hospital's procedure for granting practice privileges to healthcare providers.

"D" - Desirable requirement for trauma facilities; encouraged but not required for designation.

Dedicated - A resource used solely for a specific program.

Definitive care - A level of medical intervention capable of providing comprehensive services for a patient's injuries and associated conditions.

Demonstrated Commitment - Provision of evidence (visible and written) that demonstrates clearly an institution-wide commitment to trauma care.

Designation - A process through which a hospital is confirmed by the Division of Public Health to have the appropriate resources to manage patients with injuries of particular degrees of severity, and is granted the authorization to function as a Delaware Trauma Center.

"E" - Essential requirement for trauma facilities.

EMS - Emergency Medical Services. The arrangement of personnel, facilities, equipment, transportation, and communication to provide for the effective and coordinated delivery of medical care in emergency situations resulting from accidents, illnesses, or natural disasters.

Hospital Trauma Quality Management Program - The review program within each Trauma Center which monitors such aspects of the Trauma Program as adherence to policies and patient outcome with the goal of assuring that optimal care is continuously provided.

Immediately Available - This implies the *physical* presence of a resource in a stated location at the time it is needed by the trauma patient.

Inclusive Trauma Care System - A Trauma Care System which incorporates every acute care facility in the defined region into a system in order to provide a continuum of services for all injured persons who require medical care; in such a system, the injured patient's needs are matched to the appropriate hospital resources.

In-house - Physically present in the hospital.

Injury Control - Methodologies designed for the purpose of preventing and eliminating injuries.

Injury Severity Score (ISS) - A retrospective summary score derived by applying a prescribed scoring system and mathematical formula to a listing of a trauma patient's injuries. Use of this scoring system allows objective comparisons of trauma patients based on their injuries.

Interfacility transfer - The transfer of a patient from one hospital to another hospital.

Interpretations to Standards - Information issued by the Division of Public Health defining acceptable methods for hospitals to demonstrate compliance with the Trauma Center Standards.

n/a - A standard which is not applicable to a particular level of trauma facility or participating hospital.

On-call - Committed for a specific time period to be available and respond within an agreed amount of time to provide care for a patient in the hospital.

PALS - The *Pediatric Advanced Life Support Course* of the American Heart Association.

Participating Hospital - An acute care facility which transfers trauma patients with moderate or severe injuries to Trauma Centers after initial resuscitation. When necessary, this facility may provide care to trauma patients with minor injuries. Participating hospitals contribute data to the Delaware Trauma System Registry and Quality Improvement Program.

Pediatric specialists - Certified pediatric specialists with a commitment to trauma or certified general practitioners with special training, experience, and continuing education relevant to pediatric trauma care.

Pediatric Trauma Centers - Children's hospitals which meet the standards for a particular classification of Trauma Center within Delaware's *Pediatric Trauma Standards* and the corresponding classification in Delaware's *Adult Trauma Standards*.

Prevention - Efforts to decrease the numbers and severity of traumatic injuries.

Promptly Available - Implies the *physical* presence of health professionals in a stated location within a short period of time, which is defined by the Trauma Director, incorporated into the written protocols of the Trauma Service, and continuously monitored by the Quality Improvement Program.

Protocols - Written standards for clinical practice in a variety of situations within the Trauma System.

Regional Level 1 Trauma Center - A regional resource Trauma Center that has the capability of providing leadership and comprehensive, definitive care for every aspect of injury from prevention through rehabilitation.

Regional Level 2 Trauma Center - A regional Trauma Center with the capability to provide initial care for all trauma patients. Most patients would continue to be cared for in this Center; there may be some complex cases which would require transfer for the depth of services of a Regional Level 1 or Specialty Center.

Response Time - Time interval between notification and arrival of the general surgeon or surgical specialist in the Emergency Department or Operating Room.

Transfer agreement - A formal written agreement between hospitals which provides for the acceptance of patients in transfer.

Trauma - A term derived from the Greek for "wound", it refers to any bodily injury. *Injury* is the result of an act that damages, harms, or hurts; unintentional or intentional damage to the body resulting from acute exposure to mechanical, thermal, electrical, or chemical energy or from the absence of such essentials as heat or oxygen.

Trauma Center - A specialized hospital distinguished by the immediate availability of specialized surgeons, physician specialists, anesthesiologists, nurses, and resuscitation and life support equipment on a 24-hour basis to care for severely injured patients or those at risk for severe injury.

Trauma Facility - An acute care hospital which has received and maintains current State designation as a Trauma Center.

Trauma Registry - A data base to provide information for analysis and evaluation of the quality of patient care, including epidemiological and demographic characteristics of trauma patients. The 'Expanded' data set provides a basis

for the hospital's Trauma Quality Program; the 'Minimal' data set collects largely demographic information.

Trauma System Quality Management Program - The program which reviews aspects of the Trauma System such as interfacility transfers and triage decisions with the goal of assuring that the various components of the Trauma Care System are functioning optimally.

Trauma Team - A team approach is required for the optimal care of patients with multiple-system injuries. The composition of the trauma team and roles of the members are to be defined by the Trauma Director. The Trauma Surgeon Team Leader is responsible for overseeing and coordinating the operation of the Trauma Team to provide optimal patient care throughout hospitalization.

Triage - The sorting of patients in terms of priority need for care, so that appropriate treatment, transportation, and destination decisions can be made according to predetermined protocols.

Verification - A process in which the trauma care capability and performance of an institution are evaluated by experienced on-site reviewers.

IV. DELAWARE TRAUMA CENTER DESIGNATION PROCESS

I. Responsibilities- Division of Public Health

A. Preparation for verification visits

1. Provide staff support for the Trauma Center Designation Process.

2. Make verification visit arrangements with the American College of Surgeons (ACS).

3. Develop and disseminate a timeline for the designation process.

4. Hold educational and informational forums about the verification process and hospital role, including mock surveys for hospitals desiring them.

B. Contract with American College of Surgeons for verification visits

1. Team composition and requirements

a. Familiarity with similar size geographical region and facilities

b. No conflicts of interest

c. Regional Trauma Centers Levels 1 and 2:

- 2 Trauma Surgeons- 1 trauma RN

- 1 Neurosurgeon

- 1 E.M. physician

d. Community Trauma Centers (Level 3):

- 2 Trauma Surgeons

- 1 E. M. physician

e. Participating Hospitals (Level 4):

- Division of Public Health designees

2. Timeframe

a. ACS administrative costs decrease when multiple hospitals within one state are visited during the same time period.

b. It will be the individual hospital's decision as to when it is adequately prepared to begin the verification process. The Division of Public Health will hold periodic designation cycles for hospitals to apply for Trauma Center status.

3. Cost

a. Hospital fees for verification visits will include all ACS and surveyor fees.

4. Application form

a. The ACS requires a detailed application form. This form will be supplied to requesting hospitals by the Division of Public Health and forwarded to the ACS by the Division upon receipt of the completed applications.

5. Note- in any case where the American College of Surgeons does not provide the scope necessary to include a particular hospital in its verification process, the Director of the Division of Public Health may decide to allow that hospital to participate in the Delaware Trauma System under special circumstances. In this case, that hospital is encouraged to utilize the ACS to the extent to which applicable services are available, and the Division will arrange for a comparable verification visit by national trauma experts under individual contract with the Division. Fees and site visit reports of this team will be handled in the same manner as those of the ACS.

C. Coordinate site visits, surveyor accommodations, transportation, preparatory information to hospitals.

II. Designation

A. The Director of the Division of Public Health will, under State of Delaware authority, establish an impartial Trauma Center Designation Committee by requesting the names of two nominees from each of the following Delaware organizations or chapters:

1. Association of Delaware Hospitals

2. American Neurosurgery Association,

Delaware Chapter

3. Delaware Organization of Nurse Executives

4. Delaware Medical Society (request an anesthesiologist or intensivist)

5. American College of Surgeons, Delaware

Chapter, Committee on Trauma

6. American College of Emergency Physicians, Delaware Chapter

7. Delaware Emergency Nurse Association and Critical Care Nurse Association

8. Delaware Orthopedic Surgeon Society

9. Representative of pediatric care.

B. The Director will appoint nine committee members who will provide geographic and institutional diversity from the nominations received for initial terms of one (three members), two (three members), or three (three members) years. Terms thereafter will be three years; committee members may be invited to serve up to two subsequent terms providing the Committee's diversity is maintained.

1. Committee members will be chosen by the Director of Public Health to participate in each Designation Committee assignment, with the selections designed to optimize impartiality and avoid conflict of interest related to the current action.

C. The Designation Committee will develop a template outlining the correlation between the ACS verification report and State of Delaware Trauma Center designation in terms of 'Essential' and 'Desirable' criteria. This template will be presented to the Delaware Trauma System Committee for review and recommendation to the Division of Public Health for approval.

D. All Designation Committee proceedings shall be confidential. Information discussed at meetings and the records thereof shall be confidential and privileged and shall be protected from direct or indirect means of discovery, subpoena, or admission into evidence in any judicial or administrative proceeding. All meeting attendees will be required to sign confidentiality statements and all written information distributed during the meetings will be collected prior to adjournment. Any documented breach of confidentiality will be referred to the Division of Public Health for appropriate action.

E. The ACS report on verification visits will be received by the Division of Public Health, which will forward the information to the Trauma Center Designation Committee. The Designation Committee will make recommendations to the Division on the category of Trauma Center designation for which each hospital has qualified, based on its review of the ACS site visit report and application of Delaware's correlational template. The Division Director will then designate the state's Trauma Centers based on these recommendations.

1. Categories of designation and timeframes
 - a. Full designation - 3 years
 - b. State Provisional designation- 1 year;

deficient areas must be corrected and verified by the ACS within this period.

c. Nondesignation

d. Hospitals may be offered a lower designation level than originally applied for if they do not qualify for the higher level. If they accept the lower level designation they may apply again for a verification visit at the higher level at any time that they are ready, or may elect to remain at the designated level.

e. Hospitals not receiving full designation must notify the Division of Public Health within 30 days of status notification of their intent to correct deficiencies or to accept nondesignation. A written plan of correction including timeframes must be submitted if the hospital chooses to pursue designation. All corrections must be completed and verified within one year from the date of status notification. Hospitals will be informed whether or not their plan for correction is acceptable. The Division may require interim reports or on-site progress evaluations as a condition of approval of the written plan of correction.

F. The Delaware Division of Public Health will have a contractual agreement with each designated Trauma Center whereby the Trauma Center agrees to maintain commitment and resources commensurate with the standards of its designation level and to notify the Division in writing of intent to function at any lower level of designation. This contract will also serve as the mechanism by which a hospital receives permission to publicly refer to itself as a Delaware Trauma Center.

III. Trauma System

A Initial implementation of the Prehospital Triage Scheme will not occur until all Delaware hospitals have had a reasonable opportunity to have consultation visits, if desired, and verification visits from the American College of Surgeons.

1. Initial Trauma Center/Division of Public Health contracts will take effect at this time.

B In order to be considered a participant in Delaware's Prehospital Trauma Triage Scheme, an out-of-state facility must receive Delaware reciprocity as a Trauma Center by demonstrating current Trauma Center designation status and adherence to equivalent trauma standards.

IV. Redesignation

A. ACS reverification visits will be scheduled by the Division of Public Health for those hospitals wishing to continue their Trauma Center status.

B. Subsequent site visits will focus heavily on quality management and patient care issues.

C. Re-designation categories and timeframes will be the same as those for initial designation.

~~V. Revocation of Designation, Appeal, and Reinstatement~~

~~A. It will be the responsibility of the Trauma Center Designation Committee to develop written Trauma Center Revocation of Designation, Appeal, and Reinstatement Policies which clearly outline the processes in detail. These policies will be submitted to the Delaware Trauma System Committee for review and recommendation to the Division for approval.~~

~~B. The Revocation of Designation process may be initiated by-~~

- ~~1. Documented violation of an essential Trauma Center standard, identified through-~~
 - ~~a. A re-verification site visit,~~
 - ~~b. an interim Quality Improvement visit,~~
 - ~~c. an Evaluation Committee recommendation within the State Trauma System Quality Management program-~~
 - ~~d. a written complaint.~~

V. Initiation of Revocation of Trauma Center Designation Process

A. Consideration of revocation of a Trauma Center's state designation will be initiated when a documented violation of an applicable Essential Delaware Trauma Center Standard is identified.

B. Identification may occur through one of the following mechanisms:

1. Expiration of a Trauma Center's designation period with failure of the hospital to successfully complete an American College of Surgeons (ACS) reverification visit.
2. An interim Quality Improvement site visit.
3. A Trauma System Quality Evaluation Committee recommendation.

a. Any written complaint will prompt investigation by the hospital and the Trauma System Quality Evaluation Committee. The hospital will be asked to report the findings of its investigation to the Quality Evaluation Committee.

C. Process of investigation

1. The identifying agent will provide written notification of the violation to the Division of Public Health, including supporting documentation.

2. The Division will select the Designation Committee members assigned to conduct an investigation into the allegation.

- a. The involved Trauma Center will be

notified in writing with a request for its written response.

b. The assigned Designation Committee will conduct an appropriate follow-up investigation.

3. The Designation Committee will submit its report and recommendation to the Division of Public Health.

a. Recommendation may be for any of the following:

- Probation until the deficiency is remedied and accepted by DPH

- Status change to Participating Hospital until the deficiency is remedied and accepted by DPH (revocation of Trauma Center designation)

- Continuation of current Trauma Center designation.

b. If probation or revocation of designation is recommended, the Designation Committee report will include recommended steps necessary for reinstatement. This will include verification of adequate correction by an in-state or out-of-state review team and may include interim reports or on-site progress evaluations.

c. If probation or revocation of designation is not recommended, the Designation Committee may recommend follow-up monitoring or reporting.

4. Action by the Division of Public Health with written notification to the hospital.

VI. Investigation of Identified Violation of Standard

A. The identifying agent (report of site visit or Quality Evaluation Committee) will provide written notification of the violation to the Division of Public Health, including supporting documentation.

B. The Division Director will select the Designation Committee members to be assigned to the ad hoc investigation committee.

1. The involved Trauma Center will be notified of the investigation in writing with a request for its written response.

2. The assigned investigation committee will conduct an appropriate follow-up investigation.

C. The Designation Committee taskforce will submit its report and recommendation for one of the following to the Director of the Division of Public Health:

1. Probation until the deficiency is remedied and accepted by DPH. The Designation taskforce will include a timeframe and method by which the hospital must demonstrate compliance with the standard.

2. Status change to Participating Hospital until the deficiency is remedied and accepted by DPH (revocation of Trauma Center designation)

3. Continuation of current Trauma Center

designation.

D. If probation or revocation of designation is recommended, the Designation Committee report will include recommended steps necessary for reinstatement. This will include verification of adequate correction by an in-state or out-of-state review team and may include interim reports or on-site progress evaluations. In cases of revocation, a full or focused American College of Surgeons site visit may be recommended.

E. If probation or revocation of designation is not recommended, the Designation Committee may recommend follow-up monitoring or reporting.

F. The Director, Division of Public Health, will make a decision on the action to be taken after consideration of the investigation committee's report. Written notification of the action will be forwarded to the hospital.

G. If a hospital is unable to demonstrate compliance in the specified timeframe it must submit a written progress report and request for a deadline extension to the Director of Public Health. Failure to comply within the specified timeframe without requesting such an extension will result in change of status from probationary to Participating Hospital.

1. A hospital may relinquish its Trauma Center designation through written notification of the Director of Public Health if it chooses not to pursue correction of the deficiency.

2. If a hospital fails to comply with an extended timeframe, the Director of Public Health may require a full American College of Surgeons verification site visit in order for a hospital to be reinstated at its former level of designation.

D. Appeal process

1. The involved Trauma Center will have the right to appeal any decision of the Division of Public Health. Written notification of the intent to appeal must be made to the Division within 30 days of notification of action.

2. The Division of Public Health and assigned Trauma Center Designation Committee will name an impartial panel to hear the hospital's case and make recommendations in accordance with the Designation Committee Appeal Policy.

VII. Appeal Process

A. The involved Trauma Center will have the right to appeal any decision of the Division of Public Health regarding initial or subsequent designation or a change in designation status.

1. Written notification of the intent to appeal must be made to the Director of the Division within thirty days of notification of action.

2. The Director of the Division of Public Health will name an impartial panel to hear the hospital's case and make recommendations. The panel will consist of three members of the Trauma System Committee who have no relationship with the appealing hospital and have not been involved in the case in any way. At least one of these will be affiliated with a Delaware Trauma Center in a different county from the appealing hospital.

3. The appeal hearing will be scheduled to occur no later than 45 days following receipt of the hospital's request for appeal by the Division of Public Health.

4. Information pertinent to the case will be presented to the panel by a member of the ad hoc investigation committee (or assigned Designation Committee taskforce in the case of appeal of a designation decision following site visit) and a representative of the hospital. The presentations will be audio-recorded and transcribed by DPH staff.

5. The hearing panel will make a recommendation to the Director of the Division of Public Health that the original decision stand, be reversed, or be modified (specific recommendations for the modification should be outlined).

6. The Director of Public Health will make a decision based on the hearing panel's recommendation within thirty days of the hearing's conclusion and will provide written notification of the action to the hospital.

E. Reinstatement process

1. When a hospital has corrected a problem which resulted in probation or revocation of designation, it will notify the Division of Public Health in writing, requesting reinstatement.

2. Based on the reinstatement steps recommended by the Designation Committee, the Division will arrange a review to verify resolution of the problem.

VIII. Reinstatement Process

A. When a hospital has corrected a problem which resulted in probation or revocation of designation, it will notify the Division of Public Health in writing, requesting reinstatement.

B. Based on the reinstatement steps recommended by the Designation Committee, the Division will arrange a review to verify resolution of the problem.

C. Outcomes of the review may be:

1. Return to previous level of designation or end of probation.

2. Designate at lower level until reverified by ACS.

3. Remain at Participating Hospital level

until reverified by ACS.

V. STATE OF DELAWARE TRAUMA CENTER STANDARDS

Regional Trauma Center	Community	Participating	
Level 1	Level 2	Trauma Center	Hospital

* NOTE: E = Essential, D = Desirable, n/a = not applicable

I. Demonstrated Commitment to the Trauma Program by hospital Administration and Medical Staff

E E E D

(NOTE- Demonstration of hospital commitment will include-

1. Development and adoption of written resolution of support from both the Board of Trustees and the Medical Staff.
2. Establishment of written policies and procedures to provide and maintain the services for Trauma patients as outlined in Delaware's Trauma Center Standards.
3. Demonstrable evidence of budgetary support of the hospital's Trauma Program such as hospital-funded positions for Trauma Director, Nurse Coordinator, Registrar, and/or Trauma Quality Improvement Program personnel.
4. Adherence to State Trauma Registry guidelines for providing hospital Trauma Registry data to the State Trauma Registry for utilization in Trauma System management and Quality Improvement activities.
5. And establishment and maintenance of written transfer procedures and agreements with appropriate Trauma Centers, Speciality Centers, and hospitals, providing for movement of both critical and convalescing patients within the Trauma System. Compliance with these procedures is to be monitored by the Quality Improvement process in each institution. It is the responsibility of each receiving hospital to provide timely feedback to transferring hospitals on the status and outcome of all patients received.)

II. Documentation of EMS Involvement

E E E D

(NOTE- Active involvement in the Emergency Medical Services System will include-

1. Achievement and maintenance of Designated Paramedic Medical Command Center status.
Additional methods of demonstrating compliance with this standard include-
2. Didactic or clinical participation in Emergency Medical Technician- Basic and/or Paramedic initial and/or continuing educational programs.

3. Membership on such committees as the Delaware Paramedic Advisory Council, Delaware EMS Advisory Committee, or Delaware Volunteer Firemen's Association by hospital personnel.)

III. Hospital Organization

A. Trauma Service

E E E n/a

(NOTE- The Trauma Service is made up of all attending general surgeons who take trauma call. It is established by the Medical Staff and has the responsibility for the coordination of care of injured patients, the training of personnel, and trauma Quality Improvement within the Trauma Center. Privileges for surgeons participating in the Trauma Service are to be determined by the Medical Staff credentialing process. Patients with multiple-system or major injury must be evaluated by the Trauma Service with the surgeon responsible for the overall care of each patient clearly identifiable.

Written protocols and standards of care for the major trauma patient should include definitions of response and turnaround times as well as team participant roles.

In Regional and Community Trauma Centers, requirements for surgeons on the Trauma Service include board certification or eligibility, Advanced Trauma Life Support for Physicians provider certification (current), regular clinical involvement in trauma care, and documentation of annual continuing medical education in trauma care (at least 16 trauma-related Continuing Medical Education hours annually; 24 of these hours every 3 years must be obtained outside the institution).

1. Trauma Service Support Personnel

a. Trauma Coordinator

E E E n/a

(NOTE- The Trauma Coordinator is fundamental to the development, implementation, and evaluation of the institution's Trauma Program. Working with the Trauma Director, the Trauma Coordinator is responsible for the organization of services and systems necessary for a multidisciplinary approach throughout the continuum of trauma care. The Trauma Coordinator role has the following components: clinical, educational, registry/quality improvement/research, administrative, and liaison.

Records must be available documenting annual trauma-specific continuing education hours.)

B. Trauma Service Director

E E E n/a

(NOTE- The Trauma Service Director shall be a board-certified or board-eligible surgeon with demonstrated special competence in trauma care. Through the Quality

Improvement process, the director will have responsibility for all trauma patients and administrative authority for the hospital's Trauma Program. The Director is responsible for recommending surgeon appointment to and removal from the Trauma Service, in conjunction with appropriate Medical Staff committees.

Additional qualifications for the Trauma Service Director include regular involvement in the care of injured patients, participation in trauma-related educational activities such as ATLS and continuing education for hospital physicians, nursing staff, and prehospital providers, and involvement in community or national trauma projects or organizations.)

C. Trauma Multidisciplinary Committee

E E E n/a

(NOTE- This committee should meet regularly for the purpose of peer-review. It should be chaired by the Trauma Director and have representation from all the major services that treat trauma patients, with membership including but not limited to the Trauma Coordinator, neurosurgeon, orthopedic surgeon, emergency medicine physician, and anesthesiologist. The tasks of this committee are to critically review, evaluate, and discuss the quality and appropriateness of care in cases of adverse outcome (complications and deaths, particularly unexpected deaths), monitor complication trends, identify well-managed cases which can be utilized as teaching cases, and designate focused audits.)

D. Hospital Departments/Divisions/Sections

1. General Surgery

E E E D

2. Neurologic Surgery

E E D n/a

3. Orthopedic Surgery

E E D n/a

4. Emergency Services

E E E E

5. Anesthesia

E E E n/a

IV. Clinical Capabilities

A. Specialty Availability

1. In-house 24 hours a day:

a. General Surgery

E E D n/a

(NOTE- The active involvement of the Trauma Surgeon is crucial to optimal care of the injured patient in all phases of management, including resuscitation, identification and prioritization of injuries, therapeutic decisions, and operative procedures. In Regional facilities the 24-hour in-house availability of the attending Trauma Surgeon is the most direct method for providing this

involvement. However, alternative methods for providing immediate availability of the attending surgeon are also acceptable. In hospitals with residency programs, evaluation and treatment may be started by a team of surgeons that will include a PGY4 or more senior surgical resident who is a member of that hospital's residency program. This may allow the attending surgeon to take call from outside the hospital. In this case, local criteria must be established to define conditions requiring the attending Trauma Surgeon's immediate hospital presence. The attending surgeon's participation in major therapeutic decisions, presence in the Emergency Department for major resuscitations, and presence at operative procedures are mandatory. Compliance with these criteria and their appropriateness must be monitored by the hospital's Trauma Quality Improvement Program.

In Trauma Centers without applicable residency programs, local conditions may allow the Trauma Surgeon to be rapidly available on short notice. Under these circumstances local criteria must be established that allow the Trauma Surgeon to take call from outside the hospital, but with the clear commitment on the part of the hospital and the surgical staff that the general surgeon will be present in the Emergency Department at the time of arrival of the major trauma patient to supervise resuscitation and major therapeutic decisions, provide operative treatment, and be available to care for trauma patients in the ICU. Compliance with this requirement and applicable criteria must be monitored by the hospital's QI Program.)

b. Neurologic Surgery

E E D n/a

(NOTE- An attending neurosurgeon must be promptly available and dedicated to the hospital's Trauma Service. The in-house requirement may be fulfilled by an in-house neurosurgeon or surgeon who has special competence, as documented in the credentialing process by the chief of neurosurgery, in the care of patients with neurotrauma and who is capable of initiating measures directed toward stabilization of the patient and determination of diagnosis.)

c. Emergency Medicine

E E E E

(NOTE- In Regional institutions, requirements may be fulfilled by emergency medicine chief residents capable of assessing emergency situations in trauma patients and providing any indicated treatment. When chief residents are used to fulfill availability requirements, the attending on call will be advised and be promptly available.

In Community Trauma Centers this requirement may be fulfilled by a physician who is credentialed by the hospital to provide emergency medical services.)

- d. Anesthesiology

E	E	D	n/a
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(NOTE- Requirements may be fulfilled by anesthesiology chief residents PGY4/CA4 who are capable of assessing emergent conditions of trauma patients and providing any indicated treatment, including initiation of surgical anesthesia. When anesthesiology residents are used to fulfill availability requirements, the staff anesthesiologist on call will be advised and promptly available.

In Trauma Centers without anesthesiology residency programs, requirements may be fulfilled when local conditions assure that the staff anesthesiologist will be in the hospital at the time of the patient's arrival. During the interim period prior to the arrival of the staff anesthesiologist, an in-house Certified Registered Nurse Anesthetist (CRNA) capable of assessing emergent situations in trauma patients and of initiating and providing any indicated treatment will be available. In some hospitals without a CRNA inhouse, local conditions may allow anesthesiologists to be rapidly available on short notice. Under these circumstances, local criteria must be established to allow anesthesiologists to take call from outside the hospital without CRNA availability, but with the clear commitment that anesthesiologists will be immediately available for airway emergencies and operative management. The availability of the anesthesiologist and the absence of delays in airway control or operative anesthesia must be documented by the hospital QI process.)

2. On call and promptly available:

- a. Anesthesiology

n/a	n/a	E	D
-----	-----	---	---

(NOTE- May be provided by a CRNA under physician supervision. Anesthesia personnel involved in caring for trauma patients must have appropriate educational background and participate in trauma-related continuing educational and QI activities. Prompt response must be monitored by the Trauma QI program.)

- b. Cardiac Surgery

E	D	n/a	n/a
---	---	-----	-----
- c. Cardiology

E	E	D	n/a
---	---	---	-----
- d. General Surgery

n/a	n/a	E	D
-----	-----	---	---

(NOTE- Communication should be such that the general surgeon will be present in the emergency department at the time of arrival of a major trauma patient. Initial management of major trauma patients should follow a standard trauma treatment protocol adopted by the institution.)

- e. Hand Surgery

- f. Infectious Disease

E	D	n/a	n/a
---	---	-----	-----

- g. Internal Medicine

E	E	E	n/a
---	---	---	-----

(NOTE- The patient's primary care physician should be notified at an appropriate time.)

- h. Microvascular Surgery (replant/flaps)

E	D	n/a	n/a
---	---	-----	-----
- i. Neurologic Surgery

n/a	n/a	D	n/a
-----	-----	---	-----
- j. Obstetric/Gynecologic Surgery

E	E	D	n/a
---	---	---	-----
- k. Ophthalmic Surgery

E	E	D	n/a
---	---	---	-----
- l. Oral/Maxillofacial Surgery

E	E	n/a	n/a
---	---	-----	-----
- m. Orthopedic Surgery

E	E	E	n/a
---	---	---	-----
- n. Pediatric Surgery

E	D	D	n/a
---	---	---	-----

(NOTE- A pediatric surgeon is defined as a surgeon who has been granted privileges by the hospital to provide surgical care for the injured child.)

- o. Pediatrics

E	E	D	n/a
---	---	---	-----

(NOTE- The patient's primary care physician should be notified at an appropriate time.)

- p. Plastic Surgery

E	E	D	n/a
---	---	---	-----
- q. Pulmonary Medicine

E	E	n/a	n/a
---	---	-----	-----
- r. Radiology

E	E	E	D
---	---	---	---
- s. Thoracic Surgery

E	E	D	n/a
---	---	---	-----

(NOTE- A general Trauma Surgeon is presumed to be qualified and should have privileges to provide thoracic surgical care to patients with thoracic injuries. In facilities where the on-call Trauma Surgeon does not have privileges to provide thoracic surgical care, a board-certified thoracic surgeon should be available.)

- t. Urologic Surgery

E	E	D	n/a
---	---	---	-----

(NOTE- All specialists on call will be notified immediately and be promptly available. This availability will be continuously monitored by the Trauma QI Program.

Requirements for all physicians caring for trauma patients include board certification or eligibility, regular participation in trauma-related Continuing Medical

Education and QI activities, and experience in the care of trauma patients through education and/or background. Neurosurgeons and orthopedic surgeons who participate on the Trauma Call Roster must have documentation of at least 16 trauma-related CME's annually, one-half of which every 3 years must be obtained outside the institution.)

V. Facilities/Resources/Capabilities

A. Emergency department (ED)

1. Personnel

a.) Designated physician director
E E E D

b.) Physicians with special competence in care of critically injured, physically present in the ED and assigned a designated role as a member of the trauma team
E E E D

(NOTE- In Regional institutions, requirements may be fulfilled by emergency medicine senior residents capable of assessing emergency situations in trauma patients and providing any indicated treatment. When senior residents are used to fulfill availability requirements, the attending on call will be advised and be promptly available. This requires, at a minimum, 24 hour availability of a physician who is credentialed by the hospital to provide emergency medical services and is either Board Certified in Emergency Medicine or currently certified as an ACLS and ATLS provider. All E.D. physicians caring for trauma patients must have documentation of at least 16 trauma-related CME's annually, one-half of which every 3 years must be obtained outside the institution.)

c.) Nursing personnel with special capability in trauma care who provide continual monitoring of the Trauma patient from hospital arrival to in-house disposition
E E E D

(NOTE- Records must be available in the hospital documenting identifiable annual trauma-specific continuing education hours for every nurse who cares for critically injured trauma patients. Staffing patterns should be based upon data describing both the Emergency Department and trauma patient populations in terms of numbers and acuity.)

2. Equipment for resuscitation of patients of all ages shall include, but not be limited to:

- a.) Airway control and ventilation equipment, including laryngoscopes and endotracheal tubes of all sizes, bag-mask resuscitator, pocket masks, and oxygen
E E E E
- b.) Pulse oximetry
E E E D
- c.) End-tidal CO2 determination
E E E D

- d.) Suction devices
E E E E
- e.) EKG-monitor-defibrillator
E E E E
- f.) Apparatus to establish central venous pressure monitoring
E E E D
- g.) Standard intravenous fluids and administration devices including large-bore intravenous catheters
E E E E
- h.) Sterile surgical sets for
 - i.) Airway control/cricothyrotomy
E E E E
 - ii.) Thoracotomy
E E E D
 - iii.) Vascular access
E E E E
 - iv.) Chest decompression
E E E E
- i.) Gastric decompression
E E E E
- j.) Drugs necessary for emergency care
E E E E
- k.) X-ray availability, 24 hours a day
E E E D

(NOTE- There will be written policies and procedures related to monitoring of trauma patients when they are out of the Emergency Department and availability of emergency equipment in areas such as CT or angiography to which critical trauma patients are transported.)

- l.) Two-way communication with vehicles of emergency transport system
E E E E
- m.) Skeletal traction devices, including capability for cervical traction
E E E D
- n.) Arterial catheters
E E D D
- o.) Thermal control equipment
 - i.) For patient
E E E E
 - ii.) For blood and fluids
E E E D

3. Helipad consistent with Delaware Air Medical Regulations

E E E D

B. Operating Suite

1. Personnel and operating room

Operating room adequately staffed in-house and

immediately available 24 hours a day

E E D n/a

(NOTE- Records must be available in the hospital documenting identifiable annual trauma-specific continuing education hours for nurses who care for critically injured trauma patients. Staffing patterns should be based upon data describing the population in terms of numbers and acuity. Prompt response must be monitored by the Trauma QI program if on-call personnel are utilized in Community Trauma Centers.)

2. Equipment for all ages shall include, but not be limited to:

- a.) Cardiopulmonary bypass capability
E D n/a n/a
- b.) Operating microscope
E D n/a n/a
- c.) Thermal control equipment
 - i.) For patient
E E E n/a
 - ii.) For blood and fluids
E E E n/a
- d.) X-ray capability including c-arm image intensifier available 24 hours a day
E E D n/a
- e.) Endoscopes
E E D n/a
- f.) Craniotomy instruments
E E D n/a
- g.) Equipment appropriate for fixation of long-bone and pelvic fractures
E E E n/a

C. Postanesthetic recovery room (surgical intensive care unit is acceptable)

1. Registered nurses and other essential personnel 24 hours a day

E E E n/a

(NOTE- Records must be available in the hospital documenting identifiable annual trauma-specific continuing education hours for nurses who care for critically injured trauma patients. Staffing patterns should be based upon data describing the patient population in terms of numbers and acuity.)

2. Equipment for all ages shall include, but not be limited to:

- a. Capability to continuously monitor temperature, hemodynamics, and gas exchange
E E E n/a
- b. Equipment for the continuous monitoring of intracranial pressure
E E D n/a

- c. Pulse oximetry equipment
E E E n/a
- d. End-tidal CO2 determination
E E E n/a
- e. Thermal control
E E E n/a

D. Intensive care units (ICU's) for trauma patients

1. Personnel

- a.) Designated surgical director of trauma patients
E E E n/a
- b.) Physician, with privileges in critical care and approved by the trauma director, on duty in ICU 24 hours a day or promptly available to the patient
E E¹ D¹ n/a

(NOTE- In addition to overall responsibility for patient care by the patient's own surgeon, patients in Regional Levels 1 and 2 and Community Trauma Centers must have in-house physician coverage for intensive care at all times. This coverage may be provided by the patient's primary service or by a physician who is credentialed in critical care by the hospital and the director of the ICU. This coverage for emergencies is not intended to replace the primary surgeon in caring for the patient in the ICU; it is to ensure that the patient's immediate needs will be met while the primary surgeon is being contacted.

The active involvement of the Trauma Surgeon is crucial to optimal care of the injured patient in all phases of management, including resuscitation, identification and prioritization of injuries, therapeutic decisions, and operative procedures. In Regional facilities the 24-hour in-house availability of the attending Trauma Surgeon is the most direct method for providing this involvement. However, alternative methods for providing immediate availability of the attending surgeon are also acceptable. In hospitals with residency programs, evaluation and treatment may be started by a team of surgeons that will include a PGY4 or more senior surgical resident who is a member of that hospital's residency program. This may allow the attending surgeon to take call from outside the hospital. In this case, local criteria must be established to define conditions requiring the attending Trauma Surgeon's immediate hospital presence. The attending surgeon's participation in major therapeutic decisions, presence in the Emergency Department for major resuscitations, and presence at operative procedures are mandatory. Compliance with these criteria and their appropriateness must be monitored by the hospital's Trauma Quality Improvement Program.

¹. In Trauma Centers without applicable residency

programs, local conditions may allow the physician to be rapidly available on short notice. Under these circumstances local criteria must be established that allow the Trauma Surgeon to take call from outside the hospital, but with the clear commitment on the part of the hospital and the surgical staff that the general surgeon will be available to care for trauma patients in the ICU. Compliance with this requirement and applicable criteria must be monitored by the hospital's QI Program.

In Community Trauma Centers electing to manage severely injured patients in lieu of transferring them, a method of providing 24 hour physician coverage for ICU patients must be in place and documented through the hospital Trauma Quality Management Program.)

c.) Adequate staffing by nursing personnel with special capability in trauma care

E E E n/a

(NOTE- Records must be available in the hospital documenting identifiable annual trauma-specific continuing education hours for every nurse who cares for critically injured trauma patients. Staffing patterns should be based upon data describing the patient population in terms of numbers and acuity.)

2. Equipment for all ages shall include, but not be limited to:

- | | | | | |
|---|---|---|---|-----|
| a.) Cardiopulmonary resuscitation cart | E | E | E | n/a |
| b.) Defibrillator with internal, external paddles | E | E | E | n/a |
| c.) Electrocardiograph machine | E | E | E | n/a |
| d.) Sets of instruments for | | | | |
| i.) Tracheal intubation | E | E | E | n/a |
| ii.) Tracheostomy | E | E | E | n/a |
| iii.) Thoracostomy | E | E | E | n/a |
| iv.) Venous cut-down | E | E | E | n/a |
| v.) Central venous puncture | E | E | E | n/a |
| vi.) Arterial cannulation | E | E | E | n/a |
| vii.) Peritoneal lavage | E | E | E | n/a |
| e.) Scale | E | E | E | n/a |
| f.) Volume- and pressure-cycled ventilators | E | E | E | n/a |

g.) Vascular and intracranial pressure monitors
E E E n/a

h.) Pulse or venous oximeters
E E E n/a

i.) Thermodilution cardiac output computers
E E E n/a

j.) Temporary transvenous pacemakers
E E E n/a

k.) Infusion devices
E E E n/a

l.) Blood warmers
E E E n/a

m.) Orthopedic traction devices
E E E n/a

o.) Equipment for rapid warming, cooling of pts
E E E n/a

p.) Adjustable chairs
E E E n/a

3. Support Services

A.) Immediate access to clinical diagnostic services

E E E n/a

(NOTE- Blood gas measurements, hematocrit level, and chest X-ray studies should be available within 30 minutes of request. This capability will be continuously monitored by the QI Program.)

B.) Social Service assistance for trauma patients meeting Regional triage criteria and their families

E E E n/a

E. Medical-Surgical floors designated to receive trauma patients meeting Regional triage criteria post-ICU

E E E n/a

1. Adequate staffing by nursing personnel with special capability in trauma care

E E E n/a

(NOTE- Records must be available in the hospital documenting identifiable annual trauma-specific continuing education hours for nurses who care for critically injured trauma patients. Staffing patterns should be based upon data describing the patient population in terms of numbers and acuity.)

2. Equipment for all ages shall include, but not be limited to:

a.) Airway control and ventilation equipment, including laryngoscopes and endotracheal tubes of all sizes, bag-mask resuscitator, pocket masks, and oxygen

E E E n/a

b.) Suction devices

E E E n/a

- c.) EKG-monitor-defibrillator
E E E n/a
- d.) Apparatus to establish central venous pressure monitoring
E E E n/a
- e.) Standard intravenous fluids and administration devices
E E E n/a
- f.) Cardiopulmonary resuscitation cart
E E E n/a
- g.) Gastric decompression
E E E n/a
- h.) Drugs necessary for emergency care
E E E n/a

F. Acute hemodialysis capability

- E D D n/a

G. Organized burn care

- E E E E

- 1. **Physician-directed burn center staffed by nursing personnel trained in burn care and equipped properly for care of the extensively burned patient OR**
- 2. **Transfer agreement with recognized burn center**

H. Acute spinal cord/head injury management capability

- E E E E

- 1. **In circumstances in which a designated spinal cord injury center exists in the region, early transfer should be initiated in selected patients; transfer agreements should be in effect**
- 2. **In circumstances in which a head injury center exists in the region, early transfer should be initiated in selected patients; transfer agreements should be in effect**

I. Critical pediatric trauma care capability

- E E E E

- 1. **Trauma Center with Pediatric Commitment OR**
- 2. **Written transfer agreement with a tertiary pediatric referral center with critical care capabilities**

J. Radiological special capabilities

1. In-house radiology technician 24 hrs a day

- E E E n/a

(NOTE- If this requirement is fulfilled in Community Trauma Centers by technicians not in-house 24 hours a day, quality improvement must verify that the procedure is promptly available.)

2. Angiography

- E E D n/a

3. Sonography

- E E D n/a

4. Nuclear scanning

- E D D n/a

5. Computed tomography (CT)

- E E E n/a

6. In-house CT technician 24 hrs a day

- E E D n/a

(NOTE- If this requirement is fulfilled by technicians not in-house 24 hours a day, quality improvement must verify that the procedure is promptly available.)

7. Neuroradiology

- E D D n/a

(NOTE- Defined as a radiologist credentialed by the institution to interpret radiology studies of the central nervous system.

There will be written policies and procedures related to monitoring of trauma patients when they are out of the Emergency Department and availability of emergency equipment in areas such as CT or angiography to which critical trauma patients are transported.)

K. Rehabilitation

1. Rehabilitation service staffed by personnel trained in rehabilitation care and equipped properly for acute care of the critically injured patient

- E E E n/a
- a. Early referral
E E E n/a

(NOTE- Consultation with appropriate rehabilitative services should be made early in the patient's hospitalization. Patients with rehabilitative needs should have access to early rehabilitative evaluation and bedside therapy during the acute phase of their care. Optimal time for rehabilitation consult is within 72 hours of admission.)

b. Discharge planning

- E E E E

(NOTE- There must be identifiable evidence of early and adequate discharge planning including assessment of function to assure that all trauma patients have access to the inpatient or outpatient services they require post-acute care discharge.)

2. Full in-house long-term rehabilitation service

- E E E E

(NOTE- Access to the full range of rehabilitative services must be provided, including physiatrist or physician director of rehabilitative services, nursing care, physical therapy, occupational therapy, speech/language/hearing services, substance abuse rehabilitative counseling/referral, orthotic/prosthetic services, psychological/social/family support services, and age-appropriate rehabilitative

capability.

Records documenting annual continuing education hours must be available for all rehabilitation team members who provide care for trauma patients.

There must be immediate availability of adequate emergency equipment in all rehabilitation areas.)

OR

transfer agreement with a rehabilitation facility for long-term care

(NOTE- Facilities providing in-patient acute rehabilitative care for trauma patients should have current CARF (Committee on Accreditation of Rehabilitation Facilities) certification.)

L. Clinical laboratory service (available 24 hrs. a day)

1. Standard analyses of blood, urine, and other body fluids

E E E E

2. Blood typing and cross-matching

E E E E

3. Coagulation studies

E E E D

4. Comprehensive blood bank or access to a community central blood bank and adequate storage facilities

E E E E

5. Blood gases and pH determinations

E E E D

6. Microbiology

E E E D

7. Drug and alcohol screening

E E E D

VI. Quality Improvement

A. Quality improvement program based on ACS Resources for Optimal Care of the Injured Patient: 1993, Chapter 16 and the State of Delaware Trauma System Quality Management Plan

E E E E

B. Trauma registry

E E E E

C. Special audit for all trauma deaths

E E E E

D. Morbidity and mortality review

E E E E

E. Trauma conference, multidisciplinary

E E E D

F. Medical nursing audit, utilization, tissue review

E E E E

G. Review of prehospital trauma care

E E E D

H. Published on-call schedule must be maintained for surgeons, neurosurgeons, orthopaedic surgeons, and other major specialists

E E E D

I. Times of and reasons for trauma -related bypass must be documented and reviewed by quality improvement program

E E E n/a

K. Quality improvement personnel dedicated to and specific for the trauma program

E E D D

VII. Outreach Program

Telephone and on-site consultations with physicians of the community and outlying areas

E E D n/a

VIII. Prevention/Public Education

A. Epidemiology research

1. Conduct studies in injury control

E D D n/a

2. Research collaboration w/ other institutions

E D D D

3. Monitor progress of prevention programs

E D D D

4. Consult with qualified researchers on evaluation measures

E D D D

(NOTE- An epidemiologist or biostatistician should be available.)

B. Surveillance

1. Special ED & field collection projects

E D n/a n/a

(NOTE- This includes the capability of doing special data collection projects as need is identified, such as monitoring bicycle helmet use in the community.)

2. Expanded trauma registry data

E E E D

3. Minimal trauma registry data

E E E E

(abbreviated)

C. Prevention

1. Designated prevention coordinator

E E D n/a

(NOTE: This activity may be part of the Trauma Coordinator's responsibilities.)

2. Outreach activities, program development

E E D n/a

3. Information resource

E E D n/a

4. Collaboration with existing national, regional, and state programs
 E E E D

IX. Trauma Research Program

(NOTE: A trauma research program should be designed to produce new knowledge applicable to the care of injured patients. This research may be conducted in a number of ways, including traditional laboratory and clinical research, reviews of clinical series, and epidemiological or other studies. Regardless of the approach, the study design must include the development and testing of a clearly defined hypothesis. Consistent publication of articles focused on a clinical problem in peer-reviewed journals is the distinguishing feature of an effective research program. A trauma research program should have an organizational structure that fosters and monitors such ongoing productivity. In addition to the publications mentioned above, presentation of results at local, regional, and national society meetings and ongoing studies approved by local human and animal research review boards are expected from productive programs.)

A. Organized program with designated director

E D n/a n/a

B. Regular meeting of research group

E D n/a n/a

C. Evidence of productivity

1. Proposals reviewed by IRB

E D n/a n/a

2. Presentation at local/regional/national meetings

E D n/a n/a

3. Publications in peer-reviewed journals

E D n/a n/a

X. Continuing Education

Formal programs in continuing education provided by hospital for:

A. Staff physicians

E E D n/a

B. Nurses

E E E D

C. Allied health personnel

E E E D

D. Community physicians

E E D n/a

XI. Organ Procurement Activity

E E E E

XII. Transfer Agreements

A. As transferring facility

D E E E

(NOTE- Written transfer procedures and agreements with appropriate Trauma Centers, Speciality Centers, and hospitals, providing for timely movement of both critical and convalescing patients within the Trauma System, must be established and maintained. Compliance with these procedures is to be monitored by each institution's Quality Improvement process.)

B. As receiving facility

E E D n/a

(NOTE- It is the responsibility of each receiving hospital to provide timely feedback to transferring hospitals on the status and outcome of all patients received.)

PEDIATRIC TRAUMA STANDARDS

Adult Trauma Center with Pediatric Commitment	Regional Pediatric Trauma Center Level 1 Level 2	Community Pediatric Trauma Center
--	--	--

I. Demonstrated Commitment to Trauma Care

A. Facility must meet all corresponding Adult Trauma Center Standards

Regional Level 1 or 2	Regional Level 1	Regional Level 2	Community
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(NOTE-The Pediatric Trauma Standards identify the categories of resources required in facilities which specialize in pediatric trauma care. Reference must be made to the standards for the corresponding Trauma Center level in the Delaware Adult Trauma Center Standards document to determine the specific elements of these categories and whether each is an Essential or a Desirable standard for each level Pediatric Trauma Center.)

II. Hospital Organization

A. Hospital

1. Children's hospital or general hospital with a separate pediatric department

--- E E E

OR

General hospital with an organized pediatric department or service

E --- --- ---

B. Trauma Service

1. Pediatric Trauma Service organized and managed by a pediatric surgeon

--- E E E

OR

Pediatric Trauma Program administered by a surgeon

E --- --- ---

(NOTE- The Pediatric Program Director must be board-certified and committed to the care of the injured child, as evidenced by documented experience and annual continuing medical education on pediatric trauma.)

2. Pediatric Trauma Coordinator

--- E E E

OR

Trauma Coordinator

E --- --- ---

III. Clinical Capabilities

A. In-house 24 hours a day:

1. Pediatric surgeon

--- E E D

OR

General surgeon

E --- --- ---

(NOTE- At Regional Pediatric Trauma Centers a pediatric surgeon credentialed in trauma care will be promptly available. This responsible pediatric surgeon will be present in the operating room for all procedures. A general surgical resident at a minimum PGY4 level may initiate resuscitative care until the attending pediatric surgeon arrives.)

In Trauma Centers utilizing general surgeons to provide pediatric trauma care, the surgeons so credentialed must have special interest in and commitment to care of the injured child, demonstrated by experience and documented CME.

In Trauma Centers without applicable residency programs, local conditions may allow the Pediatric Trauma Surgeon to be rapidly available on short notice. Under these circumstances local criteria must be established that allow the surgeon to take call from outside the hospital, but with the clear commitment on the part of the hospital and the surgical staff that the pediatric surgeon will be present in the Emergency Department at the time of arrival of the major trauma patient to supervise resuscitation and major therapeutic decisions, provide operative treatment, and be available to care for trauma patients in the ICU. Compliance with this requirement and applicable criteria must be monitored by the hospital's QI Program.)

2. Pediatric neurosurgeon

--- E E D

OR

Neurosurgeon

E --- --- ---

(NOTE- An attending neurosurgeon must be promptly available and dedicated to the hospital's Trauma Service. The in-house requirement may be fulfilled by an in-house neurosurgeon or surgeon who has special competence, as documented in the credentialing process by the chief of neurosurgery, in the care of patients with neurotrauma and who is capable of initiating measures directed toward stabilization of the patient and determination of diagnosis.)

3. Pediatric Emergency physician

--- E E E

OR

Emergency physician

E --- --- ---

(NOTE- In Regional institutions, requirements may be fulfilled by emergency medicine chief residents capable of assessing emergency situations in trauma patients and providing any indicated treatment. When chief residents are used to fulfill availability requirements, the attending on call will be advised and be promptly available.)

In Community Trauma Centers this requirement may be fulfilled by a physician who is credentialed by the hospital to provide emergency medical services.)

4. Pediatric anesthesiologist

--- E E D

OR

Anesthesiologist

E --- --- ---

(NOTE- Requirements may be fulfilled by anesthesiology chief residents PGY4/CA4 who are capable of assessing emergent conditions of trauma patients and providing any indicated treatment, including initiation of surgical anesthesia. When anesthesiology residents are used to fulfill availability requirements, the staff anesthesiologist on call will be advised and promptly available.)

In Trauma Centers without anesthesiology residency programs, requirements may be fulfilled when local conditions assure that the staff anesthesiologist will be in the hospital at the time of the patient's arrival. During the interim period prior to the arrival of the staff anesthesiologist, an in-house Certified Registered Nurse Anesthetist (CRNA) capable of assessing emergent situations in trauma patients and of initiating and providing any indicated treatment will be available. In some hospitals without a CRNA inhouse, local conditions may allow anesthesiologists to be rapidly available on short notice. Under these circumstances, local criteria must be established to allow anesthesiologists to take call from outside the hospital without CRNA availability, but with the clear

commitment that anesthesiologists will be immediately available for airway emergencies and operative management. The availability of the anesthesiologist and the absence of delays in airway control or operative anesthesia must be documented by the hospital QI process.)

5. Pediatric intensivist

--- E E¹ D¹

OR

Surgical Critical Care specialist

E --- --- ---

(1 In Trauma Centers without applicable residency programs, local conditions may allow the physician to be rapidly available on short notice. Under these circumstances local criteria must be established that allow the Trauma Surgeon to take call from outside the hospital, but with the clear commitment on the part of the hospital and the surgical staff that the general surgeon will be available to care for trauma patients in the ICU. Compliance with this requirement and applicable criteria must be monitored by the hospital's QI Program.

In Community Trauma Centers electing to manage severely injured patients in lieu of transferring them, a method of providing 24 hour physician coverage for ICU patients must be in place and documented through the hospital Trauma Quality Management Program.)

B. On call and promptly available:

1. Pediatric surgeon

--- --- --- E

OR

General surgeon

--- --- --- ---

(NOTE- Communication should be such that the Pediatric Trauma Surgeon will be present in the emergency department at the time of arrival of a major trauma patient. Initial management of major trauma patients should follow a standard trauma treatment protocol adopted by the institution

2. Pediatric anesthesiologist

--- --- --- E

OR

Anesthesiologist

--- --- --- ---

(NOTE- May be provided by a CRNA under physician supervision. CRNA's involved in caring for trauma patients must have appropriate educational background and participate in trauma-related continuing educational and QI activities. Prompt response must be monitored by the Trauma QI program.)

3. Pediatric orthopedist

--- E E E

OR

Orthopedist

E --- --- ---

4. Pediatric radiologist

--- E E E

OR

Radiologist

E --- --- ---

5. Other pediatric surgical specialists

D E E E

6. Other pediatric medical specialists

D E E E

(NOTE- An on-call schedule designating pediatric surgical and medical specialists must be utilized. Prompt availability of these specialists must be monitored through the Pediatric Trauma QI Program. It is expected that physicians participating on the Pediatric Trauma Call Roster will demonstrate their interest in pediatric trauma care through involvement in Pediatric Trauma QI and educational activities.

In reference to the adult standards for on call physicians, freestanding pediatric facilities may meet the Obstetric/Gynecological Surgery standard through current transfer agreements with an adult Trauma Center as outlined in Section VI. of this document. The requirement for Pediatric Surgery and Pediatrics coverage is Essential for all Pediatric Trauma Centers.)

IV. Facilities/ Resources/ Capabilities

A. Special equipment necessary for the resuscitation, surgical or nonoperative management, and postoperative or postresuscitative care of infants and children must be immediately available on every hospital unit caring for injured children.

E E E E

B. Physician and nursing staff who care for pediatric trauma patients throughout their hospitalization must include some pediatric-specific hours in their documented annual trauma-related continuing education.

E E E E

(NOTE- Courses such as Pediatric Advanced Life Support (PALS) and Advanced Pediatric Life Support (APLS) are strongly encouraged for physician and nursing staff caring for pediatric trauma patients.)

C. Emergency Department

1. Pediatric Emergency Department with appropriate personnel, equipment, facilities

--- E E E

OR

Pediatric capabilities in an Emergency equipment and staffed by personnel trained to care for pediatric trauma patients Department with adequate pediatric

E --- --- ---

2. Nurses who are knowledgeable in the care of pediatric trauma patients

E E E E

D. Intensive care unit

1. Pediatric ICU with pediatric surgical, medical, and nursing personnel and equipment needed to care for the injured child

--- E E E

OR

ICU with personnel and equipment appropriate for the care of the injured child

E --- --- ---

E. Pediatric perioperative services

1. Operative and recovery facilities, equipment, and personnel specific to meet the trauma care needs of all ages of pediatric patients.

E E E E

F. Pediatric medical-surgical floor/unit

1. Identifiable pediatric floor or unit staffed with personnel knowledgeable in the care of pediatric trauma patients.

E E E E

G. Support services

1. Psychosocial services providing appropriate support and referrals for injured children and their families.

D E E E

2. Rehabilitation and physical medicine services specific to the needs of pediatric trauma patients available for early consult and treatment

D E E E

3. Comprehensive pediatric diagnostic and laboratory capabilities including micro-sampling and 24-hour CT scan availability

E E E E

V. Pediatric Trauma Quality Improvement

A. Identifiable Quality Improvement activities specific to the pediatric trauma patient population.

E E E E

B. Documented participation by pediatric trauma physicians in pediatric trauma QI activities.

E E E E

C. Trauma Registry collecting expanded data on pediatric patients, with capability to provide information

on the pediatric trauma population, including hospital course and outcome.

E E E E

D. Demonstrated institutional commitment to pediatric trauma research, education, and injury prevention

D E D D

VI. Transfer Agreements

A. Appropriate current transfer agreements must be in place for all pediatric trauma specialty care not provided by each institution, including care for burns, head and spinal cord injuries, obstetrics/gynecologic surgery, critical care, and rehabilitation.

E E E E

**VI. STATE OF DELAWARE TRIAGE, TRANSPORT
and TRANSFER PROTOCOLS**

**PREHOSPITAL TRAUMA TRIAGE SCHEME
IMPLEMENTATION GUIDELINES**

1. The Triage Scheme is designed to serve as a tool for the prehospital provider to use in a step-by-step manner in order to arrive at appropriate triage decisions for trauma patients. Based on the American College of Surgeons' Committee on Trauma's Resources for Optimal Care of the Injured Patient:1993 and the American College of Emergency Physicians' Guidelines for Trauma Care Systems, it is laid out to follow the logical progression of assessment used when responding to a trauma call. Step 1 takes place as the responder approaches the scene and notes mechanism of injury, followed by the notation of obvious injuries (Step 2) observed as the provider approaches the patient. Step 3 criteria are vital sign parameters.

2. A patient who meets any one of the Step 1, 2 or 3 criteria needs to be triaged to a Regional Level 1 Trauma Center, Regional Level 2 Trauma Center, or Community Trauma Center. These patients are also appropriate candidates for air transport depending on scene location and aircraft availability.

3. All prehospital personnel who are caring for a patient meeting Triage Scheme criteria should alert the receiving hospital of this as early as possible so that the facility can assemble its trauma team prior to the patient's arrival.

4. Any patient with an unmanageable airway is to be transported to the closest hospital for definitive airway management and subsequent trauma triage.

5. All patients with significant head trauma as

evidenced by a Glasgow Coma Score of 8 or less, or spinal cord trauma as evidenced by new onset limb paralysis or weakness, should be triaged to a Trauma Center with an available neurosurgeon.

6. The most critical and unstable patients should be triaged to the higher level Trauma Center whenever transport time to two Trauma Centers is nearly the same. This will save the patient the time required for later interfacility transfer if a higher level of care or resources is needed.

7. * Major burns (STEP 2) are defined as:

- 3rd degree burns > 5% BSA (Body Surface Area) - all ages,
- 2nd or 3rd degree burns > 10% BSA - patients < 10 or > 50 years of age,
- 2nd or 3rd degree burns > 20% BSA - all ages,
- 2nd or 3rd degree burns involving face, hands, feet, genitalia, perineum, or major joints - all ages,
- Significant electrical burns including lightning injury - all ages,
- Significant chemical burns - all ages,
- Inhalation injury - all ages, and
- Burn injury in patients with significant pre-existing illnesses, such as respiratory or cardiac disease.

8. If a patient fails to meet any of the criteria of Steps 1, 2 or 3, assessment should be made for the criteria listed in Step 4. The presence of one or more of these conditions should raise the index of suspicion for serious injury, and a triage decision should be made in consultation with Medical Control.

9. Patients who meet no criteria of the Triage Scheme may be transported to the closest hospital.

10. If there is any doubt about whether or not a patient needs to be in a Trauma Center, Medical Control should be consulted and consideration given to transporting the patient to a Trauma Center for evaluation.

11. The run sheet, with full documentation of the call, must be left at the hospital for inclusion in the patient's medical record and later use by the hospital's Trauma Registry.

12. In order to be considered a participant in Delaware's Prehospital Trauma Triage Scheme, an out-of-state facility must receive Delaware reciprocity as a Trauma Center by demonstrating current Trauma Center designation status and adherence to equivalent trauma standards.

13. The duPont Hospital for Children is prepared to accept and manage children and adolescents through the age of 18 years. However, any pregnant adolescent should be considered to be an adult and transported to an adult Trauma Center.

AIR TRANSPORT GUIDELINES

Utilization of aeromedical services has become a nationally accepted standard for the rapid evacuation and transportation of critically injured patients to the most appropriate medical facility for definitive medical care. In order to make the best decisions about the most appropriate mode of transport for a particular patient, multiple factors must be considered. Clinical factors relate to the patient and are described in the *Prehospital Trauma Triage Scheme*, (*Note the chart appears at the end of the regulation) Steps 1, 2, and 3. Operational factors relate to the transport process, and include helicopter availability and location measured against ground transport time. Weather, traffic, ground unit availability, and scene accessibility are other operational factors which must be considered on a case by case basis.

Air transport is appropriate for a seriously injured trauma patient (see *Prehospital Trauma Triage Scheme, Steps 1, 2, 3*) when ground transport time to a Trauma Center will exceed 10 minutes. To avoid excessive time spent on scene awaiting arrival of the aircraft, the helicopter should be dispatched at the time of initial ALS dispatch or immediately upon arrival of the first units on scene. It is in the patient's best interest for the aircraft to be dispatched early rather than to wait for ground unit request when available information suggests a major incident. When appropriate, consideration may be given to rendezvous.

If transport time between two Trauma Centers is relatively equal, critically injured trauma patients should be transported directly to the higher level Trauma Center. Patients with significant head trauma as evidenced by a Glasgow Coma Score of 8 or less, or spinal cord trauma as evidenced by new onset limb paralysis or weakness should be transported directly to a Trauma Center with an available neurosurgeon. Availability of air transport will impact these time and distance decisions and may potentially save the patient the time required for later interfacility transfer as well as keep the helicopter available for scene medevac work.

The most appropriate mode of transportation to be utilized when an interfacility transfer is being arranged is a decision to be made jointly by the receiving and transferring physicians. Again, operational factors as well as clinical factors need to be considered in arriving at the best transport decision in each circumstance.

HIGH-RISK CRITERIA FOR CONSIDERATION OF EARLY TRANSFER OF INJURED PATIENTS

These criteria are for use by Community Trauma

Centers and Participating Trauma System Hospitals in identifying critical patients requiring early transfer to a higher or more specialized level of care. Their intent is to decrease the need for an extensive, time-consuming workup prior to transfer. (These guidelines are not intended to be hospital-specific.) PLANS FOR TRANSPORT SHOULD BE INITIATED IMMEDIATELY UPON RECOGNITION THAT A PATIENT MEETS ANY OF THE CRITERIA LISTED BELOW. PATIENTS WHO MEET EARLY TRANSFER CRITERIA SHOULD BE ENROUTE WITHIN ONE HOUR OF THIS DETERMINATION BEING MADE.

CENTRAL NERVOUS SYSTEM: HEAD

- Penetrating injury or open fracture (with or without cerebrospinal fluid leak)
- Depressed skull fracture
- Glasgow Coma Scale (GCS) <12 or GCS deterioration
- Lateralizing signs

CENTRAL NERVOUS SYSTEM: SPINAL CORD

- Spinal column injury or major vertebral injury (*limb paresis or paralysis*)

CHEST

- Major chest wall injury (*penetrating injuries to torso, flail chest*)
- Wide mediastinum or other signs suggesting great vessel injury
- Cardiac injury
- Patients who may require mechanical ventilation

PELVIS

- Unstable pelvic ring disruption
- Unstable pelvic fracture with shock or other evidence of continuing hemorrhage
- Open pelvic injury

MAJOR EXTREMITY INJURIES

- Fracture/dislocation with loss of distal pulses
- Open or multiple long-bone fractures
- Extremity ischemia
- Amputation proximal to wrist or ankle

MULTIPLE-SYSTEM INJURY

- Head injury combined with face, chest, abdominal, or pelvic injury
- Major burns*, burns with associated injuries
- Injury to more than two organ systems
- Hemodynamic or respiratory instability
- Severe facial fractures or neck injury with potential for airway instability

SECONDARY DETERIORATION

- Sepsis
- Major tissue necrosis
- Single or multiple organ system failure (deterioration in central nervous, cardiac, pulmonary, hepatorenal, or coagulation systems)

COMORBID FACTORS (not stand alone criteria but should increase index of suspicion):

- Age <12 or >55 years
- Pregnancy
- Presence of intoxicants
- Cardiac or respiratory disease
- Insulin-dependent diabetes
- Morbid obesity
- Immunosuppression

* BURN CENTER REFERRAL CRITERIA

1. Major burns which usually require early referral to a Burn Center include the following:

- 3rd degree burns involving more than 5% Body Surface Area (BSA) in all ages,
- 2nd or 3rd degree burns involving more than 10% BSA in patients younger than 10 years or older than 50 years of age,
- 2nd or 3rd degree burns involving more than 20% BSA in all ages,
- 2nd or 3rd degree burns involving face, hands, feet, genitalia, perineum, or major joints in all ages,
- Significant electrical burns including lightening injury in all ages,
- Significant chemical burns in all ages,
- Inhalation injury in all ages,
- Burn injury in patients with pre-existing illnesses that could complicate management, prolong recovery, or affect mortality, and
- Burn injury in patients who will require special social, emotional, or long-term rehabilitative support, including cases involving suspected child abuse and neglect.

2. A burn patient in whom concomitant trauma poses an increased risk of morbidity or mortality may be initially treated in a Trauma Center until stable before transfer to a Burn Center.

3. Children with burns should be transferred to a Burn Center with qualified personnel and proper equipment to care for the pediatric burn patient.

INTERFACILITY TRANSFER PROTOCOL

RATIONALE: Optimal outcome for the trauma patient is time-related. It is to the patient's advantage to receive definitive care as promptly as possible. In order to perform

appropriate and timely hospital-based triage, candidates for interhospital transfer must be identified quickly and the transfer process carried out promptly.

PATIENT IDENTIFICATION: The physician should utilize the **High-Risk Patient Criteria** in conjunction with knowledge of available institutional resources to identify patients who would best be served by immediate transfer to a tertiary or specialty care center.

INITIATION of TRANSFER: Formal written transfer agreements and procedures must be established and made readily available to staff prior to the need for their implementation.

As soon as the need for interhospital transfer is identified, the responsible physician should initiate the transfer process by contacting the responsible physician at the receiving facility following established transfer agreements and procedures. Care of the patient while awaiting transfer will be determined by the referring and receiving physicians. It is NOT necessary to complete all diagnostic studies and/or minor procedures (such as suturing) prior to contacting the receiving facility or prior to transfer.

In physician to physician communication, patient condition and transfer options, including most appropriate mode of transportation and accompanying personnel shall be discussed. The physicians shall also reach an agreement on timeframe of transfer and treatment/diagnostic measures to be completed at transferring versus receiving facility.

DOCUMENTATION: Full documentation of the patient's course, including initial and subsequent assessment findings, treatment, results of diagnostic studies including copies of xrays whenever possible should be forwarded to the receiving hospital with or prior to the arrival of the patient (fax).

QUALITY MANAGEMENT: All transfers in or out will be reviewed as part of both the in-hospital and System Trauma Quality Management processes.

FOLLOW-UP: It is the responsibility of every receiving hospital to provide timely feedback to the transferring facility on the status and outcome of each patient received.

VII. STATE of DELAWARE TRAUMA SYSTEM QUALITY MANAGEMENT PLAN

I. PHILOSOPHY

The State of Delaware Trauma System is committed to

provision of optimal care for all injured persons. In order to attain this goal, the Division of Public Health coordinates all medical services provided to trauma patients based on national standards for trauma care as set forth by the Joint Commission on Accreditation of Health Care Organizations (JCAHO), the American College of Surgeons Committee on Trauma (ACS/COT)'s Resources for Optimal Care of the Injured Patient, 1993, the American College of Emergency Physicians (ACEP)'s Trauma Care System Guidelines, 1992 and Health Resources and Services Administration's The Model Trauma Care System Plan, 1992. This Performance Improvement Plan seeks to enable this System to meet and exceed these standards, both administratively and clinically, through promotion and achievement of continuous improvement in all aspects of the statewide trauma program's organization and associated activities.

II. PURPOSE/GOALS

The State of Delaware Trauma System's Quality Improvement Plan describes the framework for designing, measuring, assessing, and improving the organizational functions related to provision of medical services to injured patients within the State. It promotes performance improvement through education, facilitation of inter-and intra-hospital communication, and systems coordination. The plan integrates all pre-hospital, medical staff, nursing, ancillary services, and operational performance improvement activities through systematic monitoring and evaluation of the appropriateness of patient care, the measurement of outcomes, and the identification of opportunities for improvement.

The goals of the Trauma System's Performance Improvement Plan are "to monitor the process and outcome of patient care, to ensure the quality and timely provision of such care, to improve the knowledge and skills of trauma care providers, and to provide the ... structure and organization to promote quality improvement." within the state (ACS, 1993, p. 78).

III. OBJECTIVES

Based on national standards for Facility Quality Improvement set forth in the American College of Surgeon's Resources for Optimal Care of the Injured Patient (1993) and the JCAHO Recommendations for Improving Organizational Performance and for System Quality Improvement as outlined in the American College of Emergency Physician's Trauma Care System Guidelines, 1992, the Trauma System's Quality Improvement Plan describes the framework for use in designing, measuring, assessing, and improving the Delaware Trauma System's

organization, functions, and services. This is accomplished by a collaborative approach with the appropriate facilities, services, and disciplines involved, utilizing the following objectives:

- Systematic measurement on a continuing basis to understand and maintain the stability of systems and processes;
- Measurement of patient and systems outcomes to help determine priorities for improving systems and processes;
- Assessment of system competence and performance.

IV. AUTHORITY

The Division of Public Health has the ultimate authority and responsibility for assuring the delivery of quality trauma care throughout the state. The care of the trauma patient is monitored and evaluated at both the Facility and System levels. The Division has the authority for system data collection, review, and most importantly the authority to recommend corrective action in all aspects of trauma care throughout the continuum from injury to rehabilitation. The Division will provide guidance as needed to individual trauma facilities in the development and implementation of their Trauma Quality Improvement Programs.

Maintenance of patient confidentiality is the joint responsibility of evaluators at the State and Facility levels.

V. PRE-HOSPITAL EVALUATION

A. OBJECTIVE

The Division of Public Health shall work with the Fire Prevention Commission to address improvements regarding pre-hospital care of the injured patient. The American College of Emergency Physicians' Trauma Care System Guidelines will provide a basis for pre-hospital trauma care evaluation. There will be an on-going evaluation of all aspects of trauma care from the receipt of the call at central dispatch to the patient's arrival at the medical facility. Evaluation will document quality of care provided and compliance with protocols. Areas in need of improvement will be identified. Major areas of review are as follows:

Access to the system	Response time
Efficacy of field therapy	Scene time
Transport decisions	Transport time
Transport to the appropriate facility	
Under/over triage	
Documentation	

B. DATA COLLECTION

Delaware will follow national standards for pre-hospital data collection. The Division of Public Health will collaborate with the State Fire Prevention Commission to determine the minimum data sets to be collected by Basic and Advanced Life Support providers. Data used for evaluation of pre-hospital care must be consistent with the design of the Delaware Trauma Registry, as collected by the medical facilities and analyzed by the Division of Public Health.

Data to be reviewed shall consist of, but not be limited to the following:

- Initial response times
- Completion of primary patient assessment
- Appropriate care of life-threatening conditions
- Trip sheet completion and availability at facility
- Scene time within accepted guidelines
- Proper triage/determination of facility type needed by patient
- Transportation to appropriate facility within an acceptable time frame

Quality improvement indicators will be determined by the Trauma System Evaluation Committee based on Delaware pre-hospital protocols and national and Delaware standards of care.

C. QUALITY IMPROVEMENT

A completed pre-hospital patient care record must be provided to the medical receiving facility for inclusion in the patient's emergency room or hospital medical record. Facilities and pre-hospital providers are strongly encouraged to establish a mechanism for exchange of information. Additionally, the hospital's Trauma Registrar will include this record's data in the facility's Trauma Registry for outcome evaluation.

A Quality Improvement program model shall be developed by the Division of Public Health or its designee for the use of Basic Life Support and Advanced Life Support agencies. Recommendations for changes in educational curricula, patient care protocols, etc. shall be based on analysis of information obtained through the pre-hospital evaluation process. The Division shall also develop a mechanism for pre-hospital providers to have input into quality assurance issues, including the identification of educational needs and methods of addressing them.

VI. TRAUMA CENTER EVALUATION

A. All designated trauma facilities will design a performance improvement plan which meets the standards

and requirements established by the Division of Public Health. The Division shall utilize as guidelines the American College of Surgeons' Resources for Optimal Care of the Injured Patient: 1993 standards and subsequent revisions (as described in Chapter 6, Section D, page 32, and Chapter 16, pages 77-83). Hospital performance improvement plans will be verified during site survey and quality improvement visits.

B. DESIGN

When new processes or systems are developed within an institution, the design will be based on the following:

- Up-to-date sources of information about designing processes and systems including, but not limited to, practice guidelines, clinical pathways, professional standards, and regulatory standards;
- The needs and expectations of internal and external consumers;
- The performance of the processes and systems and their outcomes including, but not limited to, internal and external (benchmarking) comparison data.

C. MEASURE

Quality indicators (audit filters) will be based on nationally recognized guidelines set forth by the American College of Surgeons. They are established to evaluate process or outcome of the care or services provided or to determine the level of performance of existing processes and the outcomes resulting from these processes. Data collection and measurement will be systematic, relate to relevant standards of care, and prioritized according to high volume, high risk, or problem-prone areas. In addition, the needs, expectations, and feedback from patients and their families, employees, results of ongoing monitoring activities (e.g. infection control), safety of the patient care environment, utilization and risk management findings will be included.

Data collection will be designed to:

- Assess new or existing processes;
- Measure the level of performance and stability of important existing processes;
- Set performance improvement priorities;
- Establish benchmarks of performance to identify potential opportunities for improvement;
- Identify patterns and trends that may require focused attention;
- Provide comparative performance data to use for performance improvements; and
- Evaluate whether changes have improved the processes.

Quality indicators (audit filters) may:

- Measure events or phenomena that are expected to

occur at some level of frequency;

- Relate data about either a process or an outcome;
- Relate data about occurrences that are either desirable or undesirable;
- Relate data that guide the Trauma Program in improving norms of performance instead of focusing exclusively on censoring or eliminating individual outliers; and
- Identify serious events which may trigger an opportunity for improvement and require further data collection.

Focused audits will be used to periodically examine the process of care as recommended by ACS and may include, but will not be limited to, the following:

- Noncompliance with hospital criteria for trauma center designation
- Trauma attending surgeon arrival times for Trauma Codes
- The absence of documentation of required information/patient assessment findings on trauma care records

D. ASSESS

After collection the data will be analyzed to determine the following:

- Whether design specifications for new processes were met;
- The level of performance and stability of existing processes;
- Priorities for possible improvement of existing processes;
- Actions and strategies to improve the performance of processes; and
- Whether changes in the processes resulted in improvement.

This will be accomplished through the use of statistical quality control techniques and tools, comparative benchmarking data such as TRISS, review of the Trauma Program's processes and outcomes over time, and other reference material as appropriate. Intensive assessment will be used when measurement indicates that potential performance or system related opportunities for improvement exist, a single serious event occurs, the control limits are met, or when undesirable variation in performance has occurred or is occurring.

The assessment process will be interdisciplinary and interdepartmental depending upon the process or outcome under review.

E. IMPROVE

When an opportunity for improvement is identified or when the measurement of an existing process identifies

the need to redesign a process, a systematic approach such as recommended by the JCAHO, which currently uses the FOCUS-PDCA Model, will be implemented. This model is the ongoing process used to promote continuous improvement as described below:

FIND PROCESS IMPROVEMENT OPPORTUNITY

- Develop an opportunity statement
- Identify the process

ORGANIZE A TEAM THAT KNOWS THE PROCESS

- Identify employees who work closest with the process
- Identify internal/external consumers and their expectations

CLARIFY CURRENT KNOWLEDGE OF THE PROCESS

- Identify sound areas of the process
- Determine if team members are appropriate to assess the process
- Identify the process flow
- Identify problems/redundancies which can be eliminated to make the flow more efficient

UNCOVER CAUSES OF PROCESS VARIATION

- Identify variation in the process
- Identify measurable process characteristics
- Identify if the variation has a common or unique cause
- Identify the effect the variation has on other hospital systems

START THE IMPROVEMENT CYCLE

- Determine what changes can be made to improve the process
- Start a description of the process to be improved

PLAN THE IMPROVEMENT AND DATA COLLECTION

- Identify what improvements are to be made and in what order
- Assign responsibility for making the change
- Determine when the change will be effective
- Determine what data will be collected to measure changes

DO THE IMPROVEMENT

- Initiate the change (Pilot study period)
- Collect data

CHECK THE RESULTS

- Analyze the results of the data collection
- Draw conclusions

ACT IN PROCESS AND THEORY

- Standardize the change
- Determine ongoing measurement of the process and reevaluation of implemented changes (effectiveness monitored for a minimum of 3 months following corrective action)
- Policy and procedure development/revision
- Education and communication of new process

Following identification and documentation of a specific problem in patient care or system performance by the peer-review process, corrective action is taken through one of the following mechanisms:

- Change of existing policies and procedures that govern or define the standard of care
- Professional education: cases may be selected for discussion at the trauma service conferences; deficits in knowledge can be addressed through education of the whole group of providers or of specific providers
- Counseling: review of a specific case or cases is conducted by the Director of Trauma, chief of the service, or the supervisor, with the individual.
- Credentialing process: information from quality improvement activities may be reported through the institution's QI System for consideration at the time of credentialing, delineation of privileges, or evaluation.

VII. DELAWARE STATE TRAUMA REGISTRY

A. PATIENT CRITERIA

In order to generate consistent Statewide data, all patients who meet the following criteria must be included in the hospital Trauma Registry:

Patients with an ICD-9 CM N-code diagnosis between 800.00 and 959.9 plus any one or more of the following:

- 1) admission to the hospital for greater than 2 calendar days, or
- 2) inpatient operative procedure or
- 3) admission to the intensive care unit at any time, or
- 4) transfer to a trauma center or acute care facility, or
- 5) transfer from an acute care facility, or
- 6) death, including Emergency Department deaths and patients who are dead on arrival.

EXCLUSION: Patients over 55 years having the

solitary diagnosis of closed fracture of neck of femur, ICD-9 CM N 820.0 or 820.2 AND underlying cause of injury defined by E884.2, E885, or E888 (falls on same level, from bed or chair, other falls).

B. DATA SET

The Trauma Registry software to be used by hospitals will be specified by the Division of Public Health in conjunction with the Evaluation Committee, with input from all data-contributing hospitals. Technical support will be provided to all Delaware acute care facilities by the Division or its designee. Facilities will collect the required data and submit it to the System Trauma Registry Coordinator as soon as possible, but no more than 90 days after the close of each quarter.

Data collected from contributing acute care facilities will form the State's Trauma System Registry. System Registry data will then be used in the process of formulating System reports, for the purpose of System Quality Improvement, for data linkage, and for research/prevention activities.

The Trauma Registry data set shall be reviewed annually by the Delaware State Trauma Evaluation Committee and the Division of Public Health for any necessary additions, deletions, or modifications.

C. HOSPITAL PARTICIPATION

All acute care in-patient facilities in Delaware which receive traumatically injured patients will be required to contribute to the State Trauma Registry program by collecting and recording electronic data into the hospital Registry system, following the patient criteria described in Section A. All designated trauma facilities must use the complete Trauma Registry form, which includes patient information and facility-specific quality assurance and financial data elements. Non-designated facilities may choose to use the abbreviated Trauma Registry format.

Each contributing facility will designate an individual who will have the authority, responsibility and accountability for directing and maintaining the hospital Trauma Registry and its data submission to the State.

Each contributing facility will identify a primary data entry person and allow them adequate time and resources to perform their tasks. (Time commitment is estimated to be 60 minutes for a complete form and an additional 60 minutes for quality improvement activities per patient.) This individual shall be required to participate in a Delaware Trauma Registrars Network, which will facilitate communications among Registrars and provide educational information to improve data quality. All Registrars will be required to attend scheduled Network meetings and workshops.

Both the individual contributing facilities and the State will be responsible for data integrity and confidentiality.

VIII. TRAUMA SYSTEM EVALUATION

A. Evaluation of the Delaware Trauma System encompasses the entire scope of care provided to injured patients within the State of Delaware from injury through rehabilitation.

B. DIVISION of PUBLIC HEALTH RESPONSIBILITIES

- Implement and monitor the State Trauma System Quality Improvement Program.

C. TRAUMA REGISTRY COORDINATOR RESPONSIBILITIES

- Review Trauma Registry data submitted for completeness.
- Provide educational support for Trauma Registrars.
- Assure maintenance of all minutes and records related to System continuous improvement activities.
- Function as staff for Evaluation Committee.

D. DELAWARE STATE TRAUMA SYSTEM EVALUATION COMMITTEE

1. The Trauma System Evaluation Committee will be a subcommittee of the Trauma System Committee.

2. Membership consists of representatives from each component of the statewide Trauma System.

Standing members should be available for frequent working meetings and have access to the Quality Management Process of the agency which they represent. The Committee and Division may designate ad hoc Quality Management project members as needed.

After three unexcused absences in a calendar year, a member will be automatically terminated from the Committee and the Division will name a replacement.

3. Responsibilities of Evaluation Committee:

The Delaware Trauma System Evaluation Committee is charged with providing recommendations, advice, and assistance to the Division of Public Health in its ongoing evaluation of the Delaware Trauma System based on American College of Emergency Physicians standards and nationally accepted Continuous Quality Improvement guidelines. Specific functions may include the following:

- Assist the Trauma Registry Coordinator in the supervision of the State Trauma Registry.
- Assess trauma care standards, and recommend actions for the development and implementation of statewide policies and procedures that guide and support the provision of trauma care or services.

- Assess resources needed to support and sustain the Delaware State Trauma System.
- Evaluate the coordination and integration of pre-hospital, inter-hospital, intra-hospital, and ancillary services.
- Monitor the incidence of adverse outcomes on a regular basis with comparison to regional and national norms.
- Recommend action for identified problems or opportunities for improvement in patient care services.
- Report Quality Improvement activities to the Division of Public Health on a regular basis.
- Sponsor ongoing education regarding ACS, ACEP, and JCAHO standards and provide a multidisciplinary educational forum for presentation and discussion of interesting, difficult, and/or controversial trauma patient management cases.
- Evaluate effectiveness of actions taken and determine follow-up.
- Meet a minimum of four times per year, and as determined by the Committee or the Division.
- Assess other sources of data to combine into a comprehensive database for evaluation of the continuum of trauma care in the State of Delaware.
- Develop operational guidelines for the Committee's functioning.
- Perform any other function deemed necessary by the Division of Public Health

4. Reports:

Report aggregate findings/activities of Evaluation Committee including, but not limited to:

- The incidence of adverse or positive outcomes with comparison to regional and national norms;
- Trend analyses of systems components;
- Recommendations for action when opportunities for improvement are identified;
- Evaluation of effectiveness of actions taken and methodologies for follow-up.
- Support trauma prevention, research, and systems activities by publishing or helping others to publish reports

5. Major areas of Trauma System review will include:

- Triage
- Interhospital transfer
- Facility performance
- Impact of system
- Integrity of Trauma Registry data
- Prevention trends

IX. OVERSIGHT

The Division of Public Health receives at least semi-annual reports of the Trauma System's Evaluation

Committee activities. Minutes of each meeting will be forwarded to the Division in a timely manner.

X. CONFIDENTIALITY

As used in this section, "records" means the recordings of interviews and all oral or written reports, statements, minutes, memoranda, charts, data, statistics, and other documentation generated by the Evaluation Committee, its subcommittees, and the State Trauma Registry for the stated purpose of trauma system medical review or quality care review and audit.

All quality management proceedings shall be confidential. Records of the State Trauma Evaluation Committee, its subcommittees, the State Trauma Registry, and attendees at meetings held for stated purposes of trauma system medical review or quality care review and audit shall be confidential and privileged and shall be protected from direct or indirect means of discovery, subpoena, or admission into evidence in any judicial or administrative proceeding.

All studies, reports, and minutes will include only the patient trauma registry number with all other identifying information encoded or kept in locked files. Access to qualified researchers may be granted based on state, federal, and municipal statutes, bylaws, rules, regulations, and policies. All meeting attendees will be required to sign confidentiality statements. Any documented breach of confidentiality will be referred to the Division of Public Health for appropriate action.

XI. ANNUAL REVIEW

This plan is reviewed at least annually by the Division of Public Health and the Evaluation Committee.

REFERENCES

1. American College of Emergency Physicians: Guidelines for Trauma Care Systems. Dallas, Texas, ACEP, 1992.
2. American College of Surgeons Committee on Trauma: Resources for Optimal Care of the Injured Patient: 1993. Chicago, Illinois, ACS, 1993.
3. U.S. Department of Health and Human Services: Model Trauma Care System Plan. Rockville, Maryland, DHSS, 1992.

DIVISION OF SOCIAL SERVICES

Statutory Authority: 31 Delaware Code,
Section 512 (31 Del.C. 512)

PUBLIC NOTICE

The Delaware Health and Social Services, Division of Social Services, is proposing to add new policy to existing policy governing Child Care. The Division of Social Services Policy Manual at 11004.7 allows for the waiving of the child care fee for parents who are ABC participants. The new policy will also allow the Division of Social Services to waive the child care fee for caretakers, those who are not parents and who are not part of the ABC or GA grant.

COMMENT PERIOD

Any person who wishes to make written suggestions, compilations of data, testimony, briefs or other written materials concerning the proposed new regulations must submit same to the Director, Division of Social Services, P.O. Box 906, New Castle, DE, by July 31, 1999.

SUMMARY OF PROPOSED REVISIONS

Allows the Division of Social Services to automatically waive the child care fee of caretakers who need child care, and who are not part of the ABC or GA grant, but who are caring for children who are receiving ABC or GA assistance.

NATURE OF PROPOSED REVISIONS

11004.7 DETERMINATION OF THE CHILD CARE FEE

Under regulation, families are required to contribute to the cost of child care services based upon their ability to pay. Families contribute to the cost of care by paying a child care fee. DSS, however, provides child care services to certain families at no cost. Part of the process, therefore, of determining fees includes not only the decision of how much parent/caretakers should pay for the cost of care, but also which families should receive services at no cost.

Parent/caretakers who have a need for service or who receive child care services in Categories 11 or 12 receive service at no cost. In addition, Caretakers in Category 31, who have a need for services and who are the caretakers of children who receive ABC or GA assistance, will receive service at no cost.

DEPARTMENT OF LABOR

DIVISION OF EMPLOYMENT & TRAINING COUNCIL ON APPRENTICESHIP AND TRAINING

Statutory Authority: 19 Delaware Code,
Section 202 (a) (19 Del.C. §202(a))

Notice of Proposed Rule Changes

Summary:

The Council on Apprenticeship and Training proposes to recommend rule changes at the meeting to be held August 2, 1999 at 10:00 a.m. at Buena Vista Conference Center 661 South Dupont Highway, New Castle, DE 19720. Changes are proposed to certain definitions in Sec. 106.2 including Administrator, Apprentice, Apprenticeship Standards, Council, Delaware resident contractor, On-site visit, Registrant or sponsor, and Registration Supervisory inspection. In addition, changes are proposed to Sec. 106.3, 106.5, 106.6, 106.7

Comments:

Copies of the proposed rules are published in the Delaware Register of Regulation and are on file at the Department of Labor, Division of Employment and Training, 4425 N. Market Street, Wilmington, DE 19802 for inspection during regular business hours. Copies are available upon request without charge. Interested persons may submit comments in writing to the Council on Apprenticeship and Training c/o Kevin Calio at the Department of Labor, Division of Employment and Training.

Public Hearing:

A public hearing on the changes will be held during the regular meeting of the Council at 10:00 a.m. on August 2, 1999 at Buena Vista Conference Center, 661 South Dupont Highway, New Castle, DE where interested persons can present their views. This public hearing results from a substantive change to the definition of Apprentice as compared to the proposed change published in the Register, Vol. 1, Issue 8, February 1, 1998.

Section Number	Index Section
106.1	Purpose and Scope Declaration of Policy
106.2	Definitions
106.3	Eligibility and Procedure for State Registration

106.4	Criteria For Apprenticeable Occupations
106.5	Standards of Apprenticeship
106.6	Apprenticeship Agreement
106.9 7	Complaints
106.8	<u>Related Instruction Requirements</u>
106.9 7	Deregistration of State Registered Program
106.9 10	Hearing
106.10 11	Reinstatement of Program Registration
106.11 12	Program Registration Denial
106.12 13	Amendment to the Regulations In This Part

PURPOSE AND SCOPE

(A) Section 204, Chapter 2, Title 19, Delaware Code authorizes and directs the Department of Labor to formulate regulations to promote the furtherance of labor standards necessary to safeguard the welfare of Apprentices and to extend the applications of such standards by requiring their inclusion in apprenticeship contracts.

(B) The purpose of this chapter is to set forth labor standards to safeguard the welfare of Apprentices and to extend the application of such standards by prescribing policies and procedures concerning the registration of acceptable Apprenticeship Programs with the Delaware Department of Labor.

(C) These labor standards and procedures cover the Registration and Cancellation of Apprenticeship Agreements and of Apprenticeship Programs; and matters relating thereto. Any questions [and/or] to request a copy of Delaware's Prevailing Wage Regulations regarding the employment of apprentices on state-funded construction projects must be referred to:

Delaware Department of Labor
Office of Labor Law Enforcement
4425 North Market Street
Wilmington, DE 19802
(302) 761-8200

DECLARATION OF POLICY

It is declared to be the policy of this State to:

(A) encourage the development of an apprenticeship and training system through the voluntary cooperation of management and workers and interested State agencies and in cooperation with other states and the federal government;

(B) provide for the establishment and furtherance of Standards of Apprenticeship and Training to safeguard the welfare of Apprentices and trainees;

(C) aid in providing maximum opportunities for unemployed and employed persons to improve and modernize their work skills; and

(D) contribute to a healthy economy by aiding in the development and maintenance of a skilled labor force sufficient in numbers and quality to meet the expanding needs of industry and to attract new industry.

SEC. 106.2 DEFINITIONS

As used in this part:

(A) ~~"ADMINISTRATOR" refers to the Administrator of the Apprenticeship and Training Section for the State Department of Labor.~~

"ADMINISTRATOR" refers to the Administrator of the Office of Apprenticeship and Training for the State Department of Labor.

(B) "AGREEMENT" refers to a written agreement between an Apprentice and either his/her employer or an Apprenticeship Committee acting as agent for the Employer which contains the terms and conditions of the employment and training of the Apprentice.

(C) "APPRENTICE" refers to a person at least sixteen years of age who is engaged ~~"FULL TIME"~~ in learning a recognized skilled trade through actual work experience under the supervision of a Journeypersons. This person must enter into a written Apprenticeship Indenture Agreement with a registered apprenticeship sponsor. The training must be supplemented with properly coordinated studies of related technical instruction. All hours worked by a registered apprentice, while in the employ of the apprentice's sponsor, shall be considered apprenticeship hours to be counted toward wage progression increments and completion of his/her on-the-job training hours as set forth in the Apprenticeship Indenture Agreement. ~~"FULL TIME" refers to a position which is employed a minimum of forty (40) hours per week, eight (8) hours per day in the classifications as stated in the Apprenticeship Agreement under which the Apprentice is Registered. At no time shall the Apprentice be employed at a job classification other than those to which the Apprentice is Registered.~~

(D) "APPRENTICESHIP STANDARDS" refers to the document which embodies the procedure for the selection and the training of apprentices, setting forth the terms of the training, including wages, hours, conditions of employment, training on the job, and related instruction. The duties and responsibilities of the Sponsor, including administrative procedures, are set forth in their company's policies.

(E) "BAT" refers to the U.S. Department of Labor, Bureau of Apprenticeship and Training.

(F) "CANCELLATION" refers to the deregistration of a Program or the Termination of an Agreement.

(G) "COMMITTEE" refers to those persons designated

by the Sponsor to act on its behalf in the administration of the Apprenticeship Program. A Committee may be "joint" i.e., it is composed of an equal number of representatives of the employer(s) and of the employee(s) represented by a bona fide collective bargaining agent(s) and has been established to conduct, operate or administer a Program and enter into Agreements with Apprentices. A Committee may be "unilateral" or "non-joint" and shall mean a Program Sponsor in which a bona fide collective bargaining agent is not a participant.

(H) "COUNCIL" refers to the State's *Governor's* Advisory Council On Apprenticeship and Training.

(I) "DELAWARE RESIDENT CONTRACTOR" includes any general contractor, prime contractor, construction manager, subcontractor or other type of construction contractor who regularly maintains a place of business in Delaware. Regularly maintaining a place of business in Delaware does not include site trailers, temporary structures associated with one contract or set of related contracts, nor the holding, nor the maintaining of a post office box within this State. The specific intention of this definition is to maintain consistency with Title 30, Delaware Code, "Resident Contractor".

(J) "DIRECTOR" refers to the Director of the Division of Employment and Training.

(K) "DIVISION" refers to the Division of Employment and Training, Department of Labor, state of Delaware.

(L) "EMPLOYER" refers to any person or organization employing an Apprentice, whether or not such person or organization is a party to an Apprenticeship Agreement.

(M) "JOURNEYPERSON" refers to a worker who is fully qualified as a skilled worker in a given craft or trade.

(N) "ON-SITE VISIT" refers to a visit from a representative of the State of Delaware, Department of Labor, Division of Employment and Training to the office and/or the actual field job-site of the Sponsor, for the purposes of inspecting and/or monitoring the progress and training of the Registered Apprentice. This monitoring may include but is not limited to interviewing the Apprentice and the auditing of pertinent documents relative to the maintenance and enforcement of the terms of the Apprenticeship Agreement.

(O) "PROGRAM" refers to an executed apprenticeship plan which contains all terms and conditions for the qualifications, recruitment, selection, employment and training of Apprentices, including such matters as the requirements for a written Apprenticeship Agreement.

(P) "REGISTRANT OR SPONSOR" refers to any person, association, committee or organization in whose name or title the Program is (or is to be) registered or

approved regardless of whether or not such entity is an Employer. To be eligible, the Registrant or Sponsor must be a "Delaware Resident Contractor" or hold and maintain a "Delaware Resident Business License". The Registrant or Sponsor must hold and maintain a permanent place of business, not to include site trailers or other facilities serving only one contract or related set of contracts. To be eligible to be a Registrant or Sponsor, Employer/Business, association, committee or organization must have the training program and an adequate number of Journey persons to meet the ratio requirements as stated for that particular apprenticeable occupation.

(Q) "REGISTRATION" refers to the acceptance and recording of an Apprenticeship Program by the Delaware Department of Labor, Office of Apprenticeship and Training, as meeting the basic standards and requirements of the Division for approval of such Program. Approval is evidenced by a Certificate or other written ~~indicia~~ documentation. Registration also refers to the acceptance and recording of Apprenticeship Agreements thereof, by the Delaware Department of Labor, Office of Apprenticeship and Training, as evidence of the participation of the Apprentice in a particular Registered apprenticeship Program.

(R) "RELATED INSTRUCTION" refers to a formal and systematic form of instruction designed to provide the Apprentice with knowledge of the theoretical and technical subjects related to his/her trade.

(S) "SECRETARY" refers to the Secretary of Labor.

(T) "STATE" refers to the state of Delaware

(U) "SUPERVISORY INSPECTION" shall mean the same as "ON SITE VISIT".

SEC. 106.3 ELIGIBILITY AND PROCEDURE FOR STATE REGISTRATION

(A) No Program or Agreement shall be eligible for State Registration unless it is in conformity with the requirements of this chapter, and the training is in an apprenticeable occupation having the characteristics set forth in SEC. 106.4 herein.

(B) Apprentices must be individually registered under a Registered Program with the State of Delaware, Department of Labor, Division of Employment and Training. Such registration shall be effected by filing copies of each Agreement with the State. Sponsors registered with states other than the State of Delaware shall not be construed as being registered for State of Delaware Apprenticeship Program Registration purposes.

(C) The State must be properly notified through the proper office Department of Labor, Division of Employment

& Training, Office of Apprenticeship & Training of cancellation, suspension or termination of any Agreements, (with cause for same) and of apprenticeship completions. The State will attempt, where applicable, to verify the cause of apprenticeship termination.

(D) Approved Programs shall be accorded Registration, evidenced by a Certificate of Registration. The Certificate of Registration for an approved Program will be made in the name of the Program Sponsor and must be renewed every four (4) years.

(E) Any modification(s) or change(s) to registered standards shall be promptly submitted to the State through the appropriate office no later than thirty (30) days and, if approved, shall be recorded and acknowledged as an amendment to such standards.

(F) The request for registration and all documents and data required by this chapter shall be submitted in triplicate. Individual Agreements shall be submitted to the State Apprenticeship and Training Office for Registration no later than thirty (30) calendar days after the trainee has started work in the registered Program. Agreements submitted after said time shall be considered a violation of the rules and regulations and will not be honored.

(G) Under a Program proposed for Registration by an Employer or Employer's Association, where the standards, collective bargaining agreement or other instrument provides for participation by a union in any way in the operation of the Program, and such participation is exercised, written acknowledgment of a union agreement or "no objection" to the Registration is required. Where no such participation is evidenced and practiced, the Employer shall simultaneously furnish to the union a copy of its Program application. In addition, upon receipt of the application for the Program, the State shall promptly send by certified mail to such local union another copy of the Program application and together with a notice that union comments will be accepted for thirty (30) days after the date of the agency transmittal.

(H) Where the employees to be trained have no collective bargaining agent, a program plan may be proposed for Registration by an Employer or groups of Employers.

(I) ~~A Program may be Registered~~ Sponsor may register Programs in one or more occupations simultaneously or individually with the provision that the Program Sponsor shall, within sixty (60) days of Registration, be actively training Apprentices on the job and related study must begin within twelve (12) months for ~~in~~ each occupation for which Registration is granted. At no time shall an individual Apprentice be employed in more than one (1) occupation, nor signed to more than one (1) Apprenticeship Agreement at any given time.

(J) Each occupation for which a Program Sponsor holds Registration shall be subject to Cancellation if no active training of Apprentices on the job has occurred within a consecutive one hundred eighty (180) day period or if no Related Instruction has begun within a twelve (12) month period from the date of Registration or in any twelve (12) month period during the duration of that Agreement.

(K) Each Sponsor of a Program shall submit to an on-site inspection or supervisory visit and shall make all documents pertaining to the Registered Program available to appropriate representatives of the Apprenticeship and Training Office or designated service personnel upon request.

(L) Each Sponsor shall be so routinely examined, by the Office of Apprenticeship and Training, at least annually, but not more than every six (6) months, unless a specific violation is suspected or a specific document is being investigated.

(M) The Sponsor shall notify the State Registration Agency of termination or lay-off from employment of a Registered Apprentice or of the completion of the terms of the Apprenticeship Agreement within thirty (30) calendar days of such occurrence.

(N) The Sponsor shall notify the State of failure to obtain and register the Apprentice in an approved course of Related Instruction as stated and detailed on the Apprenticeship Agreement within (30) calendar days of such occurrence.

(O) It shall be the responsibility of the Sponsor to monitor the progress and attendance of the Apprentice in all phases of training such as, but not limited to, on-the-job and/or Related Training.

SEC.106.4 CRITERIA FOR APPRENTICEABLE OCCUPATIONS

An APPRENTICEABLE occupation is a skilled trade which possesses all of the following characteristics:

(A) It is customarily learned in a practical way through training and work on the job.

(B) It is clearly identified and commonly recognized throughout the industry, or recognized with a positive view towards changing technology or approved by the Delaware Department of Labor, Office of Apprenticeship & Training.

(C) It involves manual, technical or mechanical skills and knowledge which require a minimum of two thousand (2,000) hours of on-the-job training, not including the time spent in Related Instruction.

(D) It customarily requires Related Instruction to supplement the on-the-job training.

(E) It involves the development of skills sufficiently

broad enough to be applicable in similar occupations throughout the industry, rather than a restricted application to the products or services of any one company.

SEC. 106.5 STANDARDS OF APPRENTICESHIP

The following standards are prescribed for a Program.

(A) The Program must include an organized, written plan delineating the terms and conditions of employment. The training and supervision of one or more Apprentices in an apprenticeable occupation must become the responsibility of the Sponsor who has undertaken to carry out the Apprentice's training program.

(B) The standards must contain provisions concerning the following:

(1) The employment and training of the Apprentice in a skilled occupation;

(2) an equal opportunity pledge stating the recruitment, selection, employment and training of Apprentices during their apprenticeships shall be without discrimination based on: race, color, religion, national origin or sex. When applicable, an affirmative action plan in accordance with the State's requirements for federal purposes must be instituted;

(3) the existence of a term of apprenticeship, not less than one year or two thousand (2,000) hours consistent with training requirements as established by industry practice;

(4) an outline of the work processes in which the Apprentice will receive supervised work experience and on-the-job training, and the allocation of the approximate time to be spent in each major process;

(5) provision for organized related and supplemental instruction in technical subjects related to the trade. A minimum of one hundred forty-four (144) hours for each year of apprenticeship is required. Such instruction may be given in a classroom, through trade, industrial or approved correspondence courses of equivalent value or in other forms approved by the State Department of Labor; Office of Apprenticeship & Training

(6) a progressively increasing schedule of wage rates to be paid the Apprentice, consistent with the skill acquired which shall be expressed in percentages of the established Journeyman's hourly wage;

(7) Minimum Wage Progression for 1 through 7 year Apprentice Program as follows:

- 1) 1 to 7 year programs
- 2) starting pay must be at least minimum wage
- 3) final period must be at least 85%

1 YEAR [OR] 2,000 HOUR APPRENTICESHIP PROGRAM:

1st 1,000 hours: 40%

2nd 1,000 hours: 85%

2 YEAR [OR] 4,000 HOUR APPRENTICESHIP PROGRAM:

1st 1,000 hours: 40%

2nd 1,000 hours: 51%

3rd 1,000 hours: 63%

4th 1,000 hours: 85%

3 YEAR [OR] 6,000 HOUR APPRENTICESHIP PROGRAM:

1st 1,000 hours: 40%

2nd 1,000 hours: 48%

3rd 1,000 hours: 57%

4th 1,000 hours: 65%

5th 1,000 hours: 74%

6th 1,000 hours: 85%

4 YEAR [OR] 8,000 HOUR APPRENTICESHIP PROGRAM:

1st 1,000 hours: 40%

2nd 1,000 hours: 46%

3rd 1,000 hours: 53%

4th 1,000 hours: 59%

5th 1,000 hours: 65%

6th 1,000 hours: 71%

7th 1,000 hours: 78%

8th 1,000 hours: 85%

5 YEAR [OR] 10,000 HOUR APPRENTICESHIP PROGRAM:

1st 1,000 hours: 40%

2nd 1,000 hours: 45%

3rd 1,000 hours: 50%

4th 1,000 hours: 55%

5th 1,000 hours: 60%

6th 1,000 hours: 65%

7th 1,000 hours: 70%

8th 1,000 hours: 74%

9th 1,000 hours: 79%

10th 1,000 hours: 85%

6 YEAR [OR] 10,000 HOUR APPRENTICESHIP PROGRAM:

1st 1,000 hours: 40%

2nd 1,000 hours: 44%

3rd 1,000 hours: 48%

4th 1,000 hours: 52%

5th 1,000 hours: 56%

6th 1,000 hours: 60%

7th 1,000 hours: 64%

8th 1,000 hours: 68%

9th 1,000 hours: 72%

10th 1,000 hours: 76%

11th 1,000 hours: 81%
12th 1,000 hours: 85%

7 YEAR [OR] 10,000 HOUR APPRENTICESHIP PROGRAM:

1st 1,000 hours: 40%
2nd 1,000 hours: 43%
3rd 1,000 hours: 47%
4th 1,000 hours: 50%
5th 1,000 hours: 54%
6th 1,000 hours: 57%
7th 1,000 hours: 61%
8th 1,000 hours: 64%
9th 1,000 hours: 68%
10th 1,000 hours: 71%
11th 1,000 hours: 74%
12th 1,000 hours: 78%
13th 1,000 hours: 81%
14th 1,000 hours: 85%

(8) that the entry Apprentice wage rate shall not be less than the minimum prescribed by State statute or by the Fair Labor Standards Act, where applicable;

(9) That the established Journeyman's hourly rate applicable among all participating Employers be stated in dollars and cents. No Apprentice shall receive an hourly rate less than the percentage for the period in which he/she is serving applied to the established Journeyman's rate unless the Sponsor has documented the reason for same in the individual Apprentice's progress report and has explained the reason for said action to the Apprentice and Registration Agency.

In no case other than sickness or injury on the part of the Apprentice, shall a Sponsor hold back an Apprentice's progression more than one period or wage increment without the written consent of the Administrator;

(10) That the established Journeyman's rate provided for by the Standards be reviewed and/or adjusted annually. Sponsors of Programs shall be required to give proof that all employees used in determining ratios of Apprentices to Journeymen shall be receiving wages at least in the amount set for Journeymen in their individual program standards, or are qualified to perform as Journeyman persons and must be paid at least the minimum journeyman rate;

(11) that the minimum hourly Apprentice wage rate paid during the last period of apprenticeship not be less than eighty-five (85) percent of the established Journeyman wage rate. Wages covered by a collective bargaining agreement takes precedent over this section.

However, wages may not be below the State's required minimum progression.

(C) The Program must include a periodic review and evaluation of the Apprentice's progress in job performance and related instruction, and the maintenance of appropriate progress records.

(D) The ratio of Apprentices to Journeymen should be consistent with proper supervision, training and continuity of employment or applicable provisions in collective bargaining agreements. The ratio of Apprentices to Journeymen shall be one Apprentice to each five (5) Journeymen employed by the prospective Sponsor. More restrictive ratios will be granted upon request. More liberal ratios may be granted only after the requesting Sponsor has demonstrated that the number of Apprentices to be trained shall be in relation to:

- (1) the needs of the plant and/or trade in the community with consideration for growth and expansion;
- (2) the facilities and personnel available for training are adequate; and
- (3) a reasonable opportunity that employment of skilled workers on completion exists.

The following ratios will be recognized as standard for the trades of:

	Apprentice up to	Journeyman
Carpenter	1	5
Plumber/Pipefitter	1	5
Sheet Metal Worker	1	4
Insulation Worker	1	4
Electrician	1	3

If a "collective bargaining agreement" exists and stipulates a ratio of Apprentices to Journeymen, it shall prevail. Provided the Bargaining Ratio is not lower than the State standard.

(E) At least forty (40) percent of all Apprentices registered must complete training. Apprentices who voluntarily terminate their apprenticeships or employment shall not be counted in reference to this section. Programs with fewer than five (5) Apprentices shall not be required to comply with this part.

(F) A probationary period shall be in relation to the full apprenticeship term with full credit toward completion of apprenticeship.

(G) Adequate and safe equipment facilities for training and supervision and safety training for Apprentices on the job and in Related Instruction are required.

(H) The required minimum qualifications for persons entering an Apprentice Program as defined in Section 106.2(C) must be met.

(I) Apprentices must sign an Agreement. The Agreement shall directly, or by reference, incorporate the standards of the Program as part of the Agreement.

(J) Advance standing or credit up to ~~one-quarter~~ 25% OJT hours of the particular trade term in question for previously acquired experience, training skills, or aptitude for all applicants equally, with commensurate wages for any accorded progression step may be granted. The granting of a greater amount of credit shall be set at the discretion of the Administrator based on supportive documentation submitted by the Sponsor. In no case shall more than one half of the particular trade term in question be granted unless the time in question has been spent in any state or federally registered program.

(K) Transfer of Employer's training obligation through the sponsoring Committee if one exists and as warranted, to another Employer with consent of the Apprentice and the Committee or Program Sponsors, with full credit to the Apprentice for satisfactory time and training earned, may be afforded with written notice to, and approval of, the Registration Agency.

(L) These Standards shall contain a statement of assurance of qualified training personnel.

(M) There will be recognition for successful completion of apprenticeship evidenced by an appropriate certificate.

(N) These Standards shall contain proper identification of the Registration Agency, being the Department of Labor, Division of Employment & Training, Office of Apprenticeship & Training.

(O) There will be a provision for the Registration, Cancellation and Deregistration of the Program, and a requirement for the prompt submission of any modification or amendment thereto.

(P) There will be provisions for Registration of Agreements, modifications and amendments, notice to the Division of persons who have successfully completed Programs, and notice of Cancellations, suspensions and terminations of Agreements an causes therefore.

(Q) There will be a provision giving authority for the termination of an Agreement during the probationary period by either party without stated cause.

(R) There will be provisions for not less than five (5) days notice to Apprentices of any proposed adverse action and cause therefore with stated opportunity to Apprentices during such period for corrective action, ~~unless other acceptable procedures are provided for in a collective bargaining agreement~~.

(S) There will be provisions for a grievance procedure, and the name and address of the appropriate authority under the program to receive, process and make disposition of

complaints.

(T) There will be provisions for recording and maintaining all records concerning apprenticeships as may be required by the State or Federal law.

(U) There will be provisions for a participating Employer's Agreement.

(V) There will be funding formula providing for the equitable participation of each participating Employer in funding of a group Program where applicable.

(W) All Apprenticeship Standards must contain articles necessary to comply with federal laws, regulations and rules pertaining to apprenticeship.

(X) Programs and Standards of Employers and unions in other than the building and construction industry which jointly form a sponsoring entity on a multi-state basis and are registered pursuant to all requirements of this part by any recognized State apprenticeship agency shall be accorded Registration of approval reciprocity by the Delaware Department of Labor if such reciprocity is requested by the sponsoring entity. However, reciprocity will not be granted in the Building and Construction industry based on Title 29 CFR 29 Section 12(b) unless a "memorandum of understanding" has been signed by individual state and the state of Delaware.

SEC. 106.6 APPRENTICESHIP AGREEMENT

The Apprenticeship Agreement shall contain:

(A) the names and signatures of the contracting parties (Apprentice and the program Sponsor or Employer), and the signature of a parent or guardian if the Apprentice is a minor;

(B) the date of birth of the Apprentice;

(C) the name and address of the program Sponsor and the Registrant;

(D) the Apprentice's social security number;

(E) a statement of the trade or craft which the Apprentice is to be taught, and the beginning date and term (duration) of apprenticeship;

(F) the number of hours to be spent by the Apprentice in work on the job;

(G) the number of hours to be spent in Related and Supplemental Instruction is recommended to be not less than one hundred forty-four (144) hours per year;

(H) provisions relating to a specific period of probation during which the Apprenticeship Agreement may be terminated by either party to the Agreement upon written notice to the Registrant;

(I) provisions that, after the probationary period, the Agreement may be suspended, canceled or terminated for ~~good~~ cause, with due notice to the Apprentice and a reasonable opportunity for corrective action, and with

written notice to the Apprentice and the Registrant of the final action taken;

(J) a reference incorporating, as part of the Agreement, the standards of the Apprenticeship Program as it exists on the date of the Agreement or as it may be amended during the period of the Agreement;

(K) a statement that the Apprentice will be accorded equal opportunity in all phases of apprenticeship employment and training without discrimination based on race, color, religion, national origin, marital status, or sex, or disability;

(L) a statement that, if an Employer is unable to fulfill his obligation under his Agreement, the Agreement may, with consent of the Apprentice and Committee, if one exists, be transferred to another Employer under a Registered Program with written notice of the transfer to the Registrant, and with full credit to the Apprentice for satisfactory time and training earned;

(M) the name and address of the appropriate authority, if any, designated under the program to receive, process and make disposition of controversies or differences which cannot be adjusted locally or resolved in accordance with the established trade procedure or applicable collective bargaining provisions;

(N) a statement setting forth a schedule of work processes in the trade or industry in which the Apprentice is to be trained and the approximate time to be spent at each process;

(O) a statement of the graduated scale of wages to be paid the Apprentice and whether or not the required school time shall be compensated;

(P) a statement that in the event the Registration of the Program has been Canceled or revoked, the Apprentice will be notified within fifteen (15) days of the event.

SEC.106.&7 COMPLAINTS

(A) Any controversy or difference arising under an Agreement which cannot be resolved locally, or which is not covered by a collective bargaining agreement, may be submitted by an Apprentice or his/her authorized representative to the State Registration Agency for review. Matters covered by a collective bargaining agreement, however, shall be submitted and processed in accordance with the procedures therein provided.

(B) The complaint shall be in writing, signed by the complainant, and submitted by the Apprentice or his/her authorized representative within sixty (60) days of receipt of local decision. The complaint shall set forth the specific problem, including all relevant facts and circumstances. Copies of all pertinent documents and correspondence shall

accompany the complaint.

SEC. 106.8 Related Instruction Requirement

~~(A)~~ Regulations concerning Apprentices "attendance and tardiness" policy for related instruction.

(1) A registered Apprentice who misses seven (7) classes while enrolled in a related studies program at any of the vocational schools in the three (3) counties of the State of Delaware will be dropped from school. This will result in their Apprenticeship Agreement being terminated by their Sponsor and/or State Registration Agency.

(2) An absence will result when an Apprentice either arrives late or leaves early three (3) times. However, School District Officials may bring to the Administrator's attention, individual cases that may have experienced extenuating circumstances. With the Administrator's approval, such individuals may be granted exemption from this attendance policy.

(3) Courses of fewer sessions will be prorated. Instructors will inform Apprentices of allowable absences.

(4) If you are a Registered Apprentice who is enrolled through a trade union, trade society or any other organization that stipulates attendance rules more stringent than the above, then you are required to follow those regulations.

(5) Related Instruction that is delivered through a state approved "in-house program", correspondence courses or other systems of equivalent value will require the Apprentice to produce a document detailing satisfactory participation and completion.

SEC. 106.7 DEREGISTRATION BY STATE

(A) Deregistration proceedings ~~may~~ shall be undertaken when the Program is not conducted, operated or administered in accordance with the Registration standards and the requirements of this chapter;

(B) Where it appears the Program is not being operated in accordance with the Registered standards or with the requirements of the chapter, the Administrator shall so notify the Program Registrant in writing;

(C) The notice shall be sent by registered or certified mail, return receipt requested, and shall state the deficiency(s) or violation(s);

(D) It is declared to be the policy of this State to:

(1) deny the privilege of operation of a Program to persons who, by their conduct and record, have demonstrated their indifference to the aforementioned policies; and

(2) discourage repetition of violations of rules and regulations governing the operation of Registered

Apprenticeship Programs by individuals, Sponsors, or Committees against the prescribed policies of the State, and its political subdivisions, and to impose increased and added deprivation of the privilege to operate Programs against those who have been found in violation of these rules and regulations;

(3) deregister a Program either upon the voluntary action of the Registrant by a request for cancellation of the Registration, or upon notice by the State to the Registrant stating cause, and instituting formal deregistration proceedings in accordance with the provisions of this chapter;

(4) at the request of Sponsor, permit the Administrator to cancel the Registration of a Program by a written acknowledgment of such request stating, but not limited to, the following:

(a) the Registration is canceled at Sponsor's request and giving the effective date of such cancellation.

(b) that, within fifteen (15) working days of the date of the acknowledgment, the Registrant must notify all Apprentices of such Cancellation and the effective date that such Cancellation automatically deprives the Apprentice of his/her individual Registration.

(E) Any Sponsor who violates major provisions of the rules repeatedly, as determined by the Administrator of Apprenticeship and Training (three ~~or more~~ violations in any given twelve month period), shall be sent a notice which shall contain the violations and will inform the Sponsor that the Program will be placed in a probationary status for the next six (6) month period. Any new major violations in this period shall constitute cause for deregistration. In such a case, the Administrator shall notify the chairman of the Apprenticeship and Training Council, who shall convene the Council.

The Sponsor in question will be notified of said meeting and may present whatever facts, witnesses, etc., that the Sponsor deems appropriate. After said hearing, the Council shall make a recommendation based on the facts presented to the Secretary, as to whether the Program should be deregistered. The Secretary's decision shall be final and binding on the matter.

(F) Sponsors with fewer than three (3) violations shall be sent a notice by registered or certified mail, return receipt requested, stating the deficiencies found and the remedy required and shall state that the Program will be deregistered for cause unless corrective action is taken within thirty (30) days. Upon request by Registrant, the thirty (30) day period may be extended for up to an additional thirty (30) day period.

(G) If the required action is not taken within the allotted

time, the Administrator shall send a notice to the Registrant by registered or certified mail, return receipt requested, stating the following:

(1) this notice is sent pursuant to this subsection;

(2) that certain deficiencies were called to the Registrant's attention and remedial action requested;

(3) based upon the stated cause and failure of remedy, the Program will be deregistered, unless within fifteen (15) working days of receipt of this notice, the Registrant requests a hearing;

(4) If a hearing is not requested by the Registrant, the Program will automatically be deregistered.

(H) Every order of deregistration shall contain a provision that the Registrant and State shall, within fifteen (15) working days of the effective date of the order, notify all registered Apprentices of the deregistration of the Program, the effective date, and that such action automatically deprives the Apprentice of his/her individual Registration.

SEC.106.9 ~~10~~HEARINGS ON DEREGISTRATIONS

(A) Within ten (10) working days of a request for a hearing, the Administrator or his/her ~~assignee~~ designee, shall give reasonable notice of such hearing by registered mail, return receipt requested, to the Registrant. Such notice shall include:

(1) the time and place of the hearing;

(2) a statement of the provisions of the chapter pursuant to which the hearing is to be held;

(3) a statement of the cause for which the Program was deregistered and the purpose of the hearing.

(B) The chairman of the Council on Apprenticeship and Training or his/her designee shall conduct the hearing which shall be informal in nature. Each party shall have the right to counsel, and the opportunity to present his/her case fully, including cross-examination of witnesses as appropriate.

(C) The Administrator shall make every effort to resolve the complaint and shall render an opinion within ninety (90) days after receipt of the complaint, based upon the record ~~before him~~ and an investigation, if necessary. The Administrator shall notify, in writing, all parties of his decision. If any party is dissatisfied or feels that they have been treated unfairly by said decision, they may request a hearing by the Apprenticeship and Training Council. Those provisions of the hearing process that are applicable shall be followed and ~~said~~ Council shall make a determination on the basis of the records and the proposed findings of the Administrator. This determination shall be subject to review and approval by the Secretary, whose decision shall be final.

SEC. 106.40 ~~11~~ REINSTATEMENT OF PROGRAM REGISTRATION

A Program deregistered pursuant to this chapter may be reinstated upon presentation of adequate evidence that the Program is operating in accordance with this chapter. Such evidence shall be presented to the Apprenticeship and Training Council, which shall make a recommendation based on said evidence, past records and any other data deemed appropriate. After such presentation, the Council shall make a recommendation to the Secretary as to whether the Program should be reinstated. The Secretary's decision shall be final and binding.

SEC. 106.41 ~~12~~ PROGRAM REGISTRATION DENIAL

Any proposed Sponsor may, within fifteen (15) working days, request a hearing before the Apprenticeship and Training Council. If the proposed Sponsor requests a hearing, the Administrator shall advise the chairman of the Council, who shall convene the Council, for a hearing for the purpose of making a determination on the basis of the record and proposed findings of the Office of Apprenticeship & Training. This determination shall be subject to review and approval by the Secretary, whose decision shall be final and binding.

SEC. 106.42 ~~13~~ AMENDMENT TO THE REGULATIONS IN THIS PART

The Secretary may, at any time upon his/her own motion or upon written request of any interested person setting forth reasonable grounds therefore, and after opportunity has been given to interested persons to present their views, amend or revoke any of the terms of the regulations contained in this part.

**DEPARTMENT OF NATURAL
RESOURCES AND
ENVIRONMENTAL CONTROL****DIVISION OF AIR AND WASTE MANAGEMENT
AIR QUALITY MANAGEMENT SECTION**

Statutory Authority: 7 Delaware Code,
Chapter 60 (7 Del.C. Ch. 60)

REGISTER NOTICE

1. TITLE OF THE REGULATIONS:
REGULATION NO. 38 - "EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES"
2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:
The Department is proposing to revise existing Subpart A of Regulation No. 38 to incorporate several minor changes that have recently occurred in the Federal language for Subpart A. This amendment will maintain Delaware's Subpart A language in line with the Federal language. There are no known sources affected by these changes at this time, but these changes could impact future sources.
Subpart A, the "General Provisions", establishes compliance, notification, performance testing, monitoring, recordkeeping and reporting requirements common to all of the National Emission Standards for Hazardous Air Pollutants promulgated at 40 CFR Part 63 (i.e., the MACT standards).
3. POSSIBLE TERMS OF THE AGENCY ACTION:
None
4. STATUTORY BASIS OR LEGAL AUTHORITY TO ACT: 7 Delaware Code, Chapter 60
5. OTHER REGULATIONS THAT MAY BE AFFECTED BY THE PROPOSAL: None
6. NOTICE OF PUBLIC COMMENT:
The public comment period for this proposed amendment will extend through July 31, 1999. Interested parties may submit comments in writing during this time frame to: Jim Snead, Air Quality Management Section, 715 Grantham Lane, New Castle, DE 19720, and/or statements and testimony may be presented either orally or in writing at the public hearings to be held on Monday, July 26, 1999

beginning at 6:00 p.m. at the DNREC Office Building, 715 Grantham Lane, New Castle, DE 19720 or on Tuesday, July 27, 1999 beginning at 6:00 p.m. at the Owens Campus of Delaware Technical and Community College in Georgetown, DE.

7. PREPARED BY:

James R. Snead, (302) 323-4542, June 11, 1999

REGULATION NO. 38 Amendment

**EMISSION STANDARDS FOR HAZARDOUS
AIR POLLUTANTS FOR SOURCE CATEGORIES**

~~4/4/98~~ 9/11/99

Subpart A General Provisions

The provisions of Subpart A - General Provisions, of Title 40, Part 63 of the Code of Federal Regulations, dated July 1, 1997~~8~~, are hereby adopted by reference with the following changes:

(a) The provisions of Subpart A of this regulation (Regulation 38) apply to owners or operators who are or may be subject to a subsequent subpart(s) of this regulation, except when otherwise specified in that subsequent subpart(s).

(b) Except as shown in Table A-1 of this subpart, "Department" shall replace each of the following:

- (1) "Administrator";
- (2) "Administrator or by a State with an approved permit program";
- (3) "Administrator (or a State with an approved permit program)";
- (4) "Administrator (or the State with an approved permit program)";
- (5) "Administrator (or a State)"; and
- (6) "Administrator (or the State)".

(c) Paragraph 63.1(b)(2) shall be replaced with the following language: "In addition to complying with the provisions of this part, the owner or operator of any such source may be required to obtain, revise or amend permits issued to stationary sources by the Department. For more information about obtaining permits, see Regulations 2, 25 and 30 of the State of Delaware "Regulations Governing the Control of Air Pollution."

(d) Paragraph 63.1(c)(2)(iii) shall be replaced with the following language: "Area sources affected by that emission standard are immediately subject to the requirement to apply for and obtain a title V permit. If a standard fails to specify what the permitting requirements will be for area sources

affected by that standard, then area sources that are subject to the standard will be subject to the requirement to obtain a title V permit without deferral. If the owner or operator is required to obtain a title V permit, he or she shall apply for such permit in accordance with Regulation 30 of the State of Delaware "Regulations Governing the Control of Air Pollution."

(e) Paragraph 63.1(e) shall be replaced with the following language: "After January 3, 1996, the owner or operator of such source may be required to obtain a title V permit from the permitting authority (or revise such a permit if one has already been issued to the source) before a relevant standard is established under this part. If the owner or operator is required to obtain (or revise) a title V permit, he/she shall apply to obtain (or revise) such permit in accordance with Regulation 30 of the State of Delaware "Regulations Governing the Control of Air Pollution."

(f) The definition of Act found in Section 63.2 shall be replaced with the following language: "Act means the Clean Air Act (42 U.S.C. 7401 et seq., dated November 15, 1990)."

(g) The definition of Administrator found in Section 63.2 shall be replaced with the following language: "Administrator means the Administrator of the United States Environmental Protection Agency."

(h) The last sentence in the definition of Affected source found in Section 63.2 shall be deleted.

(i) The definition of Approved permit program found in Section 63.2 shall be replaced with the following language: "Approved permit program means the permit program established under Regulation 30 of the State of Delaware "Regulations Governing the Control of Air Pollution."

(j) The definition of Department is added to list of definitions found in Section 63.2 with the following language: "Department means the Department of Natural Resources and Environmental Control as defined in Title 29, Delaware Code, Chapter 80, as amended."

(k) The last sentence in the number 2 definition of Effective date found in Section 63.2 shall be replaced with the following language: "(3) With regards to the permit program, the effective date is January 3, 1996."

(l) The definition of Part 70 permit found in Section 63.2 shall be replaced with the following language: "Part 70 permit means any permit issued, renewed, or revised pursuant to Regulation 30 of the State of Delaware "Regulations Governing the Control of Air Pollution."

(m) The definition of Permit modification found in Section 63.2 shall be replaced with the following language: "Permit modification means a change to a title V permit as defined in Regulation 30 of the State of Delaware

“Regulations Governing the Control of Air Pollution.”

(n) The definition of Permit program found in Section 63.2 shall be replaced with the following language: “*Permit program* means the comprehensive State operating permit system established under Regulation 30 of the State of Delaware “Regulations Governing the Control of Air Pollution.”

(o) The definition of Permit revision found in Section 63.2 shall be replaced with the following language: “*Permit revision* means any permit modification or administrative permit amendment to a title V permit as defined in Regulation 30 of the State of Delaware “Regulations Governing the Control of Air Pollution.”

(p) The definition of Permitting authority found in Section 63.2 shall be replaced with the following language: “*Permitting authority* means the Department.”

(q) The Responsible Official definition (4) found in Section 63.2 shall be replaced with the following language: “For affected sources (as defined in this part) applying for or subject to a title V permit: “responsible official” shall have the same meaning as defined in Regulation 30 of the State of Delaware “Regulations Governing the Control of Air Pollution.”

(r) Paragraph 63.4(a)(1)(ii) shall be replaced with the following language: “An extension of compliance granted under this part by the Department; or”

(s) Paragraph 63.4(a)(3) shall be replaced with the following language: “After January 3, 1996, no owner or operator of an affected source who is required under this part to obtain a Regulation 30 permit shall operate such source except in compliance with the provisions of this part and the applicable requirements of the permit program.”

(t) Paragraph 63.5(b)(3) shall be replaced with the following language: “After the effective date of any relevant standard promulgated by the Administrator under this part, whether or not an approved permit program is effective in the State in which an affected source is (or would be) located, no person may construct a new major affected source or reconstruct a major affected source subject to such standard, or reconstruct a source such that the source becomes a major affected source subject to the standard, without obtaining written approval, in advance, from the Department in accordance with the procedures specified in paragraphs (d) and (e) of this section.”

(u) The last sentence in paragraphs 63.5(b)(4) and 63.9(b)(5) shall be replaced with the following language: “The application for approval of construction or reconstruction required in Sec. 63.5(b)(3) may be used to fulfill the notification requirements of this paragraph.”

(v) The first sentence in paragraph 63.5(d)(1)(i) shall

be replaced with the following language: “An owner or operator who is subject to the requirements of paragraph (b)(3) of this section shall submit to the Department an application for approval of the construction of a new major affected source, the reconstruction of a major affected source, or the reconstruction of a source such that the source becomes a major affected source subject to the standard.”

(w) Paragraph 63.5(e)(5)(i) shall be replaced with the following language: “Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement, including, but not limited to the requirement to obtain construction permits under Regulation 2 or 25 of the State of Delaware “Regulations Governing the Control of Air Pollution”, before commencing construction or reconstruction; or ”.

(x) Paragraphs 63.5(e)(5)(ii), 63.7(c)(3)(iii)(B) and 63.8(e)(3)(vi)(B) shall be replaced with the following language: “Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act or Department from implementing or enforcing this regulation or taking any other action under 7 Del. C., Chapter 60.”

(y) Paragraph 63.6(g)(2) shall be replaced with the following language: “An owner or operator requesting permission under this paragraph shall, unless otherwise specified in an applicable subpart, submit to the Administrator and Department a proposed test plan or the results of testing and monitoring in accordance with Sec. 63.7 and Sec. 63.8, a description of the procedures followed in testing or monitoring, and a description of pertinent conditions during testing or monitoring. Any testing or monitoring conducted to request permission to use an alternative nonopacity emission standard shall be appropriately quality assured and quality controlled, as specified in Sec. 63.7 and Sec. 63.8.”

(z) Paragraph 63.6(h)(9)(i) shall be replaced with the following language: “If the Department finds under paragraph (h)(8) of this section that an affected source is in compliance with all relevant standards for which initial performance tests were conducted under Sec. 63.7, but during the time such performance tests were conducted fails to meet any relevant opacity emission standard, the owner or operator of such source may petition the Administrator (with copy to the Department) to make appropriate adjustment to the opacity emission standard for the affected source. Until the Administrator notifies the owner or operator of the appropriate adjustment, the relevant opacity emission standard remains applicable.”

(aa) Paragraph 63.6(i)(4)(i)(A) shall be replaced with

the following language: "The owner or operator of an existing source who is unable to comply with a relevant standard established under this part pursuant to section 112(d) of the Act may request that the Department grant an extension allowing the source up to 1 additional year to comply with the standard, if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations, if the 1-year extension of compliance is insufficient to dry and cover mining waste in order to reduce emissions of any hazardous air pollutant. The owner or operator of an affected source who has requested an extension of compliance under this paragraph and who is otherwise required to obtain a title V permit shall apply for such permit or apply to have the source's title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under this paragraph will be incorporated into the affected source's title V permit according to the provisions of Regulation 30 of the State of Delaware "Regulations Governing the Control of Air Pollution."

(bb) Paragraph 63.6(i)(16) shall be replaced with the following language: "The granting of an extension under this section shall not abrogate the Administrator's authority under section 114 of the Act or Department's authority under 7 Del. C., Chapter 60."

(cc) Paragraph 63.7(a)(3) shall be replaced with the following language: "The Administrator or Department may require an owner or operator to conduct performance tests at the affected source at any other time when the action is authorized by section 114 of the Act or by Regulation 17 of the State of Delaware "Regulations Governing the Control of Air Pollutants", respectively."

(dd) Paragraph 63.7(b)(2) shall be replaced with the following language: "In the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in paragraph (b)(1) of this section, due to unforeseeable circumstances beyond his or her control, the owner or operator shall notify the Department within 5 days prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable Federal, State, or local requirement, nor will it prevent the Administrator from implementing or enforcing this part or taking any other action under the Act or Department from implementing or enforcing this regulation or taking any other action under 7 Del. C., Chapter 60."

(ee) Paragraph 63.7(c)(3)(ii)(B) shall be replaced with the following language: "If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator shall refrain from conducting the performance test until the Department approves the site-specific test plan (if review of the site-specific test plan is requested) following the Administrator's approval of the use of the alternative method. If the Department does not approve the site-specific test plan (if review is requested) within 30 days before the test is scheduled to begin, the performance test dates specified in paragraph (a) of this section may be extended such that the owner or operator shall conduct the performance test within 60 calendar days after the Department approves the site-specific test plan. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Department's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative."

(ff) Paragraph 63.7(e)(2) shall be replaced with the following language: "Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this section, in each relevant standard, and, if required, in applicable appendices of parts 51, 60, 61, and 63 of this chapter unless --

(i) The Department specifies or approves, in specific cases, the use of a test method with minor changes in methodology; or

(ii) The Administrator approves the use of an alternative test method, the results of which the Administrator has determined to be adequate for indicating whether a specific affected source is in compliance; or

(iii) The Department approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors; or

(iv) The Department waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Department's satisfaction that the affected source is in compliance with the relevant standard."

(gg) Paragraph 63.7(e)(4) shall be replaced with the following language: "Nothing in paragraphs (e)(1) through (e)(3) of this section shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act or Department's authority under Regulation 17 of the State of Delaware "Regulations Governing the Control of Air Pollution."

(hh) Paragraph 63.7(f)(2)(iii) shall be replaced with the

following language: "Submits the results of the Method 301 validation process to the Administrator (with copy to the Department) along with the notification of intention and the justification for not using the specified test method. The owner or operator may submit the information required in this paragraph well in advance of the deadline specified in paragraph (f)(2)(i) of this section to ensure a timely review by the Administrator in order to meet the performance test date specified in this section or the relevant standard."

(ii) Paragraph 63.7(f)(3) shall be replaced with the following language: "The Administrator will determine whether the owner or operator's validation of the proposed alternative test method is adequate when the Administrator approves or disapproves the use of the alternative test method required under paragraph (c) of this section. If the Administrator finds reasonable grounds to dispute the results obtained by the Method 301 validation process, the Administrator may require the use of a test method specified in a relevant standard."

(jj) Paragraphs 63.8(b)(1) shall be replaced with the following language: "Monitoring shall be conducted as set forth in this section and the relevant standard(s) unless --

(i) The Department specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures; or

(ii) The Administrator approves the use of alternatives to any monitoring requirements or procedures.

(iii) Owners or operators with flares subject to Sec. 63.11(b) are not subject to the requirements of this section unless otherwise specified in the relevant standard."

(kk) Paragraph 63.8(e)(1) shall be replaced with the following language: "When required by a relevant standard, and at any other time the Administrator may require under section 114 of the Act or Department may require under Regulation 17 of the State of Delaware "Regulations Governing the Control of Air Pollution", the owner or operator of an affected source being monitored shall conduct a performance evaluation of the CMS. Such performance evaluation shall be conducted according to the applicable specifications and procedures described in this section or in the relevant standard."

(ll) Paragraph 63.8(e)(3)(v)(B) shall be replaced with the following language: "If the owner or operator intends to demonstrate compliance by using an alternative to a monitoring method specified in the relevant standard, the owner or operator shall refrain from conducting the performance evaluation until the Department approves the site-specific performance evaluation test plan (if requested) once the Administrator approves the use of the alternative method. If the Administrator does not approve the use of the

alternative method within 30 days before the performance evaluation is scheduled to begin, the performance evaluation deadlines specified in paragraph (e)(4) of this section may be extended such that the owner or operator shall conduct the performance evaluation within 60 calendar days after the Department approves the site-specific performance evaluation test plan. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance evaluation as required in this section (without the Department's prior approval of the site-specific performance evaluation test plan) if he/she subsequently chooses to use the specified monitoring method(s) instead of an alternative."

(mm) Paragraph 63.8(f)(4)(i) shall be replaced with the following language: "An owner or operator who wishes to use an alternative monitoring method shall submit an application to the Administrator (with copy to the Department) as described in paragraph (f)(4)(ii) of this section, below. The application may be submitted at any time provided that the monitoring method is not used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring method is to be used to demonstrate compliance with a relevant standard, the application shall be submitted not later than with the site-specific test plan required in Sec. 63.7(c) (if requested) or with the site-specific performance evaluation plan (if requested) or at least 60 days before the performance evaluation is scheduled to begin."

(nn) Paragraph 63.8(f)(6)(i) shall be replaced with the following language: "An alternative to the test method for determining relative accuracy is available for affected sources with emission rates demonstrated to be less than 50 percent of the relevant standard. The owner or operator of an affected source may petition the Administrator (with copy to the Department) under paragraph (f)(6)(ii) of this section to substitute the relative accuracy test in section 7 of Performance Specification 2 with the procedures in section 10 if the results of a performance test conducted according to the requirements in Sec. 63.7, or other tests performed following the criteria in Sec. 63.7, demonstrate that the emission rate of the pollutant of interest in the units of the relevant standard is less than 50 percent of the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the owner or operator may petition the Administrator (with copy to the Department) to substitute the relative accuracy test with the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the

CEMS is used continuously to determine compliance with the relevant standard.”

(oo) Paragraph 63.9(b)(4) shall be replaced with the following language: “The owner or operator of a new or reconstructed major affected source, or of a source that has been reconstructed such that the source becomes a major affected source, that has an initial startup after the effective date of a relevant standard under this part and for which an application for approval of construction or reconstruction is required under Sec. 63.5(d) shall provide the following information in writing to the Department:”

(pp) Paragraph 63.9(b)(4)(i) shall be replaced with the following language: “A notification of intention to construct a new major affected source, reconstruct a major affected source, or reconstruct a source such that the source becomes a major affected source with the application for approval of construction or reconstruction as specified in Sec. 63.5(d)(1)(i);”

(qq) Paragraph 63.10(b)(3) shall be replaced with the following language: “If an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants is not subject to a relevant standard or other requirement established under this part, the owner or operator shall keep a record of the applicability determination on site at the source for the life of the source or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination shall include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) shall be sufficiently detailed to allow the Department to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis shall be performed in accordance with

requirements established in subparts of this part for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under section 112, if any.”

(rr) The last two sentences of Paragraph 63.10(d)(5)(ii) shall be replaced with the following language: “Notwithstanding the requirements of the previous sentence, after January 3, 1996, the owner or operator may make alternative reporting arrangements, in advance, with the Department. Procedures governing the arrangement of alternative reporting requirements under this paragraph are specified in Sec. 63.9(i).”

(ss) Paragraph 63.10(f)(6) shall be replaced with the following language: “Approval of any waiver granted under this section shall not abrogate the Administrator’s authority under the Act or Department’s authority under 7 Del. C., Chapter 60 or in any way prohibit the Department from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.”

(tt) Paragraph 63.15(b)(3) shall be added with the following language: “(3) Any information provided to or otherwise obtained by the Department shall be made available to the public unless it is determined to be confidential under 7 Del. C., Chapter 60, Section 6014 or 29 Del. C., Chapter 100, Section 10002(d).”

Table A-1 of Subpart A - Exceptions to “Department”
as replacement of “Administrator et al”
under Subpart A (b)(1) to (6)

Reference	“Administrator” means “Administrator”	“Administrator et al” is replaced by “Administrator or Department”	“Administrator et al” is replaced by “Administrator and Department”	Comments
63.1(a)(2) & (3)	Yes			
63.1(a)(11)			Yes	
63.1(a)(12)		Yes		
63.1(c)	Yes			

63.2 Administrator	Yes			As replaced
63.2 "Alternative Emission Standard"	Yes			
63.2 "Alternative test method"	Yes			
63.2 "Approved permit program"	Yes			
63.2 "Compliance date"		Yes		
63.2 Equivalent emission limitation	Yes			For last use in definition
63.2 Federally enforceable	Yes			
63.2 Lesser quantity	Yes			
63.2 "Major source"	Yes			
63.2 "New source"	Yes			
63.2 "Performance audit"	Yes			
63.2 "Reconstruction"		Yes		
63.2 "Regulation promulgation schedule"	Yes			
63.2 "Relevant Standard"		Yes		
63.2 "Responsible official"	Yes			In definition (3)
63.4(a)(1)(i)	Yes			
63.5(b)(3)	Yes			As replaced
63.5(b)(4)	Yes			1 st occurrence

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63.5(b)(5) & (6)	Yes			
63.5(e)(5)(ii)	Yes			As replaced
63.6(c)(1)	Yes			
63.6(g)(1)	Yes			
63.6(g)(2)	Yes			As replaced
63.6(g)(3)	Yes			
63.6(h)(9)(i)	Yes			As replaced
63.6(h)(9)(ii, iii & iv)	Yes			
63.6(i)(16)	Yes			As replaced
63.7(a)(3)	Yes			As replaced
63.7(b)(2)	Yes			As replaced
63.7(c)(2)(iii)	Yes			1 st occurrence
63.7(c)(3)(ii)(B)	Yes			As replaced
63.7(c)(3)(iii)(B)	Yes			As replaced
63.7(c)(4)(iii)	Yes			
63.7(e)(2)	Yes			As replaced
63.7(e)(4)	Yes			As replaced
63.7(f)(1)	Yes			
63.7(f)(2)(i)			Yes	1 st occurrence
63.7(f)(2)(iii)	Yes			As replaced
63.7(f)(3)	Yes			As replaced
63.7(f)(4) & (5)	Yes			
63.8(a)(2)	Yes			
63.8(b)(1)	Yes			As replaced
63.8(e)(1)	Yes			As replaced
63.8(e)(3)(v)(B)	Yes			As replaced
63.8(e)(3)(vi)(B)	Yes			As replaced
63.8(f)(1),(2) & (3)	Yes			

63.8(f)(4)(i)	Yes			As replaced
63.8(f)(4)(iii)& (5)	Yes			
63.8(f)(6)(i)	Yes			As replaced
63.8(f)(6)(ii)	Yes			
63.8(f)(6)(iii)	Yes			1 st & 3 rd occurrence
63.8(f)(6)(iii)			Yes	2 nd occurrence
63.9(a)(3)	Yes			
63.9(b)(5)	Yes			1 st occurrence
63.10(a)(3)	Yes			
63.10(f)(6)	Yes			As replaced
63.12	Yes			
63.13	Yes			
63.15	Yes			

**DIVISION OF AIR AND WASTE MANAGEMENT
AIR QUALITY MANAGEMENT SECTION**

Statutory Authority: 7 Delaware Code,
Chapter 60 (7 Del.C. Ch. 60)

REGISTER NOTICE

1. TITLE OF THE REGULATIONS:

REGULATION NO. 38 - "EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES"

2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:

The Department is proposing to amend Regulation No. 38 by adopting by reference the National Emission Standards for Hazardous Air Pollutants for Source Categories found at 40 CFR Part 63 Subpart N.

Subpart N addresses the emissions of chromium, a hazardous air pollutant; establishes emission limitations and work practice standards; and defines the compliance, notification, monitoring, recordkeeping and reporting requirements for hard and decorative chromium electroplating and chromium anodizing facilities.

3. POSSIBLE TERMS OF THE AGENCY ACTION:
None

4. STATUTORY BASIS OR LEGAL AUTHORITY TO ACT: 7 Delaware Code, Chapter 60

5. OTHER REGULATIONS THAT MAY BE AFFECTED BY THE PROPOSAL: None

6. NOTICE OF PUBLIC COMMENT:

The public comment period for this proposed amendment will extend through July 31, 1999. Interested parties may submit comments in writing during this time frame to: Jim Snead, Air Quality Management Section, 715 Grantham Lane, New Castle, DE 19720, and/or statements and testimony may be presented either orally or in writing at the public hearings to be held on Monday, July 26, 1999 beginning at 6:00 p.m. at the DNREC Office Building, 715 Grantham Lane, New Castle, DE 19720 or on Tuesday, July 27, 1999 beginning at 6:00 p.m. at the Owens Campus of Delaware Technical and Community College in Georgetown, DE.

7. PREPARED BY:

James R. Snead, (302) 323-4542 June 11, 1999

The Department proposes to amend Regulation 38 by adding Subpart N, which follows. Subpart N does not change any of the existing subparts of Regulation 38 and shall be placed between existing Subpart M and Subpart Q.

REGULATION NO. 38 Amendment

EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

9/11/99 Subpart N Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks

The provisions of Sections 63.340 through 63.347 in Subpart N, of Title 40, Part 63 of the Code of Federal Regulations, dated July 1, 1998 are hereby adopted by reference with the following changes:

(a) Except as shown in Table N-1 of this subpart, "Department" shall replace "Administrator".

(b) Paragraph 63.340(b) shall be replaced with the following language: "Owners or operators of affected sources subject to the provisions of this subpart must also comply with the requirements of subpart A of this regulation, according to the applicability of subpart A of this regulation to such sources, as identified in Table 1 of this subpart."

(c) The opening sentence of paragraph 63.340(e)(1) shall be replaced with the following language: "The Department has determined, pursuant to the criteria under Sec. 3 of Regulation 30 of the State of Delaware "Regulations Governing the Control of Air Pollution", that an owner or operator of the following types of operations that are not by themselves major sources and that are not located at major sources, as defined in Regulation 30, is permanently exempt from title V permitting requirements for that operation:"

(d) Paragraph 63.340(e)(2) shall be replaced with the following language: "An owner or operator of any other affected source subject to the provisions of this subpart is subject to title V permitting requirements of Regulation 30. These affected sources, if not major or located at major sources as defined in Regulation 30, are deferred by the Department from title V permitting requirements until December 9, 1999. All sources receiving deferrals shall submit title V permit applications by December 9, 2000. All sources receiving deferrals still must meet the compliance schedule as stated in Sec. 63.343."

(e) The opening sentence of Section 63.341(a) shall be replaced with the following language: "Terms used in this

subpart are defined in the Act, in subpart A of this regulation, or in this section. For the purposes of subpart N of this regulation, if the same term is defined in subpart A of this regulation and in this section, it shall have the meaning given in this section."

(f) Paragraph 63.341(b)(10) shall be replaced with the following language: " VR_{tot} = the average total ventilation rate for the three test runs as determined at the outlet by means of the Method 306 in appendix A of 40 CFR part 63 in dscm/min."

(g) The first sentence of paragraph 63.342(f)(3)(i) shall be replaced with the following language: "The owner or operator of an affected source subject to the work practices of paragraph (f) of this section shall prepare an operation and maintenance plan to be implemented no later than September 11, 1999."

(h) Replace all "Table 1 of this section" and "Table 1 of Sec. 63.342" with "Table 342-1 of this section" and "Table 342-1 of Sec. 63.342", respectively.

(i) Paragraph 63.342(f)(3)(i)(C) shall be replaced with the following language: "If the specific equipment used is not identified in Table 342-1 of this section, the plan shall incorporate proposed work practice standards. These proposed work practice standards shall be submitted to the Administrator (with copy to the Department) for approval as part of the submittal required under Sec. 63.343(d);"

(j) The first sentence of paragraph 63.342(f)(3)(iii) shall be replaced with the following language: "Recordkeeping associated with the operation and maintenance plan is identified in Sec. 63.346(b) and paragraph (f)(3)(v) of this section."

(k) Replace the title of table in Section 63.342 with the following title: "Table 342-1 to Sec. 63.342.--Summary of Work Practice Standards".

(l) The following errata found in Table 342-1 as published in the Federal Register and the Code of Federal Regulations shall be corrected as follows:

(i) Replace "chronic" with "chromic";

(ii) Replace "PSB" with "PBS"; and

(iii) Replace "manufacturers" with "manufacturer's".

(m) Replace each "this part" found in Sections 63.343 and 63.344 with "40 CFR part 63".

(n) Paragraph 63.343(a)(1) shall be replaced with the following language: "The owner or operator of an existing affected source shall comply by September 11, 1999 with the emission limitations in Sec. 63.342."

(o) Paragraphs 63.343(a)(1)(i) and (ii) shall be deleted.

(p) Paragraph 63.343(a)(2) shall be replaced with the

following language: "The owner or operator of a new or reconstructed affected source that has an initial startup after January 25, 1995, shall comply by September 11, 1999 or immediately upon startup of the source, whichever is later. The owner or operator of a new or reconstructed affected source that has an initial startup after December 16, 1993 but before January 25, 1995, shall comply by September 11, 1999."

(q) Paragraph 63.343(a)(5) shall be replaced with the following language: "An owner or operator of an existing hard chromium electroplating tank or tanks located at a small, hard chromium electroplating facility that increases its maximum cumulative potential rectifier capacity, or its actual cumulative rectifier capacity, such that the facility becomes a large, hard chromium electroplating facility must comply with the requirements of Sec. 63.342(c)(1)(i) for all hard chromium electroplating tanks at the facility no later than 1 year after the month in which monthly records required by Secs. 63.342(c)(2) and 63.346(b)(12) show that the large designation is met."

(r) Paragraph 63.343(a)(6) shall be replaced with the following language: "An owner or operator of an affected source or sources that requests an extension of compliance shall do so in accordance with the applicable paragraphs of Sec. 63.6(i) of subpart A. When the owner or operator is requesting the extension for more than one affected source located at the facility, then only one request may be submitted for all affected sources at the facility."

(s) Paragraph 63.343(a)(6)(i) shall be deleted.

(t) Paragraph 63.343(a)(6)(ii) shall be deleted.

(u) Paragraph 63.343(b)(1) shall be replaced with the following language: "Except as provided in paragraphs (b)(2) and (b)(3) of this section, an owner or operator of an affected source subject to the requirements of this subpart is required to conduct an initial performance test as required under Sec. 63.7 of subpart A using the procedures and test methods listed in Secs. 63.7 of subpart A and 63.344 of this subpart."

(v) The first sentence of paragraph 63.343(c)(1)(ii) shall be replaced with the following language: "On and after the date on which the initial performance test is required to be completed under Sec. 63.7 of subpart A, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the composite mesh-pad system once each day that any affected source is operating."

(w) The first sentence of paragraph 63.343(c)(2)(ii) shall be replaced with the following language: "On and after the date on which the initial performance test is required to be completed under Sec. 63.7 of subpart A, the owner or

operator of an affected source, or group of affected sources under common control, shall monitor and record the velocity pressure at the inlet to the packed-bed system and the pressure drop across the scrubber system once each day that any affected source is operating."

(x) The first sentence of paragraph 63.343(c)(4)(ii) shall be replaced with the following language: "On and after the date on which the initial performance test is required to be completed under Sec. 63.7 of subpart A, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the fiber-bed mist eliminator, and the control device installed upstream of the fiber bed to prevent plugging, once each day that any affected source is operating."

(y) The first sentence of paragraph 63.343(c)(5)(ii) shall be replaced with the following language: "On and after the date on which the initial performance test is required to be completed under Sec. 63.7 of subpart A, the owner or operator of an affected source shall monitor the surface tension of the electroplating or anodizing bath."

(z) The first sentence of paragraph 63.343(c)(6)(ii) shall be replaced with the following language: "On and after the date on which the initial performance test is required to be completed under Sec. 63.7 of subpart A, the owner or operator of an affected source shall monitor the foam blanket thickness of the electroplating or anodizing bath."

(aa) Paragraph 63.343(c)(8)(i) shall be replaced with the following language: "Requests and approvals of alternative monitoring methods shall be considered in accordance with Sec. 63.8(f)(1), (f)(3), (f)(4), and (f)(5) of subpart A."

(bb) Paragraph 63.343(d) shall be replaced with the following language: "An owner or operator who uses an air pollution control device not listed in this section shall submit to the Administrator (with copy to the Department) a description of the device, test results collected in accordance with Sec. 63.344(c) verifying the performance of the device for reducing chromium emissions to the atmosphere to the level required by this subpart, a copy of the operation and maintenance plan referenced in Sec. 63.342(f) including proposed work practice standards, and appropriate operating parameters that will be monitored to establish continuous compliance with the standards. The monitoring plan submitted identifying the continuous compliance monitoring is subject to the Administrator's approval."

(cc) The first sentence of paragraph 63.344(a) shall be replaced with the following language: "Performance tests shall be conducted using the test methods and procedures in this section and Sec. 63.7 of subpart A."

(dd) The last sentence of paragraph 63.344(c)(2)(iii) shall be replaced with the following language: "The other requirements of Sec. 63.7 of subpart A that apply to affected sources, as indicated in Table 1 of this subpart, must also be met."

(ee) The last sentence of paragraph 63.344(c)(4) shall be replaced with the following language: "Procedures for requesting and obtaining approval are contained in Sec. 63.7(f) of subpart A."

(ff) The second sentence of paragraph 63.344(d)(4)(i) shall be replaced with the following language: "The port shall be located as close to the control system as possible, and shall be placed a minimum of 2 duct diameters downstream and 0.5 duct diameter upstream of any flow disturbance such as a bend, expansion, or contraction (see Method 1, 40 CFR part 60, appendix A)."

(gg) Paragraph 63.344(e)(2) shall be replaced with the following language: "When multiple affected sources performing the same type of operation (e.g., all are performing hard chromium electroplating) and subject to the same emission limitation are controlled with an add-on air pollution control device that is not controlling emissions from any other type of affected operation or from any nonaffected sources, the applicable emission limitation identified in Sec. 63.342 must be met at the outlet of the add-on air pollution control device."

(hh) The opening of paragraph 63.344(e)(3)(iv) shall be replaced with the following language: "Determine the total ventilation rate from the affected sources (VR_{inlet}) by using equation 1:

$$VR_{tot} \times IDA_i / IA_{total} = VR_{inlet} \quad (1)$$

where".

(ii) Replace "Sigma VR_{inlet} " in paragraph 63.344(e)(3)(v) with " VR_{inlet} ".

(jj) The opening of paragraph 63.344(e)(4)(ii) shall be replaced with the following language: "Determine the total ventilation rate for each type of affected source ($VR_{inlet,a}$) using equation 3:

$$VR_{tot} \times IDA_{i,a} / IA_{total} = VR_{inlet,a} \quad (3)$$

where".

(kk) The opening of paragraph 63.344(e)(4)(iii) shall be replaced with the following language: "Establish the allowable mass emission rate in mg/hr for each type of affected source (AMR_i) that is controlled by the add-on air pollution control device using equation 4, 5, 6, or 7 as appropriate:"

(ll) The opening of paragraph 63.344(e)(4)(iv) shall be replaced with the following language: "Establish the allowable mass emission rate (AMR_{sys}) in mg/hr for the system using equation 8, including each type of affected source as appropriate:"

(mm) Paragraph 63.345(b) shall be replaced with the following language: "New or reconstructed affected sources. The owner or operator of a new or reconstructed affected source is subject to applicable paragraphs of Sec. 63.5, as noted in Table 1 of subpart N, as well as the provisions of this section."

(nn) The first sentence of paragraph 63.345(b)(1) shall be replaced with the following language: "After September 11, 1999, whether or not an approved permit program is effective in the State in which an affected source is (or would be) located, no person may construct a new affected source or reconstruct an affected source subject to this subpart, or reconstruct a source such that it becomes an affected source subject to this subpart, without submitting a notification of construction or reconstruction to the Department."

(oo) Paragraph 63.345(b)(2)(iii) shall be replaced with the following language: "A notification of intention to construct a new affected source or make any physical or operational changes to an affected source that may meet or has been determined to meet the criteria for a reconstruction as defined in Sec. 63.2 of subpart A;"

(pp) Paragraph 63.345(b)(2)(iv) shall be replaced with the following language: "An identification of subpart N of this regulation as the basis for the notification;"

(qq) Paragraph 63.345(b)(4), in its entirety, shall be replaced with the following language:

"(4)(i) The owner or operator of a new or reconstructed affected area source that submits a notification in accordance with paragraphs (b)(1) through (3) of this section is not subject to approval by the Department. Construction or reconstruction is subject only to notification and can begin upon submission of a complete notification.

(ii) The owner or operator of a new or reconstructed affected major source that submits a notification in accordance with paragraphs (b)(1) through (3) of this section and an application for approval of construction or reconstruction in accordance with requirements of Sec. 63.5 of subpart A is subject to approval by the Department. Construction or reconstruction can not commence prior to receipt of the Department's approval of the application for approval of construction or reconstruction and/or approval of the Regulation 2 permit to construct application.

(iii) Additionally, the owner or operator of a new

or reconstructed affected source may be required to obtain an approved construction permit under Regulation 2 of the State of Delaware "Regulations Governing the Control of Air Pollution", before commencing construction or reconstruction."

(rr) Paragraph 63.345(b)(5), in its entirety, shall be replaced with the following language: "(5) Submittal timeframes. After September 11, 1999, whether or not an approved permit program is effective in the State in which an affected source is (or would be) located, an owner or operator of a new or reconstructed affected source shall submit the notification of construction or reconstruction required by paragraph (b)(1) of this section and/or the application for approval of construction or reconstruction required by Sec. 63.5 of subpart A according to the following schedule:

(i) If construction or reconstruction commences after September 11, 1999, the notification and/or application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence.

(ii) If the construction or reconstruction had commenced and initial startup had not occurred before September 11, 1999, the notification and/or application shall be submitted as soon as practicable after September 11, 1999."

(ss) Paragraph 63.346(a) shall be replaced with the following language: "The owner or operator of each affected source subject to these standards shall fulfill all recordkeeping requirements outlined in this section and in subpart A of this regulation as identified in Table 1 of this subpart."

(tt) Paragraph 63.346(b)(15) shall be replaced with the following language: "Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements, if the source has been granted a waiver under Sec. 63.10(f) of subpart A; and".

(uu) Paragraph 63.346(b)(16) shall be replaced with the following language: "All documentation supporting the notifications and reports required by Sec. 63.9 and Sec. 63.10 of subpart A and Sec. 63.347 of this subpart."

(vv) Paragraph 63.346(c) shall be replaced with the following language: "All records shall be maintained for a period of 5 years in accordance with Sec. 63.10(b)(1) of subpart A."

(ww) Paragraph 63.347(a) shall be replaced with the following language: "The owner or operator of each affected source subject to these standards shall fulfill all reporting requirements outlined in this section and in subpart A of this regulation as identified in Table 1 of this subpart. These

reports shall be mailed to the Administrator at the appropriate address as identified in Sec. 63.13 and to the Department, in accordance with 63.10(a)(4) of subpart A."

(xx) Paragraph 63.347(a)(1) shall be replaced with the following language: "Reports required by subpart A of this regulation and this section may be sent by U.S. mail, fax, or by another courier."

(yy) The opening of paragraph 63.347(c)(1) shall be replaced with the following language: "The owner or operator of an affected source that has an initial startup before September 11, 1999, shall notify the Department in writing that the source is subject to this subpart. The notification shall be submitted no later than September 11, 1999, and shall contain the following information:"

(zz) Paragraph 63.347(c)(1)(iii) shall be replaced with the following language: "A statement that subpart N of this regulation is the basis for this notification;"

(aaa) Paragraph 63.347(c)(1)(vi) shall be replaced with the following language: "For sources performing hard chromium electroplating, the maximum cumulative potential rectifier capacity;"

(bbb) Paragraph 63.347(c)(1)(vii) shall be replaced with the following language: "For sources performing hard chromium electroplating, a statement of whether the affected source(s) is located at a small or a large, hard chromium electroplating facility and whether this will be demonstrated through actual or maximum cumulative potential rectifier capacity;"

(ccc) Paragraph 63.347(c)(1)(viii) shall be replaced with the following language: "For sources performing hard chromium electroplating, a statement of whether the owner or operator of an affected source(s) will limit the maximum cumulative potential rectifier capacity in accordance with Sec. 63.342(c)(2) such that the hard chromium electroplating facility is considered small; and".

(ddd) Paragraph 63.347(c)(1)(ix) shall be replaced with the following language: "A statement of whether the affected source is located at a major source or an area source as defined in Sec. 63.2 of subpart A."

(eee) Paragraph 63.347(c)(2), in its entirety, shall be replaced with the following language: "(2) The owner or operator of a new or reconstructed affected source that has an initial startup after January 25, 1995 shall submit an initial notification, in addition to the notification of construction or reconstruction required by Sec. 63.345(b), as follows:

(i) A notification of the date when construction or reconstruction was commenced, shall be submitted simultaneously with the notification of construction or reconstruction, if construction or reconstruction was

commenced before September 11, 1999;

(ii) A notification of the date when construction or reconstruction was commenced, shall be submitted no later than 30 calendar days after such date, if construction or reconstruction was commenced after September 11, 1999; and

(iii) A notification of the actual date of startup of the source shall be submitted by September 11, 1999 or within 30 calendar days after startup, whichever is later."

(fff) Paragraph 63.347(d)(2) shall be replaced with the following language: "In the event the owner or operator is unable to conduct the performance test as scheduled, the provisions of Sec. 63.7(b)(2) of subpart A apply."

(ggg) The opening of paragraph 63.347(e)(2) shall be replaced with the following language: "If the State in which the source is located has not been delegated the authority to implement the rule, each time a notification of compliance status is required under this part, the owner or operator of an affected source shall submit to the Administrator (with copy to the Department) a notification of compliance status, signed by the responsible official (as defined in Sec. 63.2 of subpart A) who shall certify its accuracy, attesting to whether the affected source has complied with this subpart. If the State has been delegated the authority, the notification of compliance status shall be submitted to the Department. The notification shall list for each affected source:"

(hhh) Paragraph 63.347(e)(3) shall be replaced with the following language: "For sources required to conduct a performance test by Sec. 63.343(b), the notification of compliance status shall be submitted to the Department no later than 90 calendar days following completion of the compliance demonstration required by Sec. 63.7 of subpart A and Sec. 63.343(b) of this subpart."

(iii) Paragraph 63.347(e)(4) shall be replaced with the following language: "For sources that are not required to complete a performance test in accordance with Sec. 63.343(b), the notification of compliance status shall be submitted to the Department no later than 30 days after the compliance date specified in Sec. 63.343(a)."

(jjj) Paragraph 63.347(f)(1) shall be replaced with the following language: "If the State in which the source is located has not been delegated the authority to implement the rule, the owner or operator of an affected source shall report to the Administrator (with copy to the Department) the results of any performance test conducted as required by Sec. 63.7 of subpart A or Sec. 63.343(b) of this subpart. If the State has been delegated the authority, the owner or operator of an affected source should report performance test results to the Department."

(kkk) Paragraph 63.347(g)(2)(i)(B) shall be replaced

with the following language: "The owner or operator continues to comply with all applicable recordkeeping and monitoring requirements of subpart A of this regulation and this subpart; and".

(lll) The opening sentence of paragraph 63.347(h) shall be replaced with the following language: "The requirements of this paragraph do not alleviate affected area sources from complying with the requirements of Regulation 2 and 30 of the State of Delaware "Regulations Governing the Control of Air Pollution"."

(mmm) Paragraph 63.347(h)(3)(i)(B) shall be replaced with the following language: "The owner or operator continues to comply with all applicable recordkeeping and monitoring requirements of subpart A of this regulation and this subpart; and".

(nnn) The first sentence of paragraph 63.347(i) shall be replaced with the following language: "The requirements of this paragraph do not alleviate affected sources from complying with the requirements of Regulation 2 and 30 of the State of Delaware "Regulations Governing the Control of Air Pollution"."

(ooo) Paragraph 63.347(i)(1), in its entirety, shall be replaced with the following language: "(1) Not later than September 11, 1999, submit an initial notification that includes:

(i) The same information as is required by paragraphs (c)(1)(i) through (v) of this section;

(ii) A statement that a trivalent chromium process that incorporates a wetting agent will be used to comply with Sec. 63.342(e); and

(iii) The list of bath components that comprise the trivalent chromium bath, with the wetting agent clearly identified."

(ppp) Paragraph 63.347(i)(2) shall be replaced with the following language: "Within 30 days of the compliance date specified in Sec. 63.343(a) or by September 11, 1999, whichever is later, a notification of compliance status that contains an update of the information submitted in accordance with paragraph (i)(1) of this section or a statement that the information is still accurate."

(qqq) Replace the title of table following Section 63.347 with the following title: "Table 1 of Subpart N of Regulation 38 -- Subpart A (General Provisions) Applicability to Subpart N".

(rrr) The following errata found in Table 1 of Subpart N as published in the Federal Register and the Code of Federal Regulations shall be corrected as follows:

(i) "Sec. 63.345(c)(5)" noted in comments for 63.5(d)(1)(i) shall be replaced with "Sec. 63.5(b)(5)";

(ii) "Sec. 63.345(c)(5)" noted in comments for

63.5(f)(2) shall be replaced with “Sec. 63.5(b)(5)”;

(iii) “part A” noted in comments for 63.6(b)(1)-(2) shall be replaced with “subpart A”;

(iv) Reference to “63.6(i)(12)(ii)-(iii)” shall be replaced with “63.6(i)(12)(ii)-(iv)”;

(v) Reference to “63.8(c)(4)-(7)” shall be replaced with “63.8(c)(4)-(8)”.

(sss) In Table 1 of Subpart N, delete any “Comment” and change the applicability from “Yes” to “No” for the following “General provision references”:

- (i) “63.6(i)(2)”;
- (ii) “63.6(i)(5)”;
- (iii) “63.6(i)(6)(ii)”;
- (iv) “63.6(i)(10)(v)(B)”;
- (v) “63.6(i)(12)(i)”;
- (vi) “63.6(i)(12)(ii-iv)”.

(ttt) In Table 1 of Subpart N, delete the “Comment” for the “General provision reference”, “63.6(i)(4)(i)”.

(uuu) In Table 1 of Subpart N, replace the “Comment” with the following language: “This paragraph only references “paragraph (i)(4)(ii) of this section” for compliance extension provisions.” for the following “General provision references”:

- (i) “63.6(i)(6)(i)”;
- (ii) “63.6(i)(8)”;
- (iii) “63.6(i)(9)”;
- (iv) “63.6(i)(10)(v)(A)”.

Table N-1 of Subpart N - Exceptions to “Department” as replacement of “Administrator” under Subpart N (a)

Reference	“Administrator” means “Administrator”	Comment
63.342(f)(3)(i)(C)	Yes	As replaced
Table 342-1 to Sec. 63.342	Yes	
63.343(c)(8)(ii)	Yes	
63.343(d)	Yes	As replaced
63.344(c)(4)	Yes	
63.347(a)	Yes	As replaced
63.347(e)(2)	Yes	As replaced
63.347(f)(1)	Yes	As replaced
In Table 1 of Subpart N in comments for 63.8(f)(2)	Yes	

**DIVISION OF AIR AND WASTE MANAGEMENT
AIR QUALITY MANAGEMENT SECTION**

Statutory Authority: 7 Delaware Code,
Chapter 60 (7 Del.C. Chp. 60)

1. TITLE OF THE REGULATIONS:

SUMMARY OF Delaware 2002 Rate-of-Progress Plan For Kent And New Castle Counties: For Demonstrating Progress toward Attainment of the 1-Hour National Ambient Air Quality Standard for Ground Level Ozone.

2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:

The Clean Air Act Amendments of 1990 (CAAA) requires Delaware to submit to the US Environmental Protection Agency (EPA) a State Implementation Plan (SIP) for every three years after 1996 to demonstrate how to achieve adequate rate-of-progress in reducing emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx), which are major precursors to form ozone. The plan proposed herein is for the period of 2000 to 2002, and thus termed as Delaware’s 2002 Rate-of-Progress Plan.

3. POSSIBLE TERMS OF THE AGENCY ACTION:

None.

4. STATUTORY BASIS OR LEGAL AUTHORITY TO ACT:

- 7 Del. C., Chapter 60 Section 6010.
- Clean Air Act Amendments of 1990.

5. OTHER REGULATIONS THAT MAY BE AFFECTED BY THE PROPOSAL:

None

6. NOTICE OF PUBLIC COMMENT:

Public Hearing will be held on August 3, 1999 at 6:00 p.m. in the DNREC auditorium, 89 Kings Highway, Dover, Delaware 19901.

7. PREPARED BY:

Frank F. Gao, Project Leader
 Alfred R. Deramo, Program Manager(302) 739-4791
 June 11, 1999

SUMMARY OF DELAWARE 2002 RATE-OF-PROGRESS PLAN FOR KENT AND NEW CASTLE COUNTIES

For Demonstrating Progress toward Attainment of the 1-Hour National Ambient Air Quality Standard for Ground Level Ozone

Submitted to: US Environmental Protection Agency
 By Delaware Department of Natural Resources and Environmental Control in Conjunction with Delaware Department of Transportation

July 1999

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Acronym List

AIRS-	EPA's Aerometric Information Retrieval System.
AFS-	AIRS Facility Subsystem.
AMS-	AIRS Area and Mobile Subsystem.
AQM-	Air Quality Management Section
BEA-	Bureau of Economic Analysis
CAAA-	Clean Air Act Amendments of 1990
CMSA-	Consolidated Metropolitan Statistical Area

CO -	Carbon Monoxide
DeIDOT-	Delaware Department of Transportation
DNREC-	Delaware Department of Natural Resources and Environmental Control
EPA-	United States Environmental Protection Agency
EPS2.0-	EPA's Emissions Preprocessor System software
FMVCP-	Federal Motor Vehicle Control Program
HPMS-	Highway Performance Monitoring System
I/M -	Inspection and Maintenance
LEV-	Low Emission Vehicle
MPO-	Metropolitan Planning Organization
mmBTU -	Million British Thermal Unit
mmcf-	Million Cubic Feet
NAAQS-	National Ambient Air Quality Standard
NLEV-	National Low Emission Vehicle
NOx -	Oxides of Nitrogen
OTAG-	Ozone Transport Assessment Group
OTC-	Ozone Transport Commission
OTR-	Ozone Transport Region
PAPS-	Point and Area Projection System
PERC-	Perchloroethylene
POTW-	Publicly Owned Treatment Works
RACT-	Reasonably Available Control Technology
RPP-	Rate-of-Progress Plan
RVP-	Reid Vapor Pressure
SCC-	Source Classification Code
SIC -	Standard Industrial Classification
SIP -	State Implementation Plan
VHB-	Vanasse Hangen Brustlin, Inc.
VOC-	Volatile Organic Compound

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4. NOx Substitution Guidance, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, December 1993.
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26. Technical Highlights Report: Emission Factors for Locomotives, EPA420-F-97-051, Office of Mobile sources, US EPA, Ann Arbor, MI, December 1997.

INTRODUCTION

1. Background

This document contains the summary of Delaware's State Implementation Plan (SIP) revision for the milestone

year of 2002 to address adequate rate of progress toward attainment of the 1-hour ozone National Ambient Air Quality Standard (NAAQS) as set forth in the Clean Air Act Amendments of 1990 (hereafter referred to as CAAA)¹. The plan is hereafter referred to as "Delaware 2002 Rate-of-Progress Plan", or simply as "the 2002 RPP".

The CAAA sets forth National Ambient Air Quality Standards for six air pollutants that pose public health risks and environmental threats. Delaware exceeds the standard for only one of these pollutants, i.e., the ground level ozone. High levels of ozone can harm the respiratory system and cause breathing problems, throat irritation, coughing, chest pains, and greater susceptibility to respiratory infection. High levels of ozone also cause serious damage to forests and agricultural crops, resulting in economic losses to logging and farming operations. Ozone is generally not directly emitted to the atmosphere, but formed in the atmosphere by chemical reactions between volatile organic compounds (VOC), nitrogen oxides (NO_x), and carbon monoxide (CO) in the presence of sunlight. Consequently, in order to reduce ozone concentrations, the CAAA requires specific amounts of reductions in anthropogenic VOC emissions and/or NO_x emissions over a specified period of years until the ozone standard is attained. These periodic emission reductions are termed as "rate of progress" toward the attainment of the ozone NAAQS.

The CAAA defines five nonattainment classifications for areas that exceed the 1-hour ozone NAAQS based on the severity of the pollution problem. In order of increasing severity, they are marginal, moderate, serious, severe, and extreme. Attainment dates depend on the classification designation for individual areas.² The CAAA also establishes the Ozone Transport Region (hereafter referred to as OTR) where the interstate transport of air pollutants from one or more states contributes significantly to violations of the ozone NAAQS in one or more other states. This single transport region for ozone includes the states of Delaware, Connecticut, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the Consolidated Metropolitan

1. Federal Clean Air Act, 42 U.S.C.A. 7401 et seq., as amended by the Clean Air Act Amendments of 1990, P.L. 101-549, November 15, 1990.
2. Clean Air Act Amendments of 1990, Title 1, Part D, Section 181.

Statistical Area (CMSA) that includes the District of Columbia.¹ The OTR includes the Philadelphia Consolidated Metropolitan Statistical Area (CMSA) which is classified as a severe nonattainment area (Figure 1). As shown in Figure 1, Kent and New Castle Counties in Delaware fall within the Philadelphia CMSA. Thus, these two counties are subject to all requirements set forth for the severe ozone nonattainment class. All discussions and data presented in this summary document and the 2002 RPP apply only to Kent and New Castle Counties.

Section 182 (d) of the CAAA requires states to submit a State Implementation Plan (SIP) to the United States Environmental Protection Agency (EPA), for each ozone nonattainment area

averaged over each consecutive 3-year period beginning November 15, 1996, until the area's applicable attainment date. These rate-of-progress emission reductions are based on the states' 1990 emission levels. The SIP revision for the 1990-1996 reductions is termed as "15% Rate-of-Progress Plan (RPP)" and the plans for an average 3% per year reduction over each 3-year period after 1996 is termed as "Post-1996 Rate-of-Progress Plans". The CAAA also provides for crediting of VOC emissions reductions achieved in the 1990-1996 period to the post-1996 rate-of-progress plans if they are in excess of the 15% VOC reductions requirement, and substitution of any anthropogenic nitrogen oxides (NOx) emissions reductions, net of growth, occurring in the post-1990 period for the post-1996 VOC emission reduction requirements. In addition to the average annual 3% VOC/NOx emission reduction, Section 182(d) of CAAA also requires the States to provide for photochemical grid modeling demonstrations for the attainment of ozone NAAQS by the applicable attainment date.

Through a memorandum dated on March 2, 1995, from Mary D. Nichols, Assistant Administrator for Air and Radiation, EPA provides for the States with serious and above ozone nonattainment areas a two-phased approach to the post-1996 RPPs.³ Briefly, in Phase I, the States are required to develop a plan for the milestone year of 1999 which includes necessary control measures to achieve a 9% reduction of VOC and/or NOx emissions between 1996 and 1999. In Phase II, the States are required to assess the regional and local control measures necessary to meet the rate-of-progress requirements and achieve attainment. On December 23, 1997, EPA provided further guidance, along with a memorandum from Richard D. Wilson, Acting Assistant Administrator of Air and Radiation, on how to prepare the Phase II submittal.⁴

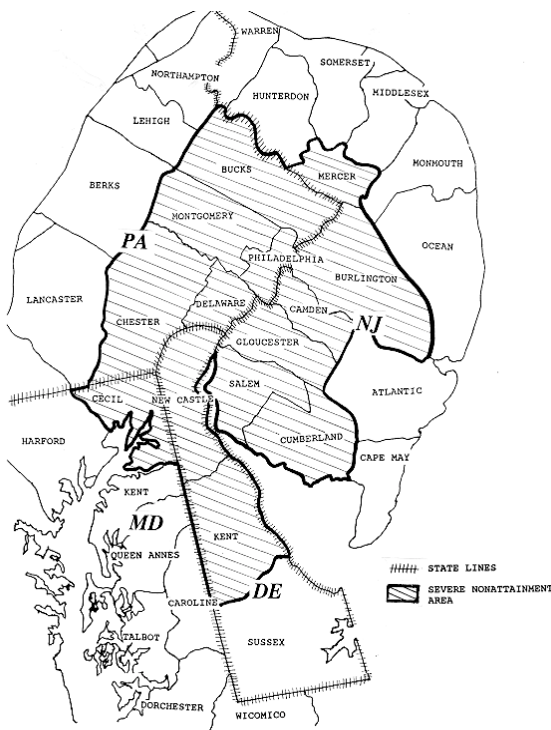


Figure 1. Philadelphia Consolidated Metropolitan Statistical Area (CMSA) Nonattainment Area.²

classified as severe or above, that achieves a 15% net reduction, by November 15, 1996, of actual anthropogenic (human-caused) volatile organic compound (VOC) emissions. In addition to the 15% reduction, Section 182(d) also requires states to submit SIP revisions that achieve an actual VOC emission reduction of at least 3% per year

2. This map is adapted from Major CO, NO₂ and VOC Sources in the 25-Mile Boundary Around Ozone Nonattainment Areas, Volume 1: Classified Ozone Nonattainment Area, EPA/4-92-005a, U.S. Environment Protection Agency, Office of Air Quality Planning and Standards, Office of Air and Radiation, Research Triangle Park, NC, February, 1992.
3. Memorandum: Ozone Attainment Demonstrations, Mary D. Nichols, Assistant Administrator for Air and Radiation, U.S. EPA, Washington, D.C. 20460, March 2, 1995.

1. Clean Air Act Amendments of 1990, Title 1, Part D, Section 184 (a).

2. Delaware State Implementation Plan Submittals

All the rate-of-progress emission reductions aforementioned are based on the States' 1990 emission levels. Delaware's 1990 Base Year Ozone Emission Inventory, which is an inventory of the 1990 actual VOC, NO_x, and CO emissions from all sources in Delaware, was submitted to EPA as a SIP revision on May 27, 1994, and was approved by EPA on March 25, 1996. Since the ozone NAAQS attainment date for Kent and New Castle Counties is 2005, Delaware is required to submit the 15% RPP, and RPPs for three post-1996 milestone years, i.e., 1999, 2002, and 2005. Delaware's 15% RPP was submitted to EPA as a SIP revision in February 1995. In this plan, Delaware showed that, by implementing necessary control measures, the required 15% VOC emission reduction could be successfully met by 1996. The 15% RPP was conditionally approved by EPA in May 1997. Delaware's 1999 RPP, the first post-1996 SIP revision developed according to the Phase I requirements set forth in the Nichols' Memorandum (please see Footnote 4), was submitted to EPA in December, 1997. In June 1999, Delaware submitted to EPA the Amendments of the 1999 RPP. In the 1999 RPP (as amended in April 1999), Delaware shows that the 9% VOC and/or NO_x emission reductions required for the 1996-1999 period can be successfully met by implementing additional control measures in this time period. Delaware also demonstrates that an additional 3% VOC/NO_x emission reduction can be achieved, without further rulemaking activities, to meet the contingency requirements specified by EPA.¹ In May 1998, Delaware submitted to EPA the Phase II attainment demonstration document based on EPA's guidance. In this Phase II document, Delaware makes a commitment to submit a SIP revision to EPA before the end of 2000 to address the emission reductions for the post-1999 rate-of-progress milestone years up to the attainment date for the 1-hour ozone NAAQS (Delaware's attainment date for the 1-hour ozone NAAQS is 2005). Both Phase I and Phase

II submittals are currently under EPA's review.

On July 18, 1997, EPA revised the 1-hour ozone NAAQS with an 8-hour standard at a level of 0.08 ppm.² However, the 1-hour standard will continue to apply to a nonattainment area for an interim period until EPA makes a determination that the area has air quality meeting the 1-hour standard. As a consequence, the provisions of Section 182 of the CAAA will continue to apply to the subject nonattainment areas until EPA makes determinations that these areas have met the 1-hour ozone standard (please see Footnote 5). The continuation of the 1-hour standard requires that Delaware submit to EPA, before the end of 2000, fully adopted Rate-of-Progress Plans for the milestone year of 2002 and for the milestone year of 2005. Delaware 2002 Rate-of-Progress Plan is for the milestone year of 2002. Delaware's 2005 Rate-of-Progress plan will be addressed in a separate SIP revision.

3. Organization of the 2002 RPP

The 2002 RPP is a fully-adopted Rate-of-Progress Plan with (a) emission target calculations for the milestone year of 2002, and (b) all control measures and regulations adopted and/or to be adopted as necessary to achieve the rate-of-progress requirements set forth for 2002. In general, the document contains five parts as explained below.

Part I. The 1990 Base Year Inventory Summary and 2002 Target Levels of VOC and NO_x Emissions

The 2002 Target Levels of VOC and NO_x Emissions are the maximum amounts of anthropogenic VOC and NO_x emissions allowed in the years of 2002 in Kent and New Castle Counties in order to meet the 3% per year VOC/NO_x reduction requirements. As previously mentioned, the basis for calculating these target levels is the 1990 Base Year Emission Inventory, which is an inventory of actual VOC, NO_x, and CO emissions that occurred in Delaware in 1990. Section 182(c)(2)(C) of CAAA allows NO_x reductions that occur after 1990 to be used to meet the post-1996 rate of progress requirements. The condition for meeting the rate-of-progress requirements is that the sum of all creditable VOC and NO_x emissions must equal 3% per year averaged over the applicable milestone period. In the event of NO_x

4. Memorandum and Guidance for Implementing the 1-Hour Ozone and Pre-Existing PM₁₀ NAAQS, Richard D. Wilson, Acting Assistant Administrator for Air and Radiation, U.S. EPA, Washington, D.C. 20460, December 23, 1997.

1. Guidance on the Post-1996 Rate-of-Progress Plan and the Attainment Demonstration, Office of Air Quality Planning and Standards, US EPA, Research Triangle Park, NC, February 1994.

2. Environmental Protection Agency: National Ambient Air Quality Standard for Ozone; Final Rule. Federal Register, Vol. 62, No. 138, Friday, July 18, 1997.

substitution, separate target levels of emissions will have to be calculated for VOC and NO_x. Part I presents a summary of the 1990 Base Year Inventory and presents also the 6-step process for determining the 2002 Target Levels of VOC emissions with and without NO_x substitution.

Part II. The 2002 Current Control Projection Inventory & Required VOC and NO_x Emission Reductions

The Current Control Projections are estimates of the amount of VOC and NO_x emissions that will occur in 2002, taking into account the effects of economic growth, and assuming no new emission control measures would be implemented between 1990 and the corresponding milestone year, i.e., 2002. The purpose of calculating the 2002 Current Control Projection Inventory is to determine the amount of growth in VOC and NO_x emissions by 2002 that must be offset. Part II discusses the methodology used to develop 2002 growth factors and shows how the growth factors are used to determine the 2002 Current Control Projection Inventory.

Part III. The 2002 Control Strategy Projection Inventory and Emission Control Measures

The 2002 Control Strategy Projections are estimates of the amount of VOC and NO_x emissions that will occur in 2002, taking into account the effects of economic growth and continued benefits of control strategies in the 15% RPP and the 1999 RPP, and including the benefits from new control measures that will be implemented during the 1999-2002 period. The purpose of calculating the 2002 Control Strategy Projection Inventory is to determine if the new national, regional and state level control measures, which will be implemented between 1999 and 2002 will reduce VOC and/or NO_x emissions sufficiently to offset growth and to meet the 2002 Target Levels of VOC and NO_x emissions calculated in Part I. Part III discusses the methodology used to develop the 2002 Control Strategy Projection Inventory and presents the individual control measures to be implemented by 2002 with their associated VOC and NO_x emissions reductions.

Part IV. Contingency Plan for the 2002 RPP

Contingency measures are required by the CAAA to be included in the rate-of-progress plans to remedy the state's failure to meet the emission reduction target in a milestone year. The CAAA requires that, in the event of such a

failure, the contingency measures can be implemented (1) without any further rulemaking actions by the state, and (2) to achieve an additional 3% emission reduction over the 1990 baseline level. Part IV discusses the contingency measures and the potential emission reductions associated with each measure.

Part V. Documentation

Numerous appendices are included in this part to backup the discussion and conclusions in Part I through Part IV. These appendices include background information, emission data, projection methodologies and calculations, relevant guidance memorandums from EPA, and other references cited in Part I through Part IV.

It should be pointed out that there exist minute discrepancies among numbers in various parts in this plan. These discrepancies are due to rounding errors in calculations and are of a magnitude of ± 0.001 TPD. These discrepancies do not affect the final calculation results and the conclusions of the plan.

4. Responsibilities

The agency with direct responsibility for preparing and submitting the 2002 RPP is the Delaware Department of Natural Resources and Environmental Control (DNREC), Division of Air and Waste Management, Air Quality Management Section (AQM), under the direction of Darryl D. Tyler, Program Administrator. The Delaware Department of Transportation (DelDOT), in conjunction with the consulting firm Vanasse Hangen Brustlin, Inc. (VHB), Watertown, MA, is responsible for performing the work associated with the on-road mobile source portions of this document. Various other Delaware agencies, including the Department of Labor, the Department of Public Safety, and the Department of Agriculture, provide information used in some portions of this document. These agencies will be referred to and acknowledged in appropriate locations in the document.

The working responsibility for Delaware's air quality planning falls within the Planning and Community Protection Branch of the Air Quality Management Section of DNREC, under the management of Raymond H. Malenfant, Program Manager. Alfred R. Deramo, Program Manager of Emissions Research, Planning and Attainment Group within the Planning and Community Protection Branch, is the project manager and chief editor of the 2002 RPP. Joseph Cantalupo, Manager of DelDOT's Intergovernmental Coordination Section, Office of Planning, is responsible for

managing the work associated with the on-road mobile source portions of this plan. Thomas F. Wholley, Director of Air Quality Services, Vanasse Hangen Brustlin, Inc., is responsible for contract work associated with the on-road mobile source portions of this plan.

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PART I

THE 1990 BASE YEAR INVENTORY SUMMARY AND THE 2002 TARGET LEVELS OF VOC AND NO_x EMISSIONS

Under the rate-of-progress provisions in Section 182(d) of the CAAA, Delaware is required to achieve an average 3% per year VOC emission reduction from the 1990 baseline emission levels in Kent and New Castle Counties in the milestone period of 1999-2002. In order to determine necessary and adequate control strategies for achieving the required emission reductions in the 2002 RPP, the target level of VOC emissions in the milestone year of 2002 must first be calculated. In addition, Section 182(c)(2)(C) of the CAAA permits the substitution of NO_x emission reductions for the post-1996 VOC emission reductions required for the adequate rate-of-progress. Such NO_x substitutions for VOC emission reductions require the calculation of the 2002 target level of NO_x emissions.

The 3% per year rate-of-progress reductions in VOC and NO_x emissions for the 1999-2002 period are determined from the 1990 Base Year Inventory after the inventory is adjusted for non-creditable emission reductions due to (1) Federal Motor Vehicle Control Program (FMVCP) tailpipe

or evaporative standards promulgated prior to 1990, (2) Federal regulations specifying Reid Vapor Pressure (RVP) limits on gasoline for nonattainment areas, (3) State regulations required to correct deficiencies in Reasonably Available Control Technology (RACT) rules, and (4) State regulations required to establish or correct Inspection and Maintenance (I/M) programs. In this part of the 2002 RPP, a summary of the 1990 Base Year Inventory for Kent and New Castle Counties is first presented, followed by the procedures and calculations for estimating the 2002 target levels of VOC emissions with and without NO_x substitution.

1.1. The 1990 Base Year Inventory Summary

The rate-of-progress provisions in the CAAA require states in nonattainment areas to submit to the EPA a current inventory of actual emissions from all sources of relevant pollutants.¹ This inventory is to be used as the basis for determining required emissions reductions. The calendar year 1990 is the time frame for this current emissions inventory which is called the 1990 Base Year Ozone State Implementation Plan (SIP) Emissions Inventory. Delaware's 1990 Base Year Inventory was submitted to the EPA as a SIP revision on May 27, 1994, and approved by EPA on March 25, 1996 (Reference 1, hereafter referred to as Delaware's 1990 Base Year Inventory).

The 1990 Base Year Inventory is categorized into point, stationary area, off-road mobile, on-road mobile and biogenic sources of emissions. Volatile organic compounds (VOC), nitrogen oxides (NO_x), and carbon monoxide (CO) are the ozone precursor emissions reported for each category in the 1990 Base Year Inventory. Because CO is only marginally reactive in producing ozone, the CO component of the 1990 Base Year Inventory is not included in the rate-of-progress requirements. Therefore, only the VOC and NO_x components of the 1990 Base Year Inventory are summarized in this part, as shown in Table 1. The values in Table 1-1 are reported in tons per day in the peak ozone season. The peak ozone season for Delaware is defined as from June 1 through August 31.

Table 1

1990 Base Year Inventory Summary of VOC and NO_x Emissions (in TPD) by County in Peak Ozone Season

-
1. 9 CAAA, Title I, Part D, Sec. 172(c)(3) and Sec. 182.

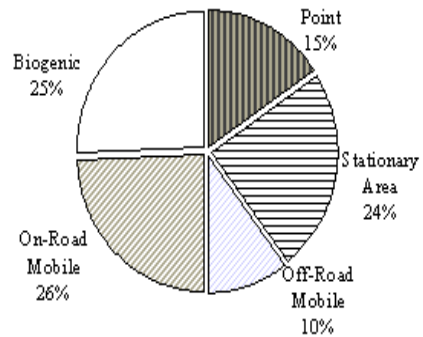
Source Category	Kent		New Castle		Total NAA	
	VOC	NOx	VOC	NOx	VOC	NOx
Point Sources	3.242	6.130	27.078	85.767	30.320	91.897
Stationary Sources Area	12.967	1.202	34.754	5.398	47.721	6.600
Off-Road Sources Mobile	3.494	7.891	16.674	18.777	20.168	26.668
On-Road Sources Mobile	13.07	10.62	35.28	27.06	48.35	37.68
Biogenic Sources*	32.46	0.00	17.51	0.00	49.97	0.00
Total Emissions	65.233	25.843	131.296	137.002	196.529	162.845

The percent VOC contribution of each source sector listed in Table 1 to the total VOC emissions from Kent and New Castle Counties is shown in Figure 2. These relative proportions are shown for the total inventory of all sources, as well as for the anthropogenic inventory that excludes biogenic emissions. The anthropogenic inventory is the inventory from which the Base Year Inventory is adjusted and the 2002 Target Levels of VOC (and NOx) emissions are calculated.

The percent NOx contribution of each source sector listed in Table 1 to the total NOx emissions from Kent and New Castle Counties is shown in Figure 3. All NOx emissions in the 1990 Base Year Inventory are from anthropogenic sources. The NOx emissions from biogenic sources are considered negligible and are not included in the 1990 Base Year Inventory.

The 1990 Base Year emissions data were downloaded from the EPA's Aerometric Information Retrieval System (AIRS) to a PC work file for the purpose of developing the 15% Rate-of-Progress Plan, the 1999 Rate-of-Progress Plan, and this 2002 Rate-of-Progress Plan. A more detailed explanation of the 1990 Base Year Inventory data and the methods used to develop the data is contained in Delaware's 1990 Base Year Ozone SIP Emissions Inventory for VOC, CO, and NOx, Department of Natural Resources and Environmental Control, Air Quality Management Section, Dover, DE, as revised in May 1994 (Reference 1).

(a) Total VOC Emissions, 196.529 TPD



(b) Anthropogenic VOC Emissions, 146.559 TPD

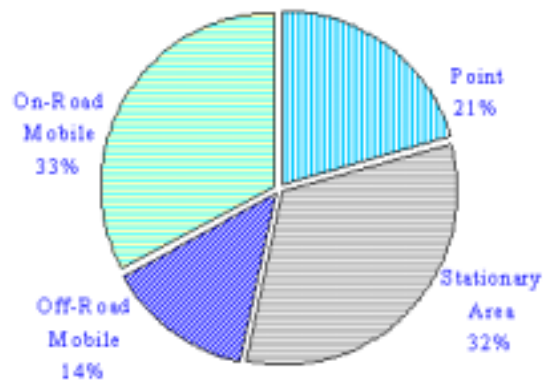


Figure 2. Contribution of Source Components to Total 1990 Base Year VOC Emissions in Delaware's Non-Attainment Area (NAA).

Anthropogenic NO_x Emissions. 162.845 TPD

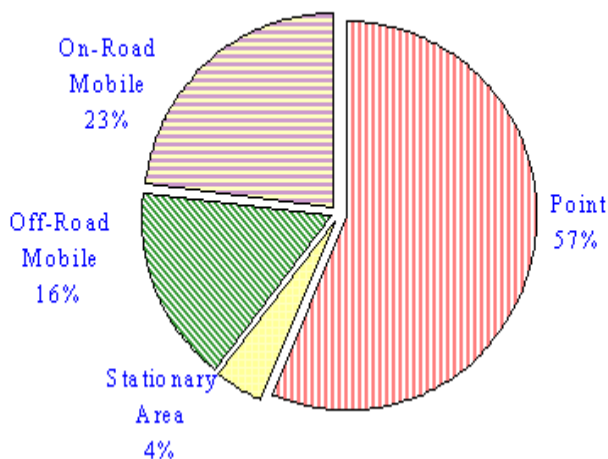


Figure 3. Contribution of Source Components to Total 1990 Base Year VOC Emissions in Delaware's Non-Attainment Area (NAA).

1.2. Guidance for Calculating Emission Target Levels for Post-1996 Milestone Years

The Clean Air Act Amendments of 1990 (CAAA) is the principal guidance for determining the target levels of VOC and NO_x emissions in a state's Rate-of-Progress Plans (RPP). Based on the CAAA, EPA has issued various guidance documents for States to follow in their RPP development. This section of the 2002 RPP briefly outlines the requirements and procedures specified in the CAAA and relevant EPA guidance documents for determining emission target levels in the rate-of-progress milestone years.

The target levels of VOC and NO_x emissions for a milestone year is the maximum amount of total anthropogenic VOC and NO_x emission to be allowed for the entire subject nonattainment area (NAA) in that specific milestone year. The CAAA sets forth restrictions on certain control measures toward the VOC emission reductions to meet the rate-of-progress requirements. Briefly, all real, permanent, and enforceable post-1990 VOC emission reductions are creditable toward the rate-of-progress reductions except (1) the Federal Motor Vehicle Control Program (FMVCP) tailpipe or evaporative standards promulgated prior to 1990, (2) the Federal Regulations specifying Reid Vapor Pressure (RVP) limits for gasoline for nonattainment areas, (3) the State regulations required to correct deficiencies in Reasonably Available Control

Technology (RACT) rules, and (4) the State regulations required to establish or correct vehicle Inspection and Maintenance (I/M) programs.¹ After adjustments for these non-creditable emission reductions and for emissions of any photochemically non-reactive VOCs such as perchloroethylene (PERC), the 1990 Base Year Inventory for Anthropogenic Emissions is termed as the 1990 Adjusted Base Year (or Baseline) Inventory. This adjusted baseline inventory forms the basis for determining the rate-of-progress (i.e., percentage) emission reductions, and the corresponding emission target levels for individual milestone years. The basic procedures for developing the adjusted base year inventory are outlined in an EPA document entitled "Guidance on the Adjusted Base Year Emissions Inventory and the 1996 Target for the 15 Percent Rate-of-Progress Plans" (Reference 2, hereafter referred to as The Guidance on the Adjusted Base Year Inventory).

For the milestone year of 1996, the target level is required for VOC emissions only. This can be done by multiplying the VOC emission level in the 1990 Adjusted Base Year Inventory by 15% to obtain the required emission reduction, and subtracting it from the 1990 adjusted level. Details of Delaware's 1996 emission target calculations can be found in The Delaware 15% Rate-of-Progress Plan, Delaware Department of Natural Resources and Environmental Control, Dover, DE, February, 1995 (Reference 3). For the post-1996 milestone years, the target levels are to be calculated for VOC emissions, as well as for NO_x emissions if NO_x substitution is selected by states to meet the required rate-of-progress reductions. Section 182(c)(2)(C) of the CAAA allows states to use actual NO_x emission reductions obtained after 1990 to meet the post-1996 VOC emission reduction requirements. If a state chooses to substitute its NO_x emission reductions for VOC emission reductions, such substitution must meet the criteria outlined in the EPA's NO_x Substitution Guidance (Reference 4). These criteria are (1) the sum of all creditable VOC and NO_x emission reductions must equal 3% per year averaged over each applicable milestone period, and (2) the overall VOC and NO_x emission reductions must be consistent with the area's modeled attainment demonstration. The second criterion, i.e., the consistency requirement, is modified by a policy memorandum issued by EPA on July 12, 1994.² The modification requires that (1) the State must have adopted RACT regulations for NO_x emission control, and (2) the State must demonstrate,

1. Clean Air Act amendment of 1990, Title I, Part D, Section 182(b)(1)(D).

through modeling of at least one episode with photochemical Urban Airshed Modeling (UAM) or Regional Oxidant Modeling (ROM), the usefulness of NOx controls in reducing the ground-level ozone concentrations. The State of Delaware satisfies these two requirements. Delaware adopted NOx RACT regulations on November 24, 1993 and these regulations became effective on May 31, 1995 (Reference 5). The Sensitivity Analysis conducted by Rutgers University for the Philadelphia-New Jersey UAM Airshed has demonstrated that as much as 75% of VOC and 75% of NOx reductions could be necessary for the entire domain to achieve the ground-level ozone standard. Details of this analysis are presented in The Delaware 1999 Rate-of-Progress Plan for Kent and New Castle Counties, Department of Natural Resources and Environmental Control, Dover, DE, as amended in June 1999 (References 6 and 7). Delaware's two nonattainment counties (i.e., Kent and New Castle) are included in the modeled airshed domain. In addition, the Regional and Urban Scale Modeling (RUSM) performed by Ozone Transport Assessment Group (OTAG) has shown that NOx emission and transport controls are crucial for Delaware to reach attainment of the ozone standard (Reference 8). Therefore, Delaware meets the consistency requirement and can choose to control NOx emissions and substitute NOx emission reductions for VOC emission reductions to meet the rate-of-progress requirements.

To determine the control strategies for achieving a 9% VOC/NOx emission reduction for each 3-year period after 1996, the target levels of VOC and NOx emissions for the three post-1996 milestone years (i.e., 1999, 2002, and 2005 for Delaware) need to be calculated. For these post-1996 milestone years, the target levels of VOC and NOx emissions for a subject milestone year depend on the target levels in the previous milestone year. According to EPA's Guidance on the Post-1996 Rate-of-Progress Plan and the Attainment Demonstration (Reference 9, hereafter referred to as The Guidance on the Post-1996 RPP), the following equation must be used for calculating emission target levels for a subject milestone year

$$TL_x = TL_y - BG_r - FT_x \quad (1)$$

where:

- x = subject milestone year (e.g., 2002),
- y = previous milestone year (e.g., 1999),
- TL_x = target level of emissions for year x,
- TL_y = target level of emissions for year y,
- BG_r = Emission reduction required for year y,
- FT_x = Fleet turnover correction for year y to year x.

1.3. The 2002 Target Levels of VOC and NOx Emissions

From Equation (1), it can be seen that the target level of VOC and NOx emissions for a subject milestone year (i.e., 2002) is calculated by subtracting, from the target levels in the previous milestone year (i.e., 1999), the required rate-of-progress emission reductions (i.e., 9% for the period of 1999-2002) and the fleet turnover correction for the corresponding milestone period. There are six major steps in calculating the target level of emissions for the milestone year 2002. The first four steps are needed to calculate the required rate-of-progress emission reductions, the fifth step is to calculate the fleet turnover corrections, and the last step is to obtain the target level.

Step 1. Development of the 1990 Base Year Inventory

The 1990 Base Year Inventory has been fulfilled in Delaware's 1990 Base Year Ozone SIP Emission Inventory (Reference 1). A summary by source sector of the 1990 Base Year Inventory of VOC and NOx emissions in Delaware's two severe nonattainment counties (Kent and New Castle) has been presented in Table 1.

Step 2. Development of the 1990 Rate-of-Progress or Baseline Inventory

The 1990 Baseline Inventory is the "baseline" from which Delaware calculates the 9% rate-of-progress emission reductions for the subject 1999-2002 milestone period. This baseline inventory accounts for only anthropogenic emissions from sources within Kent and New Castle Counties. Therefore, this baseline inventory is obtained by removing, from the 1990 Base Year Inventory, (1) biogenic emissions, (2) any emissions from sources outside Kent and New Castle Counties, and (3) the non-reactive perchloroethylene (PERC) emissions (for VOC inventory only). Delaware's 1990 Base Year Inventory for Kent and New Castle Counties (see Table 1) does not include emissions from any outside sources. It does include,

2. Memorandum: Clarification of Policy for Nitrogen Oxides (NOx) Substitution, John S. Seitz, Director, Office of Air Quality Planning and Standards, US EPA, July 12, 1994, included in Appendix H.

however, the biogenic and PERC emissions. Perchloroethylene was originally classified by EPA as a photochemically reactive VOC for emission inventory purposes. The EPA reclassified PERC as photochemically non-reactive after Delaware's 1990 Base Year Inventory was compiled. Because only the photochemically reactive VOCs participate in the formation of ozone, the PERC emissions, which are now considered not participating in the formation of ozone, need to be subtracted from the 1990 Base Year Inventory. Calculations for the 1990 Baseline Inventory for VOC emissions are shown below.

1990 Base Year Total VOC Emissions (Kent and New Castle Counties Only):

$$65.233 \text{ TPD (Kent)} + 131.296 \text{ TPD (New Castle)} = 196.529 \text{ TPD}$$

Emissions from Outside Nonattainment Area: None

1990 Base Year Total Biogenic VOC Emissions:
 $32.460 \text{ TPD (Kent)} + 17.510 \text{ TPD (New Castle)} = 49.970 \text{ TPD}$

1990 Base Year Total PERC Emissions (See Appendix A): 0.716 TPD

1990 Baseline VOC Emissions = 1990 Base Year Inventory - (Outside Emissions + Biogenic Emissions + PERC Emissions) = $196.529 - (0 + 49.970 + 0.716) = 145.843 \text{ TPD}$

The 1990 Baseline Inventory for NOx emissions will be the same as the 1990 Base Year Inventory (Table 1), since (1) biogenic NOx emissions are negligible, (2) there are no NOx emissions from outside sources in the 1990 Base Year Inventory, and (3) correction for PERC emissions does not apply to NOx emissions. The 1990 Baseline Inventory for both VOC and NOx emissions is summarized in Table 2.

Table 2

1990 Baseline Inventory Summary for VOC and NOx Emissions (in TPD)

Source Sector	Kent		New Castle		Total	NA A
	VOC	NOx	VOC	NOx	VOC	NOx
Point Sources	3.242	6.130	26.938	85.767	30.180	91.897

Stationary Area Sources	12.779	1.202	34.366	5.398	47.145	6.600
Off-Road Mobile Sources	3.494	7.891	16.674	18.777	20.168	26.668
On-Road Mobile Sources	13.07	10.62	35.28	27.06	48.35	37.68
TOTAL EMISSIONS	32.585	25.843	113.258	137.002	145.843	162.845

Step 3. Development of the 1990 Adjusted Baseline Inventory

According to Section 182(b)(1)(D) of the CAAA, emission reductions resulted from the Federal Motor Vehicle Control Program (FMVCP) and Reid Vapor Pressure (RVP) regulations promulgated prior to 1990 are not creditable for achieving the adequate rate-of-progress emission reductions. Therefore, the 1990 Baseline Inventory needs to be adjusted by subtracting the VOC (and NOx) emission reductions that are expected to occur between 1990 and the subject milestone year 2002 due to the FMVCP and RVP regulations. The result of this adjustment is called "the 1990 Adjusted Baseline Inventory relative to 2002".

The FMVCP/RVP VOC and NOx emission reductions that are expected to occur between 1990 and a subject milestone year are determined using the on-road mobile source emission modeling software (MOBILE5a) provided by EPA. The MOBILE5a input and output files for the 1990 Adjusted Baseline Inventory for on-road mobile sources are provided by Delaware Department of Transportation (DelDOT), through its contractor, Vanasse Hangen Brustlin, Inc., Watertown, MA (hereafter referred to as VHB). These files are included in Appendix B of the 2002 RPP. The calculations and results for the non-creditable FMVCP/RVP emission reductions for the target years of 1999 and 2002 are presented in Table 3.

Table 3

Non-Creditable FMVCP/RVP Emission Reductions (in TPD)

Description	VOC	NOx	
1990 Baseline On-Road Mobile Source Emissions	48.350	37.680	(a)

1990 Adjusted Base Year On-Road Mobile Source Emissions			
Adjusted for 1999	36.850	33.730	(b) ₁₉₉
Adjusted for 2002	35.660	33.240	(b) ₂₀₀
FMVCP/RVP Emission Reductions			
For 1990-1999	11.500	3.950	(a)-(b) ₁₉₉
For 1990-2002	12.690	4.440	(a)-(b) ₂₀₀

Adjusted for 2002	133.153	158.405	(a)-(b) ₂₀₀₂
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2002 RPP is obtained by subtracting the sum of non-creditable fleet turnover correction factor and the expected VOC emissions level in 2002 from the 1999 target level of VOC emissions. The expected level of VOC emissions (i.e., the control strategy projection) in 2002 is 101.139 TPD (See Table 15 in Part III), and the fleet turnover correction factor for the 1999-2002 period is 1.190 TPD. Therefore, 7.877 TPD of VOC emission reduction can be utilized for meeting the 1999-2002 rate-of-progress requirements. The calculations and result are summarized in Table 5.

The 1990 Adjusted Baseline Inventory relative to a subject milestone year is obtained by subtracting the corresponding FMVCP/RVP emission reductions from the 1990 Baseline Inventory presented in Step 2. The calculations and results are shown in Table 4. This all-source adjusted inventory is the baseline for calculating the required rate-of-progress emission reductions, as shown in the next step.

Table 5

VOC Emission Reductions (in TPD) Creditable for 3% Per Year Rate-of-Progress Requirement for 1999-2002 Period

Step 4 - Calculation of Required Creditable Reductions

The percent reductions required for VOC and NOx emissions are calculated separately. However, the sum of all creditable VOC and NOx emission reductions must be equal to the 3% per year required reduction. The VOC emission reduction that can be applied for the

Description	Emissions	
1990 Baseline VOC Emission Adjusted for 2002	133.153	(a)
1999 VOC Target Level*	110.206	(b)
VOC Fleet Turnover Correction for 1999-2002	1.190	(c)
2002 VOC Control Strategy Projections	101.139	(d)
Creditable VOC Emission Reductions for 1999-2002	7.877	(e)=(b)-(c)-(d)
% of VOC Reductions for 2002 Rate-of-Progress	5.92%	(f)=(e)/(a)x100

Table 4

1990 Adjusted Baseline VOC and NOx Emissions (in TPD)

Description	VOC	NOx	
1990 Baseline Inventory (All-Source Emissions)	145.843	162.845	(a)
FMVCP/RVP Emission Reductions			
For 1990-1999	11.500	3.950	(b) ₁₉₉₉
For 1990-2002	12.690	4.440	(b) ₂₀₀₂
1990 Adjusted Baseline Inventory Emissions			
Adjusted for 1999	134.343	158.895	(a)-(b) ₁₉₉₉

* The 1999 target level is obtained from Delaware's 1999 RPP as amended in June 1999 (Reference 7).

The percentage of VOC reduction creditable toward the 3% per year rate of progress is determined from the 1990 Adjusted Base Year Inventory of VOC emissions. The total creditable VOC emission reduction of 7.877 TPD is converted to an equivalent percentage and is found to be 5.92%. The percent NOx reduction that can be substituted to meet the average 3% per year rate-of-progress requirement is obtained from the fact that the sum of creditable VOC and NOx emission reductions must be equal to 9% between 1999 and 2002, which requires a 3.08% for NOx emission reduction. The required NOx emission reduction is then calculated to be 4.879 TPD, as indicated in Table 6.

Table 6

**NOx Emission Reductions (in TPD) Creditable for 3%
Per Year Rate-of-Progress Requirement for 1999-2002
Period**

Description	Emissions	
1990 Baseline NOx Emission Adjusted for 2002	158.405	(a)
% VOC Reductions for 2002 Rate-of-Progress	5.92%	(b)
% NOx Reductions for 2002 Rate-of-Progress	3.08%	(c)
Total % of VOC/NOx Reduction	9.00%	(d)=(b)+(c)
NOx Emission Reductions Required for 1999-2002	4.879	(e)=(a)x(c)

In summary, the emission reductions required to meet the average 3% per year rate-of-progress requirement for the 1999-2002 period are 7.877 TPD and 4.879 TPD for VOC and NOx, respectively.

Step 5. Calculation of Corrections for Fleet Turnover

It is anticipated that there will be some decrease in motor vehicle emissions for many years as a result of fleet turnover, i.e., the gradual replacement of older pre-control vehicles by newer vehicles with the control required by the CAAA, even in the absence of any additional and new controls. The CAAA does not allow States to take credit from these fleet-turnover reductions for achieving rate-of-progress purposes. Therefore, the emission reductions due to any fleet turnover during the post-1996 milestone periods are not creditable for the corresponding milestone year. The fleet turnover correction for each post-1996 target level is obtained by subtracting the 1990 Baseline On-Road Mobile Source Emissions adjusted to the subject milestone year (i.e., 2002) from the 1990 Baseline On-Road Mobile Source Emissions adjusted to the previous milestone year (i.e., 1999). The calculations and results for 2002 are shown in Table 7.

Table 7

**Fleet Turnover Corrections for On-Road Mobile Source
VOC and NOx Emissions (TPD)**

Correction (TPD)	VOC	NOx	
For 1999-2002	1.190	0.490	(b)1999- (b)2002*

* Data are obtained from Table 1-8.

Step 6 - Calculation of 2002 Target Levels of VOC and NOx Emissions

The target levels of VOC and NOx emissions in 2002 are calculated using Equation (1), i.e., by subtracting the required emission reductions (in step 4) and the fleet turnover corrections (in step 5) from the target levels of the previous milestone year of 1999 (References 6 and 7). The calculations and results are summarized in Table 8.

Table 8

Target Levels of VOC and NOx Emissions in 2002 (in TPD)

Description	VOC	NOx	
1999 Target Level*	110.206	148.964	(a)
Emission Reduction for Rate-of-Progress	7.877	4.879	(b)
Fleet Turnover Correction for 1999-2002	1.190	0.490	(c)
Target Level for 2002	101.139	143.595	(d)=(a)- (b)-(c)

* The 1999 target levels are obtained from Delaware's 1999 RPP as amended in June 1999 (Reference 7).

The target levels shown in Table 8 are the maximum VOC and NOx emissions to be allowed in 2002, under the requirements of adequate rate-of-progress toward the attainment of the 1-hour ozone standard, for Delaware's two severe nonattainment counties, i.e., Kent and New Castle Counties. Delaware must limit its VOC and NOx emissions in Kent and New Castle Counties to or below these target levels in 2002.

PART II

THE 2002 CURRENT CONTROL PROJECTION INVENTORY AND THE REQUIRED VOC AND NOx EMISSION REDUCTIONS

In addition to the 15% VOC emissions reductions, plus offsetting emission growth, by the year 1996, Section 182(c)(2) of the Clean Air Act Amendments of 1990

(CAAA) requires each serious and above ozone nonattainment area to achieve 3% per year emissions reductions, net of growth, averaged over each consecutive 3-year period after 1996 until the year of attainment. In other words, the Post-1996 Rate-of-Progress Plan and Attainment Demonstration requires that the nonattainment area not only reduce the VOC emissions from the baseline inventory by 9 percent for each 3-year milestone period, but also offset any growth in emissions due to increased economic activity in each 3-year period. For the period of 1999-2002 in Delaware, the 9% emission reductions from the 1990 Baseline Inventory emission levels include 7.877 TPD of VOC reduction and 4.879 TPD of NOx reduction, as determined in Part I. The Part II of the 2002 RPP sets forth the methodology used in determining the total amount of VOC and NOx emission reductions required for the 1999-2002 period, including the emission reductions that are required to offset emission growth.

In order to determine the total amount of VOC and NOx emission reductions required for the 1999-2002 period, the emission levels in the milestone year 2002 must be estimated. For this purpose, the 2002 growth factors are developed for the various emission source categories, as presented in Section 2.2 of the 2002 RPP. The 1990 baseline emissions are then multiplied by these growth factors, and the resulting inventory is called the 2002 Current Control Projection Inventory. The 2002 Current Control Projection Inventory is an estimation of VOC and NOx emissions that will occur in 2002, if no new emission control measures are implemented between 1990 and 2002. The difference between the 2002 Current Control Projection Inventory and the 2002 Target Level of Emissions (discussed in Part I of this plan), is the total amount of emissions that Delaware must plan to reduce in order to meet the 9 percent VOC reduction requirement for the 1999-2002 period. This part of the 2002 RPP contains a detailed discussion of how the total VOC and NOx emission reductions are determined.

2.1 The 2002 Current Control Projection Inventory Summary

The 2002 Current Control Projection Inventory of VOC and NOx emissions for Kent and New Castle Counties is summarized in Tables 9 for VOC and Table 10 for NOx. Also included in these tables, for comparison purposes, are the 1990 Baseline Inventory emissions from individual source sectors. The 1990 data presented in Tables 9 and 10 are obtained from Table 2. The Current Control Projection and Baseline VOC and NOx emission data are shown graphically in Figures 4 and 5, respectively. Figure 6 shows

the relative proportions of VOC and NOx emissions for each source sector in the 2002 Current Control Projection Inventory for the entire severe nonattainment area (NAA) in Delaware. Figures 7 and 8 respectively show the 2002 Current Control Projection Inventory VOC and NOx emissions by county.

The point, stationary area, and off-road mobile source portions of the 2002 Current Control Projection Inventory are essentially created by multiplying 1990 Baseline Inventory emission levels by the appropriate growth factors. The on-road mobile source emissions are projected by multiplying emission factors generated from the MOBILE5a software by the projected 2002 vehicle miles traveled (VMT), as explained in Section 2.3 in the 2002 RPP.

**Table 9
Summary of VOC Emissions in 2002 Current Control Projection Inventory (in TPD)**

Source Sector	Kent County		New Castle		Total NAA	
	1990*	2002	1990*	2002	1990*	2002
	Baseline	Projection	Baseline	Projection	Baseline	Projection
Point	3.242	3.361	26.938	27.914	30.180	31.275
Stationary Area	12.779	13.762	34.366	37.227	47.145	50.989
Off-Road Mobile	3.494	4.093	16.674	18.170	20.168	22.263
On-Road Mobile	13.070	16.500	35.280	44.250	48.350	60.750
Total Emissions	32.585	37.716	113.258	127.561	145.843	165.277

* 1990 Baseline Inventory data are obtained from Table 2.

**Table 10
Summary of NOx Emissions in 2002 Current Control Projection Inventory (in TPD)**

Source Sector	Kent County		New Castle		Total NAA	
	1990*	2002	1990*	2002	1990*	2002
	Baseline	Projection	Baseline	Projection	Baseline	Projection
Point	6.130	6.989	85.767	94.840	91.897	101.829

Stationary Area	1.202	1.347	5.398	6.036	6.600	7.383
Off-Road Mobile	7.891	9.024	18.777	21.175	26.668	30.199
On-Road Mobile	10.620	13.180	27.060	34.290	37.680	47.470
Total Emissions	25.843	30.540	137.002	156.341	162.845	186.881

* 1990 Baseline Inventory data are obtained from Table 2.

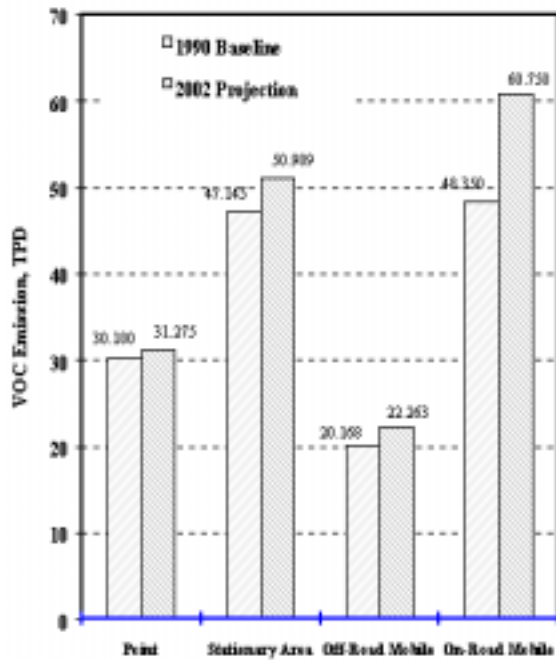


Figure 4. Comparison of VOC Emissions in 2002 Current Control Projection Inventory And 1990 Baseline Inventory

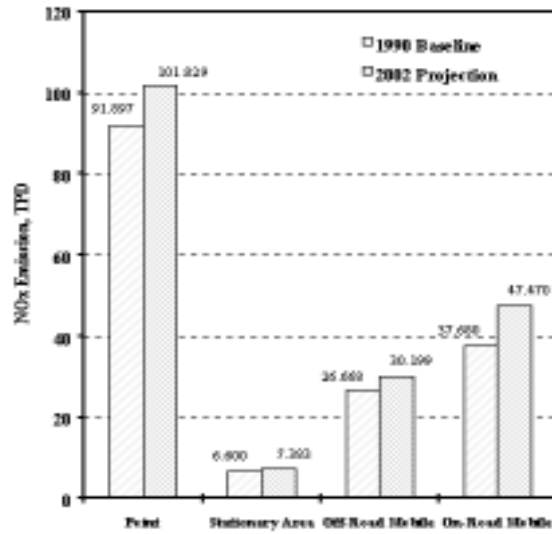


Figure 5. Comparison of NOx Emissions in 2002 Current Control Projection Inventory And 1990 Baseline Inventory

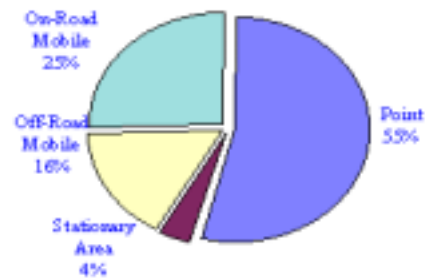
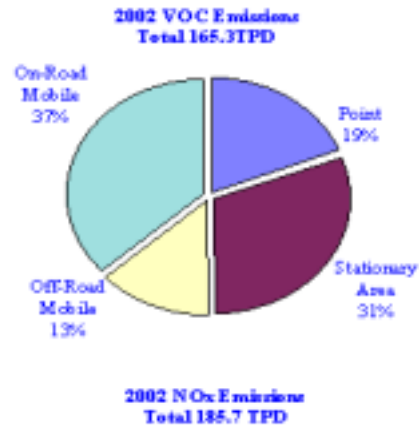


Figure 6. Total 2002 Current Control Projection Inventory VOC and NOx Emissions By Source Sector

2.2 Calculation of Total Required VOC and NOx Emissions Reductions

According to the rate-of-progress provisions in the CAAA, Delaware's 2002 RPP for the severe nonattainment area (i.e., Kent and New Castle Counties) is required not only to achieve a 9% of the 1990 baseline from the 1999 targets, but also to offset any growth in emissions between 1999 and 2002. In other words, the total emission reductions for meeting the adequate rate of progress consist of two components: (1) any growth in emissions occurring between 1999 and 2002 that must be offset, plus (2) the average 3% per year emission reductions for the 1999-2002 period.

2.2.1. Determination of Growth in Emissions for the 1999-2002 Period

The growth in emissions for the 1999-2002 period can be obtained from the current control projections of 1999 and 2002. The 2002 current control projections for VOC and NOx emissions are presented in Tables 9 and 10, respectively. The 1999 current control projection inventories of VOC and NOx emissions can be obtained from Delaware's 1999 Rate-of-Progress Plan, as amended in June 1999 (References 6 and 7). For comparison purpose, the 1999 Current Control Projection Inventories are summarized in Tables 11 and 12 for VOC and NOx emissions, respectively.

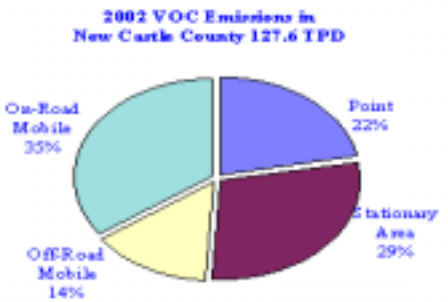
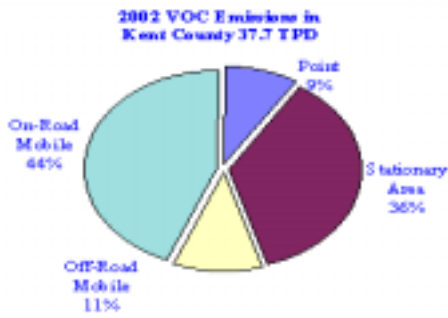


Figure 7. Total 2002 Current Control Projection Inventory VOC Emissions By County and Source Sector

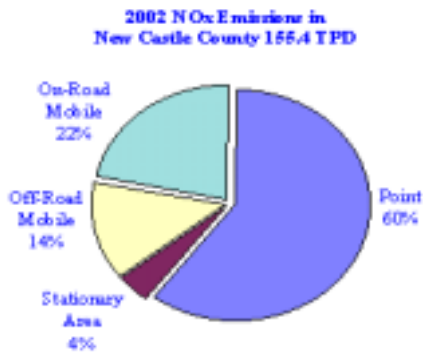
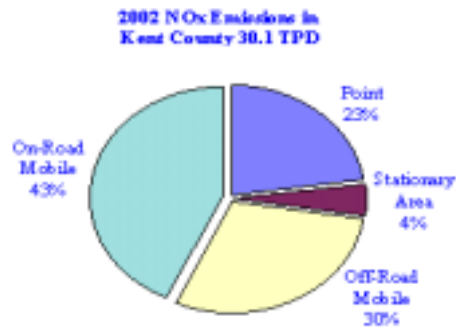


Figure 8. Total 2002 Current Control Projection Inventory NOx Emissions By County and Source Sector

Table 11

Summary of 1999 Current Control Projection Inventory VOC Emissions (in TPD)

Source Sector	Kent County		New Castle County		Total NAA	
	1990 VOC	1999 VOC	1990 VOC	1999 VOC	1990 VOC	1999 VOC
	Baseline	Projection	Baseline	Projection	Baseline	Projection
Point	3.242	3.267	26.938	27.194	30.180	30.461
Stationary Area	12.779	13.473	34.366	36.482	47.145	49.955
Off-Road Mobile	3.494	3.923	16.674	17.699	20.168	21.622
On-Road Mobile	13.070	15.460	35.280	42.240	48.350	57.700
Total Emissions	32.585	36.123	113.258	123.615	145.843	159.738

Table 12

**Summary of 1999 Current Control Projection Inventory
NOx Emissions (in TPD)**

Source Sector	Kent County		New Castle County		Total NAA	
	1990 NOx	1999 NOx	1990 NOx	1999 NOx	1990 NOx	1999 NOx
	Baseline	Projection	Baseline	Projection	Baseline	Projection
Point	6.130	6.538	85.767	96.693	91.897	103.231
Stationary Area	1.202	1.311	5.398	5.893	6.600	7.204
Off-Road Mobile	7.891	8.555	18.777	19.919	26.668	28.474
On-Road Mobile	10.620	12.570	27.060	32.580	37.680	45.150
Total Emissions	25.843	28.974	137.002	155.085	162.845	184.059

The growth in emissions is determined by subtracting the 1999 current control projections from the 2002 current control projections. A summary of the growths in VOC and NOx emissions for the 1999-2002 period is presented in Table 13. As indicated in Table 13, a growth of 5.539 TPD in VOC emissions and a growth of 2.822 TPD in NOx emissions for the 1999-2002 period must be offset in Delaware's nonattainment area.

Table 13

**Summary of Emission Growths between 1999 and 2002
(in TPD)**

Source Sector	Growth in VOC Emissions			Growth in NOx Emissions*		
	Kent	New Castle	Total NAA	Kent	New Castle	Total NAA
Point	0.094	0.720	0.814	0.451	-1.853	-1.402
Stationary Area	0.289	0.745	1.034	0.036	0.143	0.179
Off-Road Mobile	0.170	0.471	0.641	0.469	1.256	1.725
On-Road Mobile	1.040	2.010	3.050	0.610	1.710	2.320

Total Emissions	1.593	3.946	5.539	1.566	1.256	2.822
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*The minus sign(-) indicates decline instead of growth.

2.2.2. Determination of VOC and NOx Emission Reductions for the 1999-2002 Period

In its 1999 Rate-of-Progress Plan, as amended in June 1999 (Reference 7), Delaware has determined its 1999 emission target levels of 110.206 TPD for VOC and 148.964 TPD for NOx. In Part I of this 2002 RPP, it has been determined that the total nonattainment area (i.e., Kent and New Castle Counties) have to meet a target level of 101.139 TPD for VOC emissions and a target level of 143.595 TPD for NOx emissions. The VOC and NOx emission reductions required to meet the 2002 target levels can be determined as follows:

$$\begin{aligned} \text{VOC Reduction Without Growth} &= 1999 \text{ Target Level} - \\ &\quad 2002 \text{ Target Level} \\ &= 110.206 - 101.139 \\ &= 9.067 \text{ TPD} \end{aligned}$$

Total VOC Reduction Required beyond the 1999 RPP Target Level

$$\begin{aligned} &= \text{Emission Growth} + \text{Reduction Without Growth} \\ &= 5.539 + 9.067 = 14.606 \text{ TPD} \end{aligned}$$

The total VOC emission reductions of 14.606 TPD, besides the 159.738 - 110.206 = 49.532 TPD of VOC emission reductions required in the previous RPPs, is the additional VOC emission reduction needed to meet the 2002 target level of VOC emissions. In other words, Delaware's 2002 RPP for Kent and New Castle Counties must show a total reduction of 49.532 + 14.606 = 64.138 TPD in VOC emissions from the 2002 Current Control Projections. The same reduction can be calculated by taking the difference of the 2002 Current Control Projection and 2002 Target Level of VOC emissions, as shown below:

$$\begin{aligned} \text{Required VOC Reduction for 1990-2002 Period} &= 2002 \text{ Current Control Projection} \\ &\quad - 2002 \text{ Target Level} \\ &= 165.277 - 101.139 = 64.138 \text{ TPD} \end{aligned}$$

The required NOx emission reductions can be determined using similar procedures:

$$\begin{aligned} \text{NOx Reduction Without Growth} &= 1999 \text{ Target Level} - \\ &\quad 2002 \text{ Target Level} \\ &= 148.964 - 143.595 \\ &= 5.369 \text{ TPD} \end{aligned}$$

Total Required NOx Reduction beyond 1999 RPP Target Level

$$\begin{aligned} &= \text{Emission Growth} + \text{Reduction Without Growth} \\ &= 2.822 + 5.369 = 8.191 \text{ TPD} \end{aligned}$$

The total NOx emission reductions of 8.191 TPD, besides the 184.059 - 148.964 = 35.095 TPD reductions to satisfy the 1999 RPP requirements, is the additional NOx reductions needed to meet the 2002 target level of NOx emissions. In other words, the total nonattainment area of Kent and New Castle Counties must show a total NOx emission reduction of 35.095 + 8.191 = 43.286 TPD from the 2002 Current Control Projection of VOC emissions. The same reduction can be obtained by taking the difference of the 2002 Current Control Projection and 2002 Target Level of NOx emissions as shown below:

$$\begin{aligned} \text{Required NOx Reduction for 1990-2002 Period} \\ &= 2002 \text{ Current Control Projection} - 2002 \text{ Target Level} \\ &= 186.881 - 143.595 = 43.286 \text{ TPD} \end{aligned}$$

A summary of the required VOC and NOx emission reductions is presented in Table 14. These required reductions form the basis on which Delaware develops its emission control strategies in this rate-of-progress plan.

Table 14
VOC and NOx Emission Reductions Required in the 2002 RPP (in TPD)

VOC Emissions			NOx Emissions		
Target Level	Current Control Projection	Required Reduction	Target Level	Current Control Projection	Required Reduction
101.139	165.277	64.138	143.595	186.881	43.286

PART III

THE 2002 CONTROL STRATEGY PROJECTION INVENTORY AND EMISSION CONTROL MEASURES

In Part I, Delaware has determined its VOC and NOx emission targets in the milestone year of 2002 to meet the average 3% per year rate-of-progress requirement, plus offsetting the emission growth. In Part II, Delaware has determined that, in order to meet those emission targets, a 64.138 TPD VOC emission reduction and a 43.286 TPD emission reduction must be achieved in this 2002 Rate-of-Progress Plan for Kent and New Castle Counties. These emission reductions will be accomplished by implementation of VOC emission control measures proposed in the 15% RPP, VOC and NOx emission controls in the 1999 RPP and additional national, regional and state control measures necessary for further VOC and NOx emission reductions. In order to show that the reductions associated with these control measures are adequate to meet the 2002 VOC and NOx emission targets, the 1990 Baseline emissions are projected to 2002 including the effects of both growth and the new control measures. The resulting inventory is called the 2002 Control Strategy Projection Inventory. The total VOC and NOx emissions in the 2002 Control Strategy Projection Inventory must be equal to or less than the 2002 target levels of VOC and NOx emissions in order to show that the control measures are adequate for fulfilling the rate-of-progress requirements of VOC and NOx emission reductions.

The 2002 target levels of VOC and NOx emissions have been calculated in Part I to be 101.139 TPD and 143.595 TPD, respectively. Part III of the 2002 RPP discusses the 1999 Control Strategy Projection Inventory, the control measures that Delaware will implement to meet the average 3% per year rate-of-progress requirement for the 1999-2002 period, the sources affected by these control measures, and the expected reductions from each control measure.

3.1 The 2002 Control Strategy Projection Inventory Summary

The 2002 Control Strategy Projection Inventory is summarized in Tables 15 and 16 for VOC and NOx emissions, respectively. As shown in Tables 15 and 16, the total 2002 Control Strategy Projections for VOC and NOx emissions are 101.139 TPD and 142.077 TPD, respectively, in the peak ozone season. The 2002 Control Strategy Projection of VOC emissions is the same as the target level,

and the total 2002 Control Strategy Projection of NOx emissions is less than the required target level of 143.595 TPD. Therefore, the control measures that are included in the 2002 RPP are considered to be adequate for meeting the average 3% per year rate-of-progress requirement, plus offsetting the emission growth for the 1999-2002 period.

Figure 9 shows a graphic comparison by source sector of the 1990 Baseline Inventory (from Part I), the 2002 Current Control Projections (from Part II), and the 2002 Control Strategy Projections (from Table 15) for VOC emissions. Figure 10 shows the relative proportions of the 2002 Control Strategy Projections of VOC emissions from each source sector for the entire nonattainment area. Figure 11 shows the relative proportions of the 2002 Control Strategy Projections of VOC emissions by county.

Table 15
Summary of 2002 Control Strategy Projection Inventory
VOC Emissions (in TPD)

Source Sector	Kent County	New Castle County	Total NAA
Point	1.392	21.923	23.315
Stationary Area	9.981	26.693	36.674
Off-Road Mobile	2.864	13.546	16.410
On-Road Mobile	6.300	18.440	24.740
Total Emissions	20.537	80.602	101.139

Table 16
Summary of 2002 Control Strategy Projection Inventory
NOx Emissions (in TPD)

Source Sector	Kent	New Castle	Total NAA
Point	5.040	67.252	72.292
Stationary Area	0.985	4.839	5.824
Off-Road Mobile	8.175	18.686	26.861
On-Road Mobile	9.810	27.290	37.100
Total Emissions	24.010	118.067	142.077

Figure 11 shows a graphic comparison by source sector of the 1990 Baseline Inventory (from Part I), the 2002 Current Control Projections (from Part II), and the 2002 Control Strategy Projections (from Table 16) for NOx emissions. Figure 12 shows the relative proportions of the 2002 Control Strategy Projections of NOx emissions from each source sector for the entire nonattainment area. Figure 13 shows the relative proportions of the 2002 Control Strategy Projections of NOx emissions by county.

The 2002 Control Strategy Projections for point sources, stationary area sources, and off-road mobile sources are calculated primarily using the projection equations provided in the Guidance for Growth Factors, Projections, and Control Strategies for the 15 Percent Rate-of-Progress Plans, EPA-452/R-93-002, Office of Air Quality Planning and Standards, US EPA, March 1993 (Reference 13, hereafter referred to as the Guidance for Growth/Projections/Strategies). Other equations are also used for some specific cases. These equations are either obtained from other EPA guidance documents or derived from emission-related data provided by EPA. The control strategy projections of the on-road mobile sources are developed using EPA's MOBILE5a software in accordance with Procedures for Preparing Emissions Projections, EPA-450/4-91-019, Office of Air Quality Planning and Standards, US EPA, July 1991 (Reference 12, hereafter referred to as Procedures for Emission Projections).

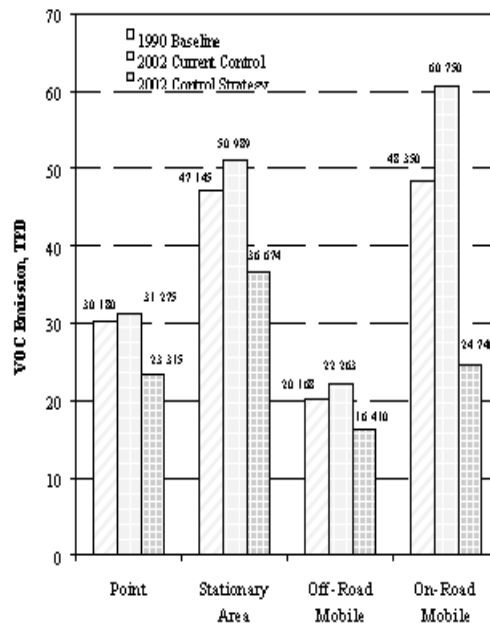


Figure 9. Comparison of VOC Emissions in 1990 Baseline, 2002 Current Control And 2002 Control Strategy Projection Inventories

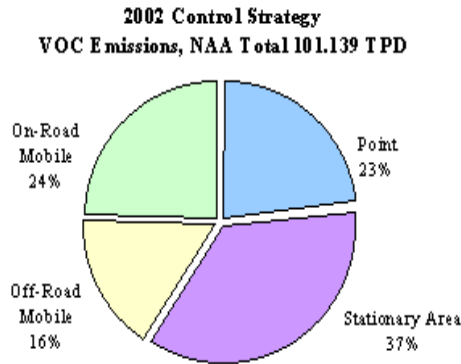


Figure 10. Contribution of Each Source Sector to Total 2002 VOC Control Strategy Projection in Delaware's Nonattainment Area (NAA)

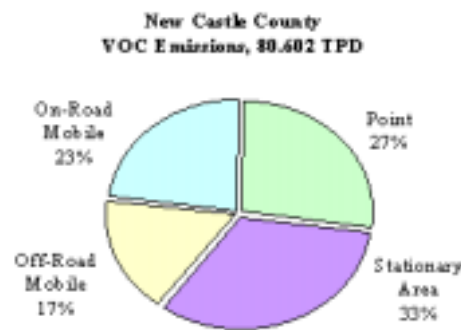
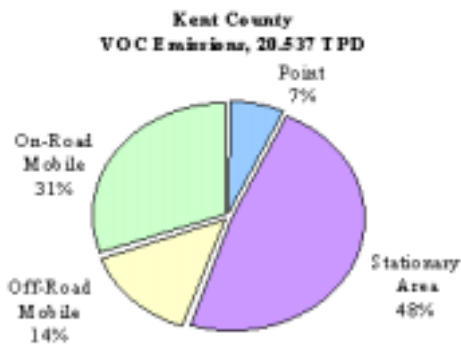


Figure 11. Contribution of Each Source Sector to 2002 VOC Control Strategy Projection in Each Nonattainment County.

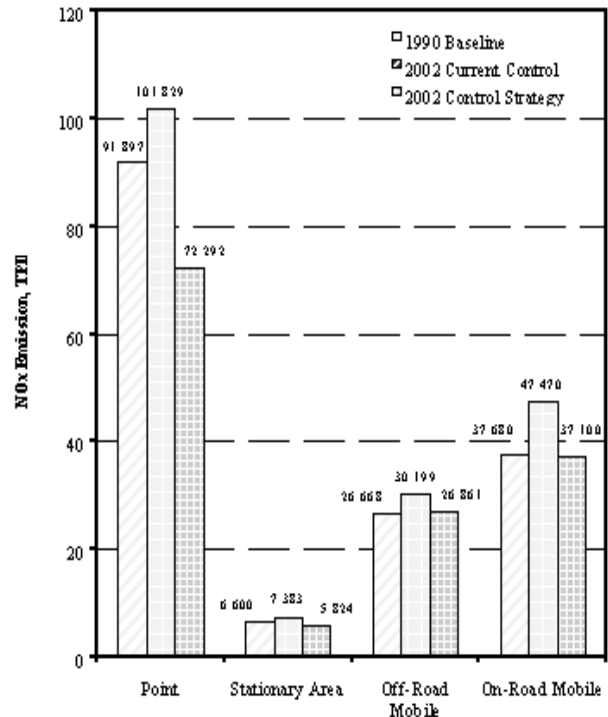


Figure 12. Comparison of NOx Emissions in 1990 Baseline, 2002 Current Control And 2002 Control Strategy Projection Inventories

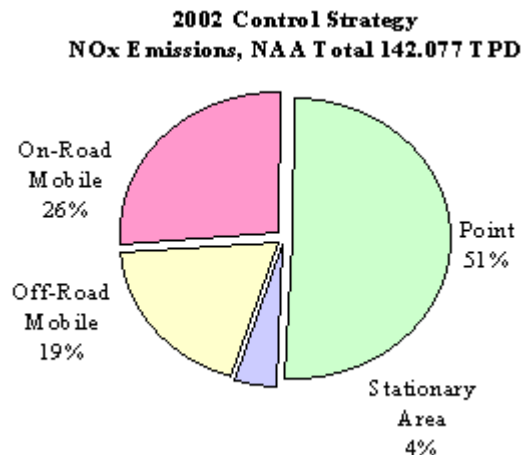


Figure 13. Contribution of Each Source Sector to Total 2002 Control Strategy Projection NOx Emissions in Delaware's Nonattainment Area (NAA).

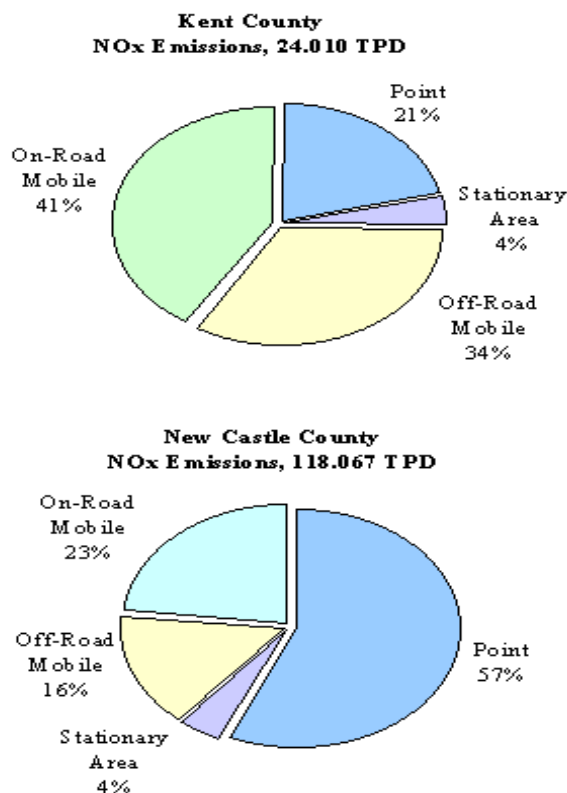


Figure 14. Contribution of Each Source Sector to 2002 Control Strategy Projection NOx Emissions in Each Nonattainment County.

3.2 Point Source 2002 Control Strategy Projection Methodology

Emissions from point sources are projected on a source-specific (process-by-process) basis in accordance with the Guidance for Growth/Projections/Strategies (Reference 13). In this guidance document and its following memoranda for amendments and corrections, EPA provides methods and projection equations for estimating future year emissions from individual point sources. Selection of method or equation to be used to project emissions from a point source is dependent on whether or not the source will have new controls by the milestone year of 2002.

A. Method 1

The VOC and NOx emissions for point sources that will have new controls by 2002 are projected at allowable emissions rates using the point source projection equations from Section 6.4 of the Guidance for Growth/Projections/

Strategies. These same equations have been used to determine the 2002 Current Control Projections in Part II of this Plan. However, the projection data used for the 2002 Control Strategy Projections differ from those used for the 2002 Current Control Projections. For the control strategy projections, the controlled emissions factors, process control efficiencies (CE), controlled emissions rates, and rule effectiveness (RE) values for the processes with new controls by 2002 are used to reflect the controls that will be in place in 2002. For the current control projections in Part II, all parameters are related to controls, if any, that were in place in 1990.

For sources that will have new controls by 2002, the Control Strategy Projections are determined using one of the following five projection equations (Reference 13):

$$EMIS_{py} = ORATE \times EMF_{py,pc} \times \left[1 - \frac{CE_{py}}{100} \times \frac{RE_{py}}{100} \right] \times GF_{py} \tag{P-1}$$

$$EMIS_{py} = ORATE \times EMF_{py} \times \frac{200 - RE_{py}}{100} \times GF_{py} \tag{P-2}$$

$$EMIS_{py} = CRTPOL \times \frac{1 - \frac{CE_{py}}{100} \times \frac{RE_{py}}{100}}{1 - \frac{CEQEFF}{100} \times \frac{RULEFF}{100}} \times GF_{py} \tag{P-3}$$

$$EMIS_{py} = CRTPOL \times \frac{\frac{200 - RE_{py}}{100}}{\frac{200 - RULEFF}{100}} \times \frac{EMF_{py}}{EMF_{90}} \times GF_{py} \tag{P-4}$$

$$EMIS_{py} = ER_{py} \times \frac{CRTPOL}{EMIS_{90}} \times \frac{200 - RE_{py}}{100} \tag{P-5}$$

where:

- EMIS_{py} = Projection Year Emissions (Tons per Peak Ozone Season Day);
- ORATE = 1990 Base Year Ozone Season Operating Rate (Production Units/Day);
- EMF_{py,pc} = Projection Year Pre-control Emissions Factor (Mass of Pollutant/Production Unit);
- CE_{py} = Projection Year Control Efficiency (Percent);
- RE_{py} = Projection Year Rule Effectiveness (Percent);
- GF_{py} = Projection Year Growth Factor (Dimensionless);
- EMF_{py} = Projection Year Post-control Emissions Factor (Mass of Pollutant/Production Unit);
- CRTPOL = 1990 Baseline Ozone Season Actual Emissions (Tons Per Peak Ozone Season Day);
- CEQEFF = 1990 Base Year Control Efficiency (Percent);

RULEFF = 1990 Base Year Rule Effectiveness (Percent);
 EMF_{by} = 1990 Base Year Emissions Factor ;
 ER_{py} = Projection Year Annual Emissions Cap
 (Mass of Pollutant/Year);
 EMIS_{bya} = 1990 Base Year Annual Emissions
 (Tons Per Year).

Depending on the method that is used to estimate the 1990 Baseline emissions and the type of projection year control data available, one of these five equations is used to project emissions from each process that will have new controls by 2002. Equation P-1 is used when the 1990 baseline emissions are calculated using a pre-control emission factor, and a control efficiency is used to factor the control measure into the emissions estimation. Equation P-2 is used when emissions are calculated using a post-control emissions factor; that is, the emissions factor accounts for the affect of the control measure on emissions. Equation P-3 is used when 1990 baseline emissions are calculated by material balance or test data, and a control efficiency is used to factor the control measure into the emissions estimation. Equation P-4 is used when 1990 baseline emissions are calculated by material balance or test data, and the control level is represented by an emissions factor rather than by a control efficiency. Equation P-5 is used when permit limits or emission caps are used to represent the effect of the control measures on emissions. This equation is originally presented in the aforementioned EPA's document and recently amended by EPA in a guidance memorandum¹. According to this memorandum, the term ER_{py} can be an emission cap on other than an annual basis, and then the term EMIS_{bya} should be modified to reflect the same time period.

Delaware has compiled the 2002 control data for point sources from Federal and State regulations and air emissions permits that have been issued in the post-1990 time frame. The required emission and control data are inserted into the appropriate projection equation for each process. Wherever applicable, a default RE value of 80% for the projection year is used, as suggested by EPA (Reference 14). The calculation results from these equations, which include the

1. Memorandum: Correction Errata to 15 Percent Rate of Progress Guidance Document. G.T. Helms, Group Leader, Ozone Policy and Strategies Group, Office of Air Quality Planning and Standards, US EPA, Research Triangle Park, NC, March 17, 1999. The memorandum is included in Appendix I.

effects of both emission growth and new controls, are the 2002 Control Strategy Projections of emissions from individual processes.

The following is an example of control strategy projection calculation for a point source process that will have new controls by 2002.

Example Point Source Emission Projection Calculation:

The Delaware Regulations Governing Solid Waste have been revised in 1990 to include requirements for installation of gas control systems at all sanitary landfills. Control efficiencies for each affected landfill are determined based on design data for the proposed gas control systems. For the Cherry Island facility located in New Castle County, a control device efficiency (flare efficiency) of 98% and a capture efficiency of 51.49% are used to project the VOC emissions. The overall control efficiency for the Cherry Island landfill is:

$$\text{Overall Control Efficiency } CE_{2002} = 0.98 \times 51.49 = 50.46\%$$

Other projection data for the Cherry Island landfill are:

- CRTPOL = 0.268 TPD in the peak ozone season;
- RE₂₀₀₂ = 80%;
- CEQEFF = 0%;
- RULEFF = 0%;
- GF₂₀₀₂ = 1.09.

Using Equation P-3, the 2002 projected VOC emissions value for the Cherry Island landfill with the addition of new controls can be calculated as:

$$EMIS_{2002} = 0.268 \times \frac{1 - \frac{50.46}{100} \times \frac{80}{100}}{1 - \frac{0}{100} \times \frac{0}{100}} \times 1.09 = 0.174 \text{ TPD}$$

B. Method 2

All sources that will not have new controls by 2002 are projected by multiplying their 1990 baseline emissions with the appropriate growth factors, that is,

$$EMIS_{py} = CRTPOL \times GF_{py} \tag{P-6}$$

Therefore, for sources that will not have new controls by 2002, the 2002 Control Strategy Projection emissions are equal to the 2002 Current Control Projection emissions that are determined in Part II of the 2002 RPP.

A summary of the 2002 Control Strategy Projections for point source emissions is presented in Table 17.

Table 17
2002 Control Strategy Projections for Point Source Emissions (in TPD)

Source SIC	Category Name	Kent		New Castle	
		VOC	NOx	VOC	NOx
16	Construction	0.060	0.078	0.022	0.028
20	Food Manufacturing	0.030	0.060	0.000	0.000
22	Textiles	0.000	0.000	0.883	0.087
25	Furniture and Fixtures	0.502	0.010	0.000	0.000
26	Paper Manufacturing	0.030	0.085	0.260	0.146
28	Chemicals & Allied Products	0.197	0.055	6.313	3.653
2911	Petroleum Refining	0.000	0.000	4.337	47.714
2951	Asphalt Paving Mixtures	0.000	0.000	0.022	0.028
30	Rubber/Plastic Manufacturing	0.000	0.000	0.974	0.003
33	Primary Metal Industry	0.047	0.000	0.000	0.000
34	Fabricated Metal Products	0.000	0.000	0.077	0.000
37	Transportation Equipment	0.000	0.000	7.014	0.653
38	Mesr./Analyz/Control Instrumentation	0.053	0.000	0.000	0.000
42	Motor Freight Transportation	0.000	0.000	0.031	0.015
46	Pipelines	0.002	0.000	0.000	0.000
4911	Electric Utilities & Generators	0.046	4.660	0.226	14.026
4952	POTWs	0.217	0.000	1.322	0.000
4953	Landfills	0.027	0.000	0.182	0.000
80	Health Services	0.000	0.000	0.010	0.130
82	Educational Services	0.000	0.000	0.000	0.024
87	Engineering, Research	0.000	0.000	0.198	0.744
97	Federal, Civilian Government	0.181	0.092	0.051	0.000

Total Emissions by County	1.392	5.040	21.923	67.252
Total State NAA Emissions	VOC: 23.315		NOx: 72.292	

3.3 Stationary Area and Off-Road Mobile Source 2002 Control Strategy Projection Methodology

Stationary area and off-road mobile source emissions are projected according to the Guidance for Growth/Projections/Strategies (Reference 13). The projection method for stationary area and off-road mobile sources is dependent on whether or not sources will be subject to new controls by 2002. Stationary area and off-road mobile sources that will not be subject to new controls by 2002 are projected using the following equation:

$$EMIS_{py} = CRTPOL \times GF_{py} \quad (A-1)$$

where $EMIS_{py}$ = emission in projection year (TPD in Peak Ozone Season);

$CRTPOL$ = 1990 baseline actual emission (TPD in Peak Ozone Season);

GF_{py} = growth factor for projection year (dimensionless).

For stationary area and off-road mobile sources that are subject to new controls by 2002, the 2002 Control Strategy Projections are determined in a manner similar to the point source 2002 Control Strategy Projections, using projection equations from the Guidance for Growth/Projections/Strategies. The main difference between the point source projections and the stationary area and off-road mobile source projections is that point source emissions are projected on a process-by-process basis as described previously, while stationary area and off-road mobile source emissions are projected on a category-wide basis. Therefore, the 2002 Control Strategy Projection Inventory for stationary area and off-road mobile sources is determined using category-wide activity level data versus the process operating data that is used for point source projections.

The stationary area and off-road mobile source projection data reflects 2002 controls and rule effectiveness values. A rule penetration value is also factored into the emissions projection. Rule penetration factors are used in conjunction with rule effectiveness (as defined in Part II of this Plan) to adjust regulated stationary area source emissions estimates. Rule penetration is the portion of an area source category that is affected by a regulation. If a

regulation applies to only a certain percentage of sources within a source category, a rule penetration factor is applied to ensure that the control efficiency and rule effectiveness adjustment affect only the emissions values for those regulated sources, and not the emissions values for the unregulated sources in the category.

1. Stationary Area Sources

In general, stationary area sources that will be subject to new controls by 2002 are projected using the following equation:

$$EMIS_{py} = ACTLEV \times EMF_{py} \times GF_{py} \times \left[N - \frac{CE_{py}}{100} \times \frac{RE_{py}}{100} \times \frac{RP_{py}}{100} \right] \quad (A-2)$$

- where $EMIS_{py}$ = emissions in projection year (TPD in Peak Ozone Season);
- $ACTLEV$ = 1990 baseline activity level (activity units per day in Peak Ozone Season);
- EMF_{py} = projection year emissions factor (mass of pollutant per activity unit);
- GF_{py} = projection year growth factor (dimensionless);
- CE_{py} = projection year control efficiency (percent);
- RE_{py} = projection year rule effectiveness (percent);
- RP_{py} = projection year rule penetration (Percent);
- N = 1 if the future control is accounted for the CE factor, or
 = 2 if the future control is accounted for the EMF factor, and in which case, CE should be set equal to 100% (see EPA's memorandum on March 17, 1999, included in Appendix H).

This equation is originally presented in the aforementioned EPA's document and recently amended by EPA in a guidance memorandum (See footnote 12 on page 37). In cases where the emission factor in a projection year (EMF_{py}) is equal to the 1990 baseline emission factor (EMF_{by}), the corresponding 1990 baseline emission (CRTPOL) can be used in Eq. (A-2) to replace the 1990 baseline activity level (ACTLEV) and the projection year emissions factor (EMF_{py}). This is because when $EMF_{py} = EMF_{by}$, CRTPOL is equal to ACTLEV times EMF_{py} in Eq. (A-2). Then, Eq. (A-2) becomes

$$EMIS_{py} = CRTPOL \times GF_{py} \times \left[1 - \frac{CE_{py}}{100} \times \frac{RE_{py}}{100} \times \frac{RP_{py}}{100} \right] \quad (A-2b)$$

For gasoline dispensing facilities that will be subject to the Stage II vapor recovery controls, the projection equation differs slightly due to the nature of the projection year emission factor for Stage II vapor recovery. The projection year emission factor for Stage II Vapor Recovery is produced by modeling using EPA's MOBILE5a software on the basis of the state-specific motor vehicle input parameters. This emissions factor has already included the effects of the control efficiency, rule effectiveness, and rule penetration in the projection year. Therefore, the term

$$\frac{CE_{py}}{100} \times \frac{RE_{py}}{100} \times \frac{RP_{py}}{100} \text{ in Eq. (A-2)}$$

in Eq. (A-2) is not required for emission projections for those sources with the Stage II Vapor Recovery controls. Thus, for projecting emissions from sources affected by Stage II Vapor Recovery, Eq.(A-2) becomes:

$$EMIS_{py} = ACTLEV \times EMF_{py} \times CF \times GF_{py} \quad (A-3)$$

- where $EMIS_{py}$ = emission in projection year (TPD in Peak Ozone Season);
- $ACTLEV$ = 1990 baseline activity level (gallons gasoline per day in Peak Ozone Season);
- EMF_{py} = emissions factor in projection year from MOBILE5a (grams VOC per gallon gasoline);
- CF = Conversion Factor (grams/gallon to tons/gallon);
- GF_{py} = Growth Factor for projection year.

The following is a calculation example of 2002 Control Strategy Projection for a stationary area source category that will have new controls by 2002.

Example of Projection Calculation for Stationary Area Source

Section 34 of Delaware Air Regulation 24 prohibits the

manufacture, mixing, storage, use, and application of cutback asphalt during the ozone season. The 2002 projected VOC emissions from cutback asphalt for Kent County can be determined using stationary area source projection Eq. (A-2) (or A-2b). The projection data for cutback asphalt emissions in Kent County are:

ACTLEV = 45 tons asphalt/yr or 0.173 tons asphalt/day in Peak Ozone Season;

EMF₂₀₀₂ = EMF₁₉₉₀ = 420 lbs VOC/ton asphalt;

CE₂₀₀₂ = 100%;

RE₂₀₀₂ = 80%;

RP₂₀₀₂ = 100%;

GF₂₀₀₂ = 0.90.

The control efficiency and rule penetration are determined to be 100% from Section 34 of Regulation 24. The EPA's default 80% value is used for the projection year rule effectiveness. Using Equation A-2, the projected VOC emission is:

$$EMIS_{2002} = 0.173 \times 420 \times 0.90 \times \left[1 - \frac{100}{100} \times \frac{80}{100} \times \frac{100}{100} \right] \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.007 \text{ TPD}$$

A summary of the 2002 Control Strategy Projections for stationary area source emissions is presented in Table 18.

2. Off-Road Mobile Sources - Using Reformulated Gasoline

Using reformulated fuel is one of the control measures that will affect off-road mobile source emissions by 2002. Emissions from off-road mobile sources that will be affected by reformulated fuel are projected using information provided in a memorandum entitled VOC Emission Benefits for Nonroad Equipment with the Use of Federal Phase 1 Reformulated Gasoline, dated August 18, 1993, from Phil Lorang, Director, Emission Planning and Strategies Division, Office of Mobile Sources, U.S. Environmental Protection Agency, Ann Arbor, Michigan (included in Appendix K). According to the memorandum, reformulated fuel will affect the exhaust and evaporative VOC emission components of the 2-stroke and 4-stroke engine categories. For Delaware, 86.51% of the VOC emissions from 2-stroke and 4-stroke engines is exhaust and 5.58% is evaporative. The remaining 7.91% of the VOC emissions from 2-stroke and 4-stroke engines is not significantly affected by reformulated fuel. The VOC emissions reduction is estimated to be 3.3% of the exhaust emissions and 3.5% of

the evaporative emissions. Therefore, VOC emissions from 2-stroke and 4-stroke engines were projected using the following equation:

Table 18
2002 Control Strategy Projections for Stationary Area Source Emissions (in TPD)

Source SCC	Category Name	Kent		Castle	
		VOC	NOx	VOC	NOx
2102	Industrial Fuel Consumption	0.007	0.489	0.036	2.880
2103	Commercial/Instit. Fuel Consumption	0.007	0.176	0.033	0.812
2104	Residential Fuel Consumption	0.150	0.172	0.103	0.623
2301	Chemical Manufacturing	0.008	0.000	0.156	0.000
2302	Food and Kindred Products	0.075	0.000	0.299	0.000
2308	Rubber/Plastics Production	0.075	0.000	0.438	0.000
2399	Industrial Processes: NEC	0.093	0.000	0.185	0.000
2401	Surface Coating	2.589	0.000	11.352	0.000
2415	Degreasing	0.721	0.000	2.888	0.000
2420	Dry Cleaning	0.101	0.000	0.207	0.000
2425	Graphic Arts	0.292	0.000	0.005	0.000
2461	Misc. Commercial Solvent Use				
	Pesticide Use	1.135	0.000	1.230	0.000
	Cutback & Emulsified Asphalt	0.013	0.000	0.007	0.000
2465	Misc. Consumer Solvent Use	0.874	0.000	3.404	0.000
2501	Petroleum Product Storage	0.569	0.000	1.824	0.000
2505	Petroleum Product Transport	0.869	0.000	1.822	0.000
2601	On-Site Incineration	0.157	0.036	0.689	0.207

2610	Open Burning	0.475	0.095	1.57 2	0.314
2660	Leaking Underground Storage Tanks	0.015	0.000	0.01 2	0.000
2810	Misc. Sources: Other Combustion				
	Structural & Forest Fires	0.103	0.017	0.01 3	0.003
	Prescribed Burning	0.009	0.000	0.00 1	0.000
2830	Accidental Releases	1.645	0.000	0.41 9	0.000
Total Emissions by County		9.981	0.985	26.6 93	4.839
Total State NAA Emissions		VOC: 36.674	NOx: 5.824	:	

$$EMIS_{py} = CRTPOL \times GF_{py} \times [36.51\% \times (1 - 3.3\%) + 5.58\% \times (1 - 3.5\%) + 7.91\%]$$

$$= CRTPOL \times GF_{py} \times 0.9695 \quad (A-4)$$

where

- EMIS_{py} = emission in projection year (TPD in Peak Ozone Season);
- GF_{py} = growth factor for projection year;
- CRTPOL = 1990 baseline emissions (TPD in Peak Ozone Season).

3. Off-Road Mobile Sources - New Emissions Standards

The EPA is under court order to promulgate new emissions standards for Heavy-Duty Compression Ignition (CI) or diesel engines, small nonroad Spark Ignition (SI) Engines, and outboard/Inboard Marine Engines. These new standards will result in VOC and/or NOx emission reductions from a wide variety of nonroad engines. In subsection 3.5.3, Delaware presents details of how to project emissions using these new emission standards.

A summary of the 2002 Control Strategy Projections for off-road mobile source emissions is presented in Table 19.

Table 19
2002 Control Strategy Projections for Off-Road Mobile Source Emissions (in TPD)

Source SCC	Category Name	Kent		New Castle	
		VOC	NOx	VOC	NOx
2260	2-Stroke Gasoline Vehicles	0.68 0	0.04 7	1.650	0.42 4
2265	4-Stroke Gasoline Vehicles	0.51 4	0.03 3	2.290	0.19 6
2270	Diesel Vehicles	0.50 8	3.58 1	1.076	9.89 3
2275	Aircraft	0.46 8	0.59 3	0.217	0.08 8
2280	Commercial Marine Vehicles	0.58 2	3.67 8	1.077	6.35 1
2282	Recreational Marine Vessels	0.08 6	0.00 9	7.127	0.73 4
2283	Military Marine Vessels	0.00 4	0.02 0	0.007	0.03 7
2285	Railroads	0.02 2	0.21 4	0.102	0.96 3
Total Emissions by County in 2002		2.86 4	8.17 5	13.546	18.6 86
Total State NAA Emissions in 2002		VOC: 16.4	NOx: 26.8	:	61

3.4 On-Road Mobile Source 2002 Control Strategy Projection Methodology

The on-road mobile source portion of 2002 Control Strategy Projection Inventory has been determined using the 2002 emission factors generated by MOBILE5a and the 2002 projected vehicle-miles-traveled (VMT) on the 2002 Delaware roadway network. The 2002 VMT projections are determined using the network-based travel-demand models for Kent and New Castle Counties. The 2002 VMT projections and the 1990 VMT projections, both are calculated by the travel-demand models, are used to derive a growth factor for each functional vehicle class. The growth factor is then applied to the 1990 VMT from the Highway Performance Monitoring System (HPMS) data. This methodology provides consistency with the 1990 Base Year Inventory methodology, since they are both based on VMT

from HPMT. The on-road mobile source projection inventory has been developed by Vanasse Hangen Brustlin, Inc. (VHB), Watertown, MA, under contract with Delaware Department of Transportation (DelDOT).

A summary of the 2002 Control Strategy Projections for on-road mobile source emissions is presented in Table 20. The emission levels in Table 20 also serve as the on-road mobile source emission budgets for Kent and Newcastle Counties for purposes of meeting the transportation conformity requirements set forth in Section 182 of the CAAA.

Table 20
2002 Control Strategy Projections for On-Road Mobile Source Emissions (in TPD)

County	VOC	NOx
Kent	6,300	9,810
New Castle	18,440	27,290
Total NAA	24,740	37,100

3.5 Emission Control Measures and Emission Reductions

The control measures that Delaware includes in the 2002 RPP are summarized in Table 21 along with implementation dates for individual control measures. The VOC and NOx emission reductions from individual control measures are also listed in the table (in TPD in the peak ozone season). As indicated in Table 21, the total VOC and NOx emission reductions for Delaware’s nonattainment area (i.e., Kent and New Castle Counties) for the 2002 RPP are 64.138 TPD and 44.804 TPD, respectively. As calculated in Part II, the emission reductions that Delaware needs to meet the 3% per year rate-of-progress requirement plus offsetting the growth for the 2002 milestone year are 64.138 TPD and 43.286 TPD for VOC and NOx, respectively. Therefore, the control measures listed in Table 3-7 are not only adequate to meet the emission reduction requirements for the 2002 milestone year, but also generate 1.518 TPD of surplus of NOx emission reductions. Delaware decides to use this NOx emission surplus in the contingency plan of the 2002 RPP to meet the contingency requirements set forth in the CAAA (See Part IV).

The control measures in Table 21 are grouped by point, area, off-road mobile, and on-road mobile source sectors depending on which source sectors they affect. Several control measures affect both point and area sources, and

therefore are listed under both source sectors. For sources that will be subject to new controls by 2002, the emission reductions are determined by subtracting the 2002 Control Strategy Projection emissions (described in this part) from the 2002 Current Control Projection emissions (described in Part II of this Plan), using the following equation,

$$ER_{2002} = \text{Current Control Projection} - \text{Control Strategy Projection} \quad (R-1)$$

where ER_{2002} stands for “Emission Reduction (ER) in 2002”. For sources that will not have new controls or will not be affected by new rules by 2002, their control strategy projections will be equal to their current control projections. Thus, emission reductions from those sources will be zero.

Table 21
Summary of VOC & NOx Emission Control Measures and Expected Emission Reductions for 2002 (in TPD)

Control Measures And Regulations	Creditability	Effective Date	Emission Reduction	
			VOC	NOx
Point Source Controls				
RACT "Catch-Ups" in Kent County:				
Solvent Metal Cleaning	Creditable	31-May-95	0.547	0.000
Surface Coating of Metal Furniture	Creditable	31-May-95	0.037	0.000
Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufact. Equip.	Creditable	31-May-95	0.004	0.000
Subtotal for RACT "Catch-Ups" in Kent			0.588	0.000
New RACT Regulations:				
Bulk Gasoline Marine Tank Vessel	Creditable	31-Dec-95	1.896	0.000
Loading Facilities				
SOCMI Reactor Processes and Distillation Operations	Creditable	1-Apr-96	0.026	0.000
Batch Processing Operations	Creditable	1-Apr-96	0.431	0.000

PROPOSED REGULATIONS

Offset Lithography	Creditable	1-Apr-96	0.085	0.000
Aerospace Coatings	Creditable	1-Apr-96	0.007	0.000
Industrial Cleaning Solvents	Creditable	1-Nov-96	0.518	0.000
Non-CTG RACT	Creditable	31-May-95	0.380	0.000
Delaware NOx RACT	Creditable	31-May-95	N/A	2.320
Subtotal for New RACT Regulations			3.343	2.320
Regional Controls:				
OTR Regional NOx MOU	Creditable	1-May-99	N/A	27.220
Federal Benzene Waste Rule and Delaware Air Regulation 24.28	Creditable	Spring 1995	1.722	0.000
Other Delaware Regulations:				
Sanitary Landfills	Creditable	9-Oct-93	0.345	0.000
Irreversible Process Changes	Creditable	1-Jan-96	1.964	0.000
Total for Point Source Reductions			7.962	29.540
Stationary Area Source Controls				
RACT "Catch-Ups" in Kent County:				
Solvent Metal Cleaning	Creditable	31-May-95	0.136	0.000
Cutback Asphalt	Creditable	31-May-95	0.026	0.000
Subtotal for RACT "Catch-Ups" in Kent			0.162	0.000

Emulsified Asphalt	Creditable	31-May-95	0.053	0.000
Motor Vehicle Refinishing	Creditable	1-Apr-96	1.324	0.000
Offset Lithography	Creditable	1-Apr-96	0.081	0.000
Aerospace Coatings	Creditable	1-Apr-96	0.033	0.000
Stage II Vapor Recovery	Creditable	15-Nov-94	1.882	0.000
Subtotal for New RACT Regulations			4.025	0.000
Other Delaware Regulations:				
Open Burning	Creditable	8-Feb-95	7.831	1.559
Federal Rules				
Consumer Products	Creditable	11-Sep-98	0.957	0.000
Architectural Coatings	Creditable	11-Sep-98	1.340	0.000
Total for Area Source Reductions			14.315	1.559
Off-Road Mobile Source Controls				
Reformulated Fuel	Creditable	1-Jan-95	0.033	0.000
New Emission Standards:				
For Small Spark Ignit. Engines	Creditable	EPA:	4.067	0.049
For Compression Ignit. Engines	Creditable	Court	0.732	2.824
For Marine Engines	Creditable	Ordered	1.019	-0.060
For Locomotives	Creditable	31-Dec-01	0.000	0.521
Total for Off-Road Mobile Source Reductions			5.851	3.334
On-Road Mobile Source Controls				
FMVCP and RVP	Noncreditable	Pre-1990	19.930	2.530
Tier I Vehicle Emissions Standards	Creditable	Model Year 94	4.280	5.950
a. Basic I/M for Kent County	Creditable	1-Jan-91	1.210	0.530
b. ATP and Pressure Test for Kent		1-Jan-95		

Control Measures And Regulations	Creditability	Effective Date	Emission Reduction	
			VOC	NOx
Stationary Area Source Controls (Cont'd)				
New RACT Regulations:				
Stage I Vapor Recovery-Gas. Disps. Facil.	Creditable	15-Nov-94	0.652	0.000

ATP and Pressure Test for New Castle	Creditable	1-Jan-95	4.300	0.700
Reformulated Fuel	Creditable	1-Jan-95	5.880	-0.190
LEV Program	Creditable	1-Nov-99	0.410	0.850
Total for On-Road Mobile Source Reductions			36.010	10.370
Total Reductions from All Controls			64.138	44.803

PART IV

Contingency Plan of Delaware's 2002 RPP

4.1 Contingency Requirements for Emission Reductions

The CAAA requires States with nonattainment areas to implement specific control measures if the area fails to make reasonable further progress, fails to meet any applicable milestone, or fails to attain the national ambient air quality standards by the applicable attainment date.¹ The EPA has interpreted this CAAA provision as a requirement for States with moderate and above ozone nonattainment areas to include sufficient contingency measures in their Rate-of-Progress Plans so that, upon implementation of such measures, additional emission reductions of at least 3% of the adjusted 1990 base year emissions would be achieved (Reference 13). Under the same provision of the CAAA, EPA also requires that the contingency measures must be fully-adopted control measures or rules, so that, upon failure to meet milestone requirements or attain the standards, the contingency measures can be implemented without any further rulemaking activities by the States and/or EPA.

To meet the requirements for contingency emission reductions, EPA allows States to use NOx emission reductions to substitute for VOC emission reductions in their contingency plans. The condition set forth by EPA for NOx substitution is that States must achieve a minimum of 0.3% VOC reductions of the total 3% contingency reduction, and the remaining 2.7% reduction can be achieved through NOx emission controls (Reference 9). Delaware decides to include both VOC and NOx emission controls in its contingency plan for the 2002 Rate-of-Progress Plan.

1. CAAA, Title I, Part D, Section 172(c)(9) and Section 182(c)(9).

4.2 Control Measures to Meet Contingency Requirements

Delaware proposes to achieve the required contingency emission reductions through controls over both VOC and NOx emissions. The VOC emission reductions will be obtained from implementing an annual inspection schedule for the Stage II Vapor Recovery Systems, and the NOx emission reductions will be achieved through a combination of controls on various sources in the peak ozone season, as well as through improvement of rule effectiveness (RE) for the regional NOx emission control rule.

4.2.1 Stage II Vapor Recovery System with Annual Inspections

The CAAA requires States with moderate and above ozone nonattainment areas to submit a SIP revision requiring owners or operators of gasoline dispensing facilities to install and operate a system for gasoline vapor recovery during refueling process for motor vehicles.² Under this requirement, Delaware has developed its Stage II Vapor Recovery Program, which is defined in Section 36 of Delaware Air Regulation 24 (Reference 5). The Delaware's stage II vapor recovery regulation gives the regulatory agency the right to perform compliance inspections as needed. Currently, a triennial inspection schedule is performed by the responsible agency (Underground Storage Tank Branch of DNREC). Delaware has taken credit for VOC emission reductions from this triennial inspection schedule in Part III of the 2002 RPP, where the emission reductions are estimated using a control efficiency (CE) of 95%, a rule penetration (RP) of 97%, and a rule effectiveness (RE) of 65.3% according to an EPA's guidance document. The total creditable VOC emission reduction from the triennial inspection is 1.88 TPD (Part III of the 2002 RPP).

Additional VOC emission reductions can be obtained from the Stage II Vapor Recovery Program when the inspection frequency is increased. If the program is conducted with an annual inspection schedule, the rule effectiveness (RE) value of this control will increase from 65.3% to 90.5%, resulting in additional VOC emission reductions. In other words, the program is more effective for reducing VOC emissions with a higher inspection frequency. Delaware proposes to perform an annual inspection schedule for its Stage II Vapor Recovery Program as a contingency measure. Based on a 95% control efficiency, a 97% rule

2. CAAA, Title I, Part D, Section 182(b)(3).

penetration, and a 90.5% rule effectiveness, the emission factor generated from MOBILE5a is 0.88 grams of VOC per gallon of gasoline for both Kent and New Castle Counties.

According to EPA's guidance document Procedures for Emissions Inventory Preparation, Volume IV: Mobile Sources (Reference 22), the in-use efficiency of stage II vapor recovery system applies to both spillage and displacement. As determined in the 2002 RPP, the annual inspection in the Stage II Vapor Recovery Program will lead to additional VOC emission reductions of 0.05 TPD and 0.53 TPD from spillage and displacement, respectively. The total additional VOC emission reduction is therefore 0.58 TPD ($0.05 + 0.53 = 0.58$).

In Part I, Delaware has determined its 1990 adjusted baseline inventory level of VOC emissions to be 133.153 TPD. The additional 0.58 TPD VOC emission reduction estimated above is $(0.58/133.153) = 0.0043 = 0.43\%$ of the 1990 adjusted base year VOC emissions, thus, satisfying the 0.30% minimum requirement on VOC emission reductions for the contingency plan. The rest of the contingency reductions will be obtained through NOx controls, which will be discussed in the following subsection.

4.2.2 NOx Emission Controls in Peak Ozone Season

As determined above, 0.43% of the 3.00% contingency requirement will be obtained by VOC emission reductions from annual inspection of Stage II vapor recovery systems. The remaining 2.57% (i.e., $3.00\% - 0.43\% = 2.57\%$) is the percentage required for NOx reduction substitution. The adjusted 1990 base year NOx emission level has been determined to be 158.405 TPD in Part I (page 1-19). Thus, the NOx emission reductions for contingency purpose will be at least $158.405 \times 2.57\% = 4.07$ TPD.

In Subsection 3.5, Part III of the 2002 RPP, Delaware has demonstrated that, through adequate NOx emission controls, a 1.52 TPD NOx emission reduction will be achieved, in addition to those needed to meet the minimum rate-of-progress requirements for the 2002 RPP. Delaware shall use this additional 1.52 TPD NOx emission reduction in this contingency plan based on the following judgements. First, this additional reduction shall be achieved from a combination of control measures in the RPP. Second, all these control measures are fully-adopted measures or rules. Thus, no further rulemaking actions by the State and/or EPA are needed when this 1.52 TPD NOx reduction surplus becomes necessary to serve the contingency purpose. After including the above 1.52 TPD NOx reduction in the contingency plan, Delaware needs to

achieve an additional 2.55 TPD (i.e., $4.07 - 1.52 = 2.55$) in NOx emission reductions to meet the minimum requirement for the contingency purpose. This NOx reduction will be achieved through RE improvement.

Delaware has promulgated the OTC Regional NOx Controls through its Regulation 37 (NOx Budget Program, as amended in April 1999). As demonstrated in Appendix N of the 2002 RPP, the provisions in Regulation 37 give Delaware the capability to improve the rule effectiveness (RE) for all affected NOx sources from the default value of 80% to 92%. Applying this improved RE value of 92% to all affected sources, the projections of their NOx emissions in 2002 can be reevaluated. The total NOx emissions from these sources with a RE value of 92% is 29.77 TPD. If compared with the total reduction of 27.22 TPD obtained with the default RE of 80% (Table 3-17 in Part III of the 2002 RPP), the additional reduction will be 2.55 TPD (i.e., $29.77 - 27.22 = 2.55$). This additional 2.55 TPD NOx emission reduction can be obtained through RE improvement without any further rule-making activities at both State and federal levels.

4.3 Summary of Contingency Measures and Emission Reductions

A summary of the contingency measures and the associated additional VOC and NOx emission reductions are presented in Table 22. As shown in Table 22 and in the discussions above, the contingency measures proposed herein are adequate for meeting the contingency requirements set forth by EPA.

Table 22. Summary of Contingency Measures and Emission Reductions

<u>Contingency Measures</u>	<u>Emission Reduction (TPD)</u>	
	<u>VOC</u>	<u>NOx</u>
Stage II Vapor Rec. with Annual Inspection	0.58	-
Required VOC Emission Reductions	0.58	-
NOx Controls in Peak Ozone Season	-	1.52
RE Improvement on NOx Regional Control Rule	-	2.55
Total NOx Emission Reduction	-	4.07
Required NOx Emission Reductions	-	4.07

**PART V
DOCUMENTATION**

This part presents a collection of supporting documents referred to in Part I through Part IV of the 2002 RPP. The documents are in appendix form and include the following:

All appendixes are available upon request. Written request should be addressed to Mr. Alfred R. Deramo, Program Manager, ERPA/PCP/AQM/DNREC, 156 South State Street, Dover, DE 19901, or through fax at (302)739-3106, or via e-mail at aderamo@state.de.us.

- APPENDIX A: Summation of Perchloroethylene Emissions from Delaware 1990 Base Year Emission Inventory.
- APPENDIX B: Mobile 5a Input and Output Parameters for the 1990 Adjusted Base Year Inventory Relative to the Milestone Year 2002.
- APPENDIX C: Development of Growth Factors for the 2002 Rate-of-Progress Plan.
- APPENDIX D: Point Source Emission Projections for the 2002 Current Control Projection Inventory.
- APPENDIX E: Stationary Area and Off-Road Mobile Source Emission Projections for the 2002 Current Control Pro and Control Strategy Inventories.
- APPENDIX F: On-Road Mobile Source Projection Methodology and Data for the 2002 Current Control and Control Strategy Projection Inventory.
- APPENDIX G: Point Source Emission Projections for 2002 Control Strategy Projection Inventory.
- APPENDIX H: Collection of EPA Guidance Documents Referred in 2002 RPP (Hard copy).
- APPENDIX I: VOC Emissions Reductions from the Federal Benzene Waste Rule and Delaware Regulation 24.28.
- APPENDIX J: Mobile 5a Input and Output Files for Stage II Vapor Recovery with Triennial Inspection.
- APPENDIX K: VOC and NO_x Emission Reductions from New Emission Standards on Nonroad Diesel Engines.
- APPENDIX L: Methodology for Determining VOC and NO_x Emissions Reductions from On-Road Mobile Source Control Measures.
- APPENDIX M: Mobile 5a Input and Output Files for Stage II Vapor Recovery with Annual Inspection.
- APPENDIX N: Rule Effectiveness Improvement for NO_x Emission Sources Covered by Delaware Regulation 37.

Symbol Key

Roman type indicates the text existing prior to the regulation being promulgated. Underlined text indicates new text added at the time of the proposed action. Language which is ~~stricken~~ through indicates text being deleted. [**Bracketed Bold language**] indicates text added at the time the final order was issued. [~~Bracketed stricken through~~] indicates language deleted at the time the final order was issued.

Final Regulations

The opportunity for public comment shall be held open for a minimum of 30 days after the proposal is published in the Register of Regulations. At the conclusion of all hearings and after receipt within the time allowed of all written materials, upon all the testimonial and written evidence and information submitted, together with summaries of the evidence and information by subordinates, the agency shall determine whether a regulation should be adopted, amended or repealed and shall issue its conclusion in an order which shall include: (1) A brief summary of the evidence and information submitted; (2) A brief summary of its findings of fact with respect to the evidence and information, except where a rule of procedure is being adopted or amended; (3) A decision to adopt, amend or repeal a regulation or to take no action and the decision shall be supported by its findings on the evidence and information received; (4) The exact text and citation of such regulation adopted, amended or repealed; (5) The effective date of the order; (6) Any other findings or conclusions required by the law under which the agency has authority to act; and (7) The signature of at least a quorum of the agency members.

The effective date of an order which adopts, amends or repeals a regulation shall be not less than 10 days from the date the order adopting, amending or repealing a regulation has been published in its final form in the Register of Regulations, unless such adoption, amendment or repeal qualifies as an emergency under §10119.

**DELAWARE STATE FIRE
PREVENTION COMMISSION**

Statutory Authority: 16 Delaware Code,
Section 6603 (16 **Del.C.** 6603)

ORDER

The State Fire Prevention Commission ("The Commission") held a properly noticed public hearing on December 5, 1998 and February 16, 1999 at 2:00 p.m. and 7:00 p.m. to receive comment on proposed changes to Part V, Chapter 5 of the Commission's Regulations regarding Standard for the Marking, Identification and Accessibility of Fire Lanes, Exits, Fire Hydrants, Sprinkler and Standpipe Connections. The attendance sheets and transcribed minutes of this hearing are attached to this Order as Exhibit "A" in lieu of a statement of the summary of evidence. Similarly, those written comments received by The Commission are attached to this Order as Exhibit "B".

Based upon the evidence received, The Commission finds the following facts to be supported by the evidence.

The regulations as proposed will safeguard life and property from the hazards of fire and explosion.

DECISION

The Commission hereby adopts the Regulations proposed as the amended Part v, Chapter. A copy is attached.

So Ordered this 23rd day of March, 1999

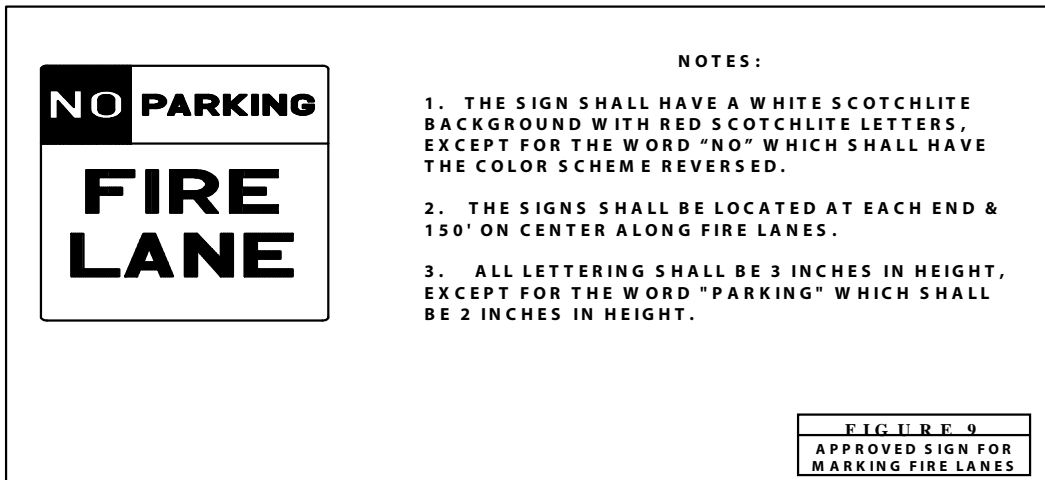
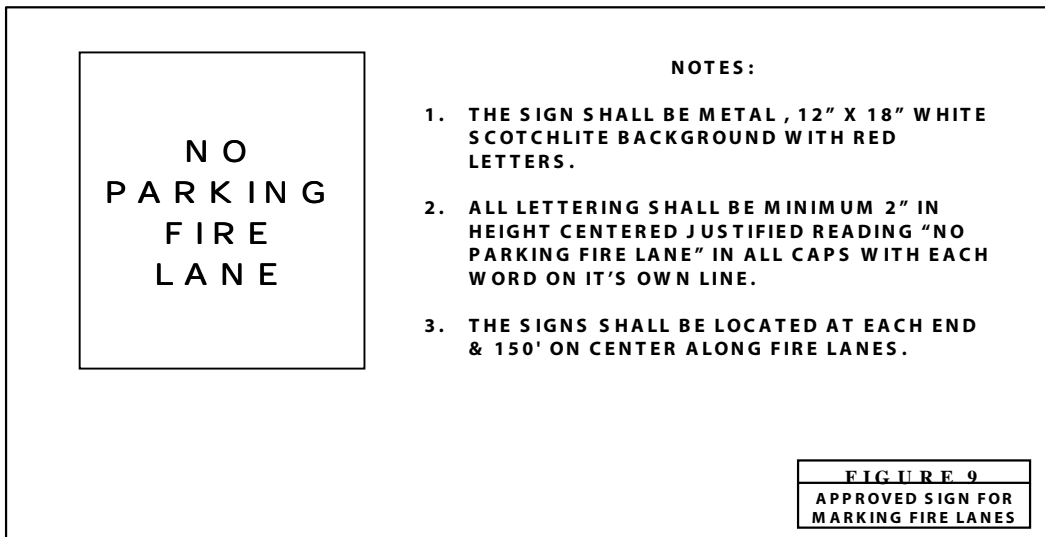
Chairman Carleton E. Carey, Sr. Donald W. Knight

Robert E. Palmer, Vice Chairman Daniel W. Magee

W. (Bill) Betts, Jr. Kenneth H. McMahon

Francis J. Dougherty

*** Please note that only one change was made to the regulation as originally proposed and published in the February 1999 issue of the Register on page 1331 (2:8 Del.R. 1331). Therefore, only the change, the addition of a Figure Nine is being published. Please refer to the February 1999 issue of the Register or contact the State Fire Marshal's Office.**



DEPARTMENT OF AGRICULTURE

HARNESS RACING COMMISSION

Statutory Authority: 3 Delaware Code,
Section 10027 (3 Del.C. 10027)

ORDER

Pursuant to 29 Del. C. §10118, the Delaware Harness Racing Commission ("Commission") hereby issues this Order adopting proposed amendments to the Commission Rules in Chapter VII, Rule I-F and Chapter VI, Rule II-A-5. Following notice in the Delaware Register of Regulations, the Commission makes the following findings and conclusions.

SUMMARY OF EVIDENCE AND INFORMATION SUBMITTED

1. The Commission posted notice of the proposed rule amendments in the Register of Regulations in the April 1, 1999 edition. The Commission received no written comments in response to the public posting of the rules.

FINDINGS OF FACT

2. The public was given notice and an opportunity to provide the Commission with comments in writing to the Commission's Rules. The Commission received no public comments in response to the proposed rules. The proposed amendment to Chapter VII, Rule I-F would revise the

procedure for determination of preference dates. The proposed amendment to Chapter VI, Rule II-A-5 would revise the procedure for the selection of races in divisions.

3. These proposed amendments are revisions of previous rules considered at length by the Commission. The proposed rules were promulgated by the Commission in accord with its statutory duties and authority as set forth in 3 Del. C. §10027. The Commission deems these rules as amended necessary for the effective enforcement of 3 Del. C. Chapter 100 and for the full and efficient performance of its duties thereunder.

4. The Commission concludes that the adoption of the proposed rules would be in the best interests of the citizens of the State of Delaware and necessary to insure the integrity and security of the conduct of harness racing in the State of Delaware. The Commission adopts the rules as provided below:

Chapter VII, Rule I-(F)

F. Preference Dates

Preference dates shall be given to horses in all overnight events at extended pari-mutuel tracks in accordance with the following:

1. The date of the horse's last previous start in a purse race is its preference date with the following exceptions:

(a) The preference date on a horse that has drawn to race and has been scratched is the date of the race from which scratched.

(b) When a horse is racing for the first time after August 1st, the date of its last qualifying race shall be considered its preference date.

(c) Wherever horses have equal preference in a race, the actual preferences of said horses in relation to one another shall be determined by lot.

(d) When an overnight race has been re-opened because it did not fill, all eligible horses declared into the race prior to the re-opening shall receive preference over other horses subsequently declared, irrespective of the actual preference dates, excluding horses already in to go.

2. When a horse is racing for the first time ever, the date of its last qualifying race shall be considered its preference date.

3. This rule relative to preference is not applicable at any meeting at which an agricultural fair is in progress. All horses granted stalls and eligible must be given an opportunity to compete at these meetings.

Chapter VI, Rule II-A-5

II. Overnight Events

A. General Provisions

5. Regularly scheduled races or substitute races may be divided where necessary to fill a program of racing, or may be divided and carried over to subsequent racing program, subject to the following:

a) No such divisions shall be used in the place of regularly scheduled races which fill.

b) Where races are divided in order to fill a program, starters for each division must be determined by lot after preference has been applied, unless the conditions provide for divisions based upon age, performance, earnings, or sex may be determined by the racing secretary.

c) However, where necessary to fill a card, not more than three races per day may be divided into not more than three divisions after preference has been applied. The divisions may be selected by the racing secretary. For all other overnight races that are divided, the division must be by lot unless the conditions provide for a division based on performance, earnings or sex.

5. The Commission adopts these rules as amended pursuant to 3 Del. C. §10027 and 29 Del. C. §10113. These adopted rules replace in their entirety the former version of the Rules of the Delaware Harness Racing Commission and any amendments. The effective date of this Order shall be ten (10) days from the publication of this Order in the Register of Regulations on July 1, 1999.

IT IS SO ORDERED this 10th day of June, 1999.

Anthony Flynn, Chairman
H. Terry Johnson, Commissioner
Beth Steele, Commissioner
Mary Ann Lambertson, Commissioner
Robert Kerr, Commissioner

1. Amend Chapter VII, rule I-(F) to now provide as follows:

F. Preference Dates

Preference dates shall be given to horses in all overnight events at extended pari-mutuel tracks in accordance with the following:

1. The date of the horse's last previous start in a purse race ~~during the current year~~ is its preference date with the following:

a) The preference date on a horse that has drawn to race has been scratched is the date of the race from which scratched.

b) When a horse is racing for the first time

after ~~February 1 in the current year~~ August 1st, the date of the ~~first declaration into a purse race~~ its last qualifying race shall be considered its preference date.

c) Wherever horses have equal preference in a race, the actual preferences of said horses in relation to one another shall be determined by lot.

d) When an overnight race has been re-opened because it did not fill, all eligible horses declared into the race prior to the re-opening shall receive preference over other horses subsequently declared, irrespective of the actual preference dates, excluding dates, excluding horses already in to go.

2. When a horse is racing for the first time ever, the date of its last qualifying race shall be considered its preference date.

~~3.~~ This rule relative to preference is not applicable at any meeting at which an agricultural fair is in progress. All horses granted stalls and eligible must be given an opportunity to compete at these meetings.

2. Amend Chapter VI, Rule II-A-5 to now provide as follows:

II. Overnight Events

A. General Provisions

5. Regularly scheduled races or substitute races may be divided where necessary to fill a program of racing, or may be divided and carried over to a subsequent racing program, subject to the following:

a) No such divisions shall be used in the place of regularly scheduled races which fill.

b) Where races are divided in order to fill a program, starters for each division must be determined by lot after preference has been applied, unless conditions provide for divisions based upon age, performance, earnings or sex may be determined by the racing secretary.

c) However, where necessary to fill a card, not more than ~~three~~ one races per day may be divided into not more than ~~two~~ three divisions after preference has been applied. The divisions may be selected by the racing secretary. For all other overnight races that are divided, the division must be by lot unless the conditions provide for a division based on performance, earning or sex.

DEPARTMENT OF EDUCATION

Statutory Authority: 14 Delaware Code, Section 122(e) (14 Del. C., Section 122(e))

REGULATORY IMPLEMENTING ORDER RECRUITING AND TRAINING OF PROFESSIONAL EDUCATORS FOR CRITICAL CURRICULAR AREAS

I. SUMMARY OF THE EVIDENCE AND INFORMATION SUBMITTED

The Secretary seeks the consent of the State Board of Education to amend the regulations Recruiting and Training of Professional Educators for Critical Curricular Areas found on Pages 1-18 to 1-26 in the Handbook for Personnel Administration for Delaware School Districts. The amendments are necessary to change the language from the Department of Public Instruction to the Department of Education and to change the words must and will to shall.

Notice of the proposed regulations was published in the News Journal and the Delaware State News on May 14, 1999 in the form hereto attached as Exhibit A. The notice invited written comments and none were received from the newspaper advertisements.

II. FINDINGS OF FACT

The Secretary finds that it is necessary to amend these regulations because the language in the regulations needs to reflect the use of the word shall, and the references to the Department of Public Instruction need to be changed to the Department of Education.

III. DECISION TO AMEND THE REGULATIONS

For the foregoing reasons, the Secretary concludes that it is necessary to amend the regulations. Therefore, pursuant to 14 Del. C., Section 122, the regulations attached hereto as Exhibit B are hereby amended. Pursuant to the provisions of 14 Del. C., Section 122(e), the regulations hereby amended shall be in effect for a period of five years from the effective date of this order as set forth in Section V. below.

IV. TEXT AND CITATION

The text of the regulations repealed hereby shall be in the form attached hereto as Exhibit B, and said amended regulations shall be cited in the document Regulations of the Department of Education.

V. EFFECTIVE DATE OF ORDER

The actions hereinabove referred to were taken by the Secretary pursuant to 14 Del. C., Section 122, in open session at the said Board's regularly scheduled meeting on June 17, 1999. The effective date of this Order shall be ten (10) days from the date this Order is published in the Delaware Register of Regulations.

IT IS SO ORDERED this 17th day of June, 1999.

DEPARTMENT OF EDUCATION
Dr. Iris T. Metts, Secretary of Education

Approved this 17th day of June, 1999.
STATE BOARD OF EDUCATION

Dr. James L. Spartz, President
Jean W. Allen, Vice President
John W. Jardine, Jr.
Dr. Joseph A. Pika
Dennis J. Savage
Dr. Claibourne D. Smith

Exhibit B

200.9 Recruiting and Training of Professional Educators for Critical Curricular Areas

~~Title 14, Chapter 11, Delaware Code provides for the establishment of a statewide program for the recruiting and training of certain professional educators who will serve the pupils in the public elementary and secondary schools of the State in critical curricular areas. The statute specifies five distinct programs for meeting this objective and places responsibility for the administration of the programs on the State Board of Education.~~

The programs ~~will~~ shall be administered in accordance with 14 Del. C., Chapter 11, and the following rules and regulations pursuant to the appropriation of funds in the annual Budget Bill.

~~1.0~~ 1. Designation of Critical Curricular Areas - Annually, on a date not later than the July meeting of the State Board of Education, the ~~[Certification and Personnel Division of the Department of Public Instruction Education Secretary of Education]~~ Secretary of Education shall present a recommendation to the State Board on the Critical Curricular Areas to be addressed during that fiscal year. This recommendation will be based upon supply and demand information obtained from local school districts and from state and national sources. ~~(For the 1984-85 year, the identified critical areas are as follows: Mathematics (grades~~

~~7-12), Chemistry, Physics, and Physical Science.)~~

~~2.0~~ 2. Allocation of Funds - Annually, on a date not later than the July meeting of the State Board of Education, the ~~Secretary of Education Instructional Services Branch of the Department of Public Instruction,~~ Secretary of Education shall present a recommendation to the State Board of Education on the preliminary allocation of funds among the five programs authorized by Chapter 11. Final allocations will be based upon the total appropriation for that fiscal year and the number of eligible applicants for the five programs.

~~3.0~~ 3. Applications - All applicants for funds under any of the five programs shall be required to complete an application on a form prescribed by the Department of ~~Public Instruction~~ Education and shall be required to provide whatever information and documents the Department determines are necessary for the effective and efficient management of the programs.

~~4.0~~ 4. Academic Year Institute - The Academic Year Institute is an ongoing program specifically designed to meet certification requirements in the critical areas of teacher shortage as determined by the State ~~Board~~ Department of Education. This is a part-time program which shall be offered during the regular school year. Participants will register for a maximum of three semester hours of graduate/undergraduate college courses per semester. The Institute will be sponsored by the State ~~Board~~ Department of Education and will be located at the University of Delaware and/or Delaware State University.

4.1 ~~a.~~ Eligibility

4.1.1 ~~(1)~~ The candidate ~~must~~ shall be employed as a teacher in the public schools of Delaware or in another State agency offering secondary education programs.

4.1.2 ~~(2)~~ The candidate ~~must~~ shall submit a completed application and other documentation and information by the specified closing date for application.

4.1.3 ~~(3)~~ The candidate ~~must~~ shall express an intent to enroll in a course or courses which will lead to certification in one or more of the critical curricular areas.

4.2 ~~b.~~ Financial Aid

4.2.1 ~~(1)~~ Academic Year Institute participants ~~will~~ shall receive full support for tuition, textbooks, laboratory fees and mileage for approved courses.

4.2.2 ~~(2)~~ Depending upon the institution and the course or courses in which the participant is enrolled, the State ~~Board~~ Department of Education ~~will~~ shall either make direct payment to the institution for tuition and laboratory fees or will reimburse the participant for costs upon receipt of proper documentation of the participant's expenses.

4.2.3 ~~(3)~~ The State ~~Board~~ Department of Education ~~will~~ shall reimburse the participant for

expenditures for textbooks and mileage upon receipt of a completed personal reimbursement form.

4.3 e- Selection Procedures

4.3.1 (1) Participants ~~will~~ shall be selected competitively from the eligible applicants for the program within the limits of the funds authorized for the program.

4.3.2 (2) An application review panel, composed of Department of ~~Public Instruction~~ Education staff members, shall meet twice each year - after the close of the application period for each semester - to review applications and select participants.

5.0 5- Summer Inservice Program (Summer Institute)

- The Summer Institute Program is a summer program specifically designed to meet certification requirements in the critical areas of teacher shortage as determined by the State ~~Board~~ Department of Education. The program will be offered during a six-week period in the summer beginning not later than the last week in June. Participants ~~will~~ shall register for a minimum of six semester hours of graduate/undergraduate credit in a specifically designed program focused on building skills and knowledge in the critical curricular areas. The Summer Institute, modeled after the National Science Foundation format, ~~will~~ shall be sponsored by the State ~~Board~~ Department of Education and will be located at the University of Delaware and/or Delaware State University.

5.1 a- Eligibility

5.1.1 (1) The candidate ~~must~~ shall be employed as a teacher in the public schools of Delaware or in another State agency offering secondary education programs.

5.1.2 (2) The candidate ~~must~~ shall not be currently certifiable in the critical curricular area being addressed by the Summer Institute for which application is made.

5.1.3 (3) The candidate ~~must~~ shall submit a completed application and other required information and documentation by the closing date for application.

5.1.4 (4) The candidate ~~must~~ shall express an interest and intent to pursue certification in one or more of the critical curricular areas for which he or she is not currently certifiable.

5.1.5 (5) The candidate ~~must~~ shall submit a letter of recommendation from the Superintendent or an appropriate supervisor of the candidate's school district or agency.

5.2 b- Financial Aid

5.2.1 (1) Summer Institute participants ~~will~~ shall receive full support for tuition, textbooks, and laboratory fees. Depending on the institution and the program in which the participant is enrolled, the State ~~Board~~

Department of Education ~~will~~ shall either make direct payment to the institution for these costs or ~~will~~ shall reimburse the participant upon receipt of proper documentation of the participant's expenses.

5.2.2 (2) The participants ~~will~~ shall also receive a stipend of \$250 per week, up to a maximum of \$1,500 for a six-week Institute. This stipend ~~will~~ shall be paid by the State ~~Board~~ Department of Education to the participant upon receipt of notification from the institution that the participant successfully completed all courses taken with a minimum grade of "C".

5.3 e- Selection Procedures

5.3.1 (1) Participants ~~will~~ shall be selected competitively from the eligible applicants for the program within the limits of the funds authorized for the program.

5.3.2 (2) An application review panel, composed of Department of ~~Public Instruction~~ Education staff members, shall meet annually after the close of the application period to review applications and select participants.

6.0 6- Program For Persons From Other Professions Who Will Prepare To Teach - This program is designed to provide financial assistance to persons from other professions who possess the training and skills to teach in the critical curricular areas of teacher shortage as determined by the State Board of Education but who lack the professional education courses required to qualify for a standard certificate. Participants ~~will~~ shall be permitted to enroll in the institution of higher education of their choice and ~~will~~ shall be reimbursed for the tuition costs, within limits specified below, for up to six semester hours of credit per semester.

6.1 a- Eligibility

6.1.1 (1) The candidate ~~must~~ shall be a resident of the State of Delaware.

6.1.2 (2) The candidate ~~must~~ shall have a graduate or undergraduate degree from an accredited institution of higher education in a field related to one or more of the critical curriculum areas.

6.1.3 (3) The candidate ~~must~~ shall first submit official transcripts to the [~~Certification and Personnel Division of the State~~] Department of ~~Public Instruction~~ Education for evaluation.

6.1.4 (4) Candidates who lack no more than six semester credits of coursework from meeting the content area requirements in one or more of the critical curriculum areas ~~will~~ shall be invited to apply for participation in the program.

6.1.5 (5) The candidate ~~must~~ shall submit a completed application form and must express an interest and

intent to pursue certification.

6.1.6 ~~(6)~~ The candidate ~~must~~ shall submit a plan outlining educational plans, including a timeline, to complete the professional education courses needed to obtain certification.

6.2 ~~b.~~ Financial Aid

6.2.1 ~~(4)~~ The participant ~~will~~ shall receive financial support for tuition costs for up to six semester hours of credit per semester.

6.2.2 ~~(2)~~ The participant may receive assistance for a maximum of thirty semester credits of professional education courses but must update his or her application and receive approval in advance each semester.

6.2.3 ~~(3)~~ The participant ~~will~~ shall be reimbursed for tuition costs in an amount not greater than the tuition charged a Delaware resident by the University of Delaware for a course or courses of equal credit value.

6.2.4 ~~(4)~~ The State ~~Board~~ Department of Education ~~will~~ shall reimburse the participant upon receipt of proper documentation of the participant's expenses and upon receipt of notification from the institution that the participant successfully completed the courses for which reimbursement is requested with a minimum grade of "C".

6.3 ~~e.~~ Selection Procedures

6.3.1 ~~(4)~~ An application review panel, composed of Department of ~~Public Instruction~~ Education staff members ~~will~~ shall meet on an as-needed basis to review applications and select participants.

6.3.2 ~~(2)~~ Participants ~~will~~ shall be selected from eligible applicants on a first-come basis, except that applicants approved for one semester will be given preference in future semesters until they complete their educational requirements, use their total eligibility, or are unsuccessful in achieving the minimum grade of "C" in approved courses.

6.3.3 ~~(3)~~ Participants ~~will~~ shall be limited and the approval process will be terminated when authorized funds for this program in any fiscal year have been allocated.

7.0 ~~7.~~ Teacher Scholarship Loan Programs - The Teacher Scholarship Loan Program is designed to meet certification requirements in the critical areas of teacher shortage as determined by the State ~~Board~~ Department of Education. This is a full-time program offered during the regular school year. As a minimum, participants ~~will~~ shall register for the number of semester hours required of a full-time student.

7.1 ~~a.~~ Eligibility

7.1.1 ~~(4)~~ The candidate ~~must~~ shall have taught in a Delaware public school for at least one year prior to the year in which the scholarship is to be used.

7.1.2 ~~(2)~~ The candidate ~~must~~ shall be employed as a teacher in a Delaware public school and/or must be a resident of the State of Delaware at the time of application.

7.1.3 ~~(3)~~ The candidate ~~must~~ shall express an interest and intent to pursue certification in one or more of the critical curricular areas identified by the State ~~Board~~ Department of Education.

7.1.4 ~~(4)~~ The candidate ~~must~~ shall hold a standard Delaware teaching certificate but must not be currently certifiable in the critical curricular area specified in ~~(3)~~ 7.1.3 above.

7.1.5 ~~(5)~~ The candidate ~~must~~ shall submit a completed application and other documentation and information by the specified closing date for application.

7.1.6 ~~(6)~~ The candidate ~~must,~~ shall, if currently employed, have prior approval from his or her employing local district board of education.

7.1.7 ~~(7)~~ The candidate ~~must~~ shall be accepted into an approved program in an institution of higher education leading to certification in the critical curriculum area specified in ~~(3)~~ 7.1.3 above.

7.2 ~~b.~~ Financial Aid

7.2.1 ~~(4)~~ Teacher Scholarship Loan Program participant ~~will~~ shall receive a scholarship in an amount equal to the salary he or she would receive for ~~185 days of~~ service as a teacher, as specified in Chapter 13, Title 14, Delaware Code.

7.2.2 ~~(2)~~ A participant, who was employed by a Delaware public school district in the year prior to receipt of the scholarship and who is on leave of absence during the year of the scholarship, shall continue to receive all State-supported employee benefits through a grant from the State ~~[Board Department of Education]~~ to the employing district. (Such participants shall be considered to be on sabbatical leave and for purposes of salary increments and pension eligibility and computation, a year of leave shall be considered a year of experience as provided in §1325(9), Title 14, Delaware Code.)

7.2.3 ~~(3)~~ A participant may receive a local salary supplement and local employee benefits if the employing district elects to provide them at the expense of the employing district.

7.2.4 ~~(4)~~ A district ~~will~~ shall also be eligible to receive an interest-free loan, in an amount not to exceed ~~[\$5,000]~~ **[to be determined by the State Department of Education]**, which the participant may use to defray the cost of tuition and books. The actual amount of the loan will be dependent upon estimated costs of these two items and other financial resources available to the participant.

7.2.5 ~~(5)~~ Participants receiving a loan shall

execute a promissory note, in the amount of the loan, to the State Treasurer. This note will be forgiven at the rate of one-third of the loan for each of three years of teaching in a Delaware public school after completion of the study authorized. In any year the teacher fails to meet the teaching obligation, the loan shall be due and payable for the unpaid balance plus interest specified in the note.

7.3 e. Selection Procedures

7.3.1 (†) Participants ~~will~~ shall be selected competitively from the eligible applicants for the program within the limits of the funds authorized for the program.

7.3.2 (‡) The applicant review panel, composed of Department of ~~Public Instruction~~ Education staff members, shall meet once each year at the close of the application period to review applications.

8.0 ~~8.~~ Student Loan Program - The Student Loan Program is for Delaware residents who are accepted into an institution of higher learning to be trained as a teacher in the critical area of teacher shortage as determined by the State ~~Board~~ Department of Education. A student selected for the program may attend any accredited college or university in the United States where the appropriate training will result in certification as a teacher for a critical area of teacher shortage as determined by the State ~~Board~~ Department of Education.

8.1 ~~a.~~ Eligibility

8.1.1 (†) The candidate ~~must~~ shall have been a Delaware resident for a period of one year at the time of application.

8.1.2 (‡) The candidate ~~must~~ shall have Scholastic Aptitude Test (SAT) scores of 500 verbal and 500 quantitative. Candidates already in a college or university program must be maintaining a "C" average or better in courses in the critical curriculum areas.

8.1.3 (‡) The candidate ~~must~~ shall have been admitted to an accredited college or university program directed toward certification in a critical curricular area as determined by the State ~~Board~~ Department of Education.

8.1.4 (†) The candidate ~~must~~ shall submit a completed application and other documentation and information by the specified date for application.

8.2 ~~b.~~ Financial Aid

8.2.1 (†) Student Loan Program participants ~~[will shall receive a maximum loan of \$5,000 shall receive a loan, the amount to be determined by the Department of Education,]~~ for one year's study, less scholarship aid available from other sources.

8.2.2 (‡) The loan may be renewed from year to year through a four-year training program.

8.2.3 (‡) Participants in the Student Loan

Program shall execute a promissory note, in the amount of the loan, to the State Treasurer. The entire note will be forgiven on the basis of two years of teaching in a Delaware public school in a critical curriculum area for each year of loan granted.

8.2.4 (†) Each year of the loan will be interest-free to those who meet the two-year teaching obligation for each year of loan granted.

8.2.5 (‡) In the event that the participant does not graduate, does not continue to study in the critical curriculum area, or does not meet the teaching obligation, the entire loan, with interest specified by the State Treasurer, shall be due and payable. Payment of the note and interest shall be in accordance with the time schedule specified in the note.

8.3 ~~e.~~ Selection Procedures

8.3.1 (†) Participants ~~will~~ shall be selected competitively from the eligible applicants for the program within the limits of the funds authorized for the program.

8.3.2 (‡) The applicant review panel, composed of Department of ~~Public Instruction~~ Education staff members, shall meet twice each year at the close of the application period for each semester to review applications.

**REGULATORY IMPLEMENTING ORDER
TEACHER OF THE YEAR AWARD**

I. SUMMARY OF THE EVIDENCE AND
INFORMATION SUBMITTED

The Secretary of Education seeks the consent of the State Board of Education to amend the regulation Teacher of the Year Award found on pages 1-14 to 1-16 (a) in the Handbook for Personnel Administration for Delaware School Districts. The amendment deletes the portions of the regulation that are found in 14 Del. C., Chapter 89, leaving the sections on Qualifications and Nominations as Department of Education regulations. The language is also amended to reflect the change from the Department of Public Instruction to the Department of Education and to change the words should and will to the word shall.

Notice of the proposed regulation was published in the News Journal and the Delaware State News on May 14, 1999, in the form hereto attached as Exhibit A. The notice invited written comments and none were received from the newspaper advertisements.

II. FINDINGS OF FACT

The Secretary finds that it is necessary to amend this

regulation because portions of the regulation are repeated directly from the Del. C., Chapter 89, and do not need to be regulated by the Department of Education.

III. DECISION TO AMEND THE REGULATION

For the foregoing reasons, the Secretary concludes that it is necessary to amend the regulation. Therefore, pursuant to 14 Del. C., Section 122, the regulation attached hereto as Exhibit B is hereby amended. Pursuant to the provisions of 14 Del. C., Section 122(e), the amended regulation hereby shall be in effect for a period of five years from the effective date of this order as set forth in Section V. below.

IV. TEXT AND CITATION

The text of the regulation repealed hereby shall be in the form attached hereto as Exhibit B, and said amended regulation shall be cited in the document the Regulations of the Department of Education.

V. EFFECTIVE DATE OF ORDER

The actions hereinabove referred to were taken by the Secretary pursuant to 14 Del. C., Section 122, in open session at the said Board's regularly scheduled meeting on June 17, 1999. The effective date of this Order shall be ten (10) days from the date this Order is published in the Delaware Register of Regulations.

IT IS SO ORDERED this 17th day of June, 1999.

DEPARTMENT OF EDUCATION
Dr. Iris T. Metts, Secretary of Education

Approved this 17th day of June, 1999.
STATE BOARD OF EDUCATION

Dr. James L. Spartz, President
Jean W. Allen, Vice President
John W. Jardine, Jr.
Dr. Joseph A. Pika
Dennis J. Savage
Dr. Claibourne D. Smith

Exhibit B

200.8 Teacher of the Year Award

~~Title 14, Chapter 89, establishes a series of Teacher of the Year awards in order to reward outstanding teachers throughout the state. All school districts shall follow these rules and 14 Delaware Code Chapter 89 which in combination constitute the basis for the award grants. These~~

~~rules shall be applicable to the Teachers of the Year named during the fiscal year ending June 30, 1991, and annually thereafter.~~

~~Teacher of the Year Award~~

This program shall be administered in accordance with 14 Del. C., Chapter 89, and the following rules and regulations.

~~Procedures - Each year every school district throughout this state shall conduct a study within each school building to determine those certified employees (teachers) who are deserving of the title "Teacher of the Year" from that building. The selection process will follow the current guidelines which have been developed by the State Board of Education which includes input from teachers, administrators, and Department of Public Instruction Staff. After the buildings make their individual selections, the District-wide Teacher of the Year shall be selected from each District, following the current guidelines. The final step will be the selection of the State Teacher of the Year.~~

1.0 Qualifications - To be considered for the Teacher-of-the-Year award, a person shall have taught, continuously or intermittently, for an accumulative period of nine months or more previous to the date of such person's nomination; shall have been formally nominated; and be actively teaching in this State at the time of nomination. A nominee shall be a person fully certified by the State ~~Board~~ Department of Education for the position held.

2.0 Nominations - The following guidelines shall apply in preparing nominations in accordance with the requirements of the Act.

2.1 a. The State ~~Superintendent of Public Instruction~~ Department of Education shall annually send to each school district superintendent detailed instructions and proper forms for the presentation of nominees. Each district superintendent is invited to nominate one teacher employed by the district.

2.2 b. Nominees ~~should~~ shall be skillful and dedicated teachers, pre-kindergarten through Grade 12, who plan to continue as teachers. Personnel whose main responsibilities are administrative or supervisory, such as principals or guidance counselors, are not eligible.

2.3 e. Nominees ~~should~~ shall have the respect and admiration of students, parents, and co-workers. They should play active and useful roles in their communities as well as in their schools. They should be poised and

articulate and have the energy and equanimity to be able to withstand a busy schedule.

2.4 d. The most important qualification is a superior ability to inspire students of all backgrounds and abilities to learn.

2.5 e. Each district ~~will~~ shall submit a portfolio describing the nominee and setting forth her or his positions on educational issues. Format will be based on that of the National Teacher of the Year program.

2.6 f. Staff members of the Department ~~will~~ shall review each portfolio and ~~will~~ shall observe each teacher at work. Based on reading of the portfolios and observations, the Department selectors will designate not more than five finalists for consideration by judges.

2.7 g. Judges from outside of the Department ~~will~~ shall evaluate the finalists. Those invited as judges will be the three most recent previous state Teachers of the Year; the president of the State PTA; the president of the State Student Council Association; and a member of the State Board of Education.

2.8 h. The judges ~~will~~ shall recommend one person for the state superintendent to declare as state Teacher-of-the-Year.

~~Basic Awards — Not later than thirty calendar days following the announcement of the name of the State Teacher of the Year, the State Superintendent of Public Instruction Secretary of Education shall direct the transfer of funds from the appropriate State Board Department of Education account into a special account in each school district for use by its Teacher of the Year. Section 8903, Title 14, cites two basic awards: those individuals who are chosen as Teacher of the Year for their respective school districts will be awarded \$2000; the person who is chosen State Teacher of the Year shall be awarded \$3000 in addition to the district-level award. These funds are awarded with no restriction on how they will be used; they should be considered as salary bonuses.~~

~~Educational Benefit Award — The State Teacher of the Year will shall receive, in addition, a grant of \$5000 to use for the educational benefit of his or her students.~~

~~a. No amount or portion of this \$5000 award shall be used for the personal benefit of the award recipient; provided, however, that in the use of this fund for educational purposes the recipient may be an indirect or incidental beneficiary as teacher of the benefited pupils. In the event that all funds set aside for an award recipient have not been completely expended by that recipient at the time when a subsequent award is granted, the remainder of the former recipient's award shall not revert, but shall remain set~~

~~aside in the name of such former recipient until such time as it is totally expended or the recipient dies or leaves the State.~~

~~b. The recipient shall present to the superintendent of the school district in which he or she is employed a plan for utilization of the fund. Such submission shall not waive the right of the recipient to judge and choose but shall be in order to avoid wasteful duplication of materials or violation of school district policy regarding students, materials, or activities. The principal criterion for use of the Fund shall be that of educational benefit to pupils. The Fund may be designated for, but not limited to, such items as:~~

- ~~• Purchase of non consumable materials and supplies; e.g., library books, audio visual equipment, computer equipment and programs, musical instruments, specialized furniture.~~

- ~~• Purchase of otherwise consumable materials that are used in the production of a student designed item; e.g., artist's or draftsman's paper, canvas, paints, instruments, wood and metal.~~

- ~~• Payment for student travel; e.g., prepared visits to museums, theaters, historic sites, laboratories when these are related to classroom study.~~

- ~~• Employment of performers and consultants; e.g., touring companies of a dramatic or musical group, visiting artist, poet, author, musician or historian.~~

- ~~• Reimbursements to the recipient, not to exceed \$500, for personal expenses.~~

~~e. Where the recipient has purchased materials, equipment or any other durable item with award funds, such item shall be the property of the Delaware school district in which the recipient is employed at the time of the expenditure. Each invoice, purchase order and personal reimbursement form related to withdraws from Teacher of the Year award funds shall be retained by the school district, and shall be available for inspection as public records and subject to regular audit by the State Auditor of Accounts. (Section 8905)~~

~~Pension Modification — Each Teacher of the Year, on every level, shall have added to his or her final year of salary the dollar amount of his or her basic Teacher of the Year awards, as cited in Section 8903, solely for computing the final average compensation for pension purposes. (Section 8906)~~

**DEPARTMENT OF HEALTH AND
SOCIAL SERVICES**

DIVISION OF SOCIAL SERVICES

Statutory Authority: 31 Delaware Code,
Section 505 (31 Del.C. 505)

NATURE OF THE PROCEEDINGS:

The Delaware Department of Health and Social Services ("Department") initiated proceedings to update Medical Assistance eligibility rules. The Department's proceedings to amend its regulations were initiated pursuant to 29 Delaware Code Section 10114 and its authority as prescribed by 31 Delaware Code Section 512.

The Department published its notice of proposed regulation changes pursuant to 29 Delaware Code Section 10115 in the May 1999 Delaware Register of Regulations, requiring written materials and suggestions from the public concerning the proposed regulations to be produced by June 1999, at which time the Department would receive information, factual evidence and public comment to the said proposed changes to the regulations.

No written or verbal comments were received relating to this proposed rule.

FINDINGS OF FACT:

The Department finds that the proposed changes as set forth in the May 1999 Register of Regulations should be adopted as written.

THEREFORE, IT IS ORDERED, that the proposed regulations of the Medicaid/Medical Assistance Program are adopted and shall be final effective July 10, 1999.

Gregg C. Sylvester, M.D.
Secretary

6/11/99
Date of Signature

Division of Social Services Eligibility Manual

15400.3.1 Income

Follow ABC income standards and methodologies (disregards, exclusions, allocations). ~~The child's income must not exceed the ABC payment standard for one.~~ See DSSM 4008 for ABC policy on determining financial eligibility and using the gross and net income tests. If two or more siblings are placed in the same foster care home, they must be budgeted together. In this case, the appropriate ABC standard for two or more individuals will apply.

15400.3.1.1 Income at Redetermination

At redetermination, financial eligibility for IV-E children can be determined by comparing the net monthly income to the appropriate board rate or the ABC standard of need, whichever is more beneficial to the child. The board rates are changed each year in July.

For non-IV-E children, the income at time of redetermination must be less than the ABC ~~payment standard.~~ standard of need.

16240 Composition of Budget Unit

The budget unit is composed of various adults who are legally/financially responsible for each other and various children (related or unrelated) for whom the adults have legal responsibility or for whom the adults have accepted parental-like responsibility.

One family and/or household may be composed of one or more budget units and an individual may belong to more than one budget unit. The budget unit must exclude any individual who is receiving SSI. Any individual who is receiving assistance under ABC, GA, Disabled Children, HCBS, QMB, SLMB, QI-1, QI-2, QDWI, or another Medicaid only group may be included or excluded from the budget unit. If the income of the individual who is receiving medical assistance under another eligibility group makes another individual ineligible, we will exclude the individual who is receiving assistance under another eligibility group.

The budget unit may be modified to exclude related individuals with income except:

- a parent is always financially responsible for the minor (under age 18) natural/adopted, non-emancipated child, or unborn child,
- a spouse is always financially responsible for a spouse,
- unmarried partners with a mutual child (child in common) are always financially responsible for the child. ~~or unborn child.~~ Neither partner is responsible for the other, even though both parents are responsible for their mutual child.

NOTE: The parent, spouse, or partner may be excluded from the poverty level budget unit if he or she is receiving assistance under another Medicaid group.

16240.1 Individuals to Include

- Pregnant woman and unborn child(ren) Note: Pregnant women count as at least two family members in determining the budget unit size in all cases. If a pregnant woman is diagnosed with a multiple pregnancy, this must be verified to adjust the budget size accordingly.
- The spouse: If the income of the stepparent makes

some of the stepchildren ineligible, do not count the stepparent income. The stepparent and his or her own children remain in the budget unit.

- Unmarried partners if the couple have a child for whom they have assumed parental-like responsibility. The child and the unmarried partners will first be included in the budget unit. An unmarried partner (who is not the parent of the child) must be excluded when his or her income makes the child or the other unmarried partner ineligible.
- Include both unmarried partners when determining the eligibility of a mutual child. ~~or a mutual unborn child. The pregnant woman will count as two (or more).~~
- Other natural or adopted children under age 18 that both parents have in common. Families have the choice of including or excluding siblings. If a child has income, include the child with income in the budget unit, but do not count that child's income when determining the eligibility of the siblings, the parents, or other individuals in the budget unit. The child's income is counted when determining his or her own eligibility. Please note that the income of a child who is a minor parent is counted when determining the eligibility of his or her own child unless the income is otherwise excluded.
- Other related or unrelated children under age 18 (such as a niece, cousin, friend's child, minor sibling of adult). This is permissible because there is no technical requirement that the child be living in the home of a specified relative. If the children are ineligible in the big budget unit, place them in a separate budget unit. Include the adult sibling who has assumed parental-like responsibility for a minor sibling in the budget unit. If the income of the adult sibling renders the minor ineligible, place the minor in a separate budget unit.
- The parents of a pregnant minor living together in the same home. Do not include her parents if the pregnant minor is considered emancipated. See technical eligibility for an explanation of emancipation.

16240.2 Individuals to Exclude

- Individuals who are recipients of SSI. Individuals who are recipients of ABC, GA, Disabled Children, HCBS, QMB, SLMB, QI-1, QI-2, QDWI, or another Medicaid only group may be included or excluded in the budget unit.
- Parents of the father of a baby ~~or unborn~~ when the pregnant minor's girlfriend is living there with his parents. We will include the parents of the father if he is under age 18 and is applying for Medicaid.

NOTE: If an individual is not included in the budget unit, do not include his or her income.

DEPARTMENT OF INSURANCE

Statutory Authority: 18 Delaware Code,
Section 1113 (18 Del.C. 1113)

In the Matter of: |
The Amendment of Insurance | Docket Number 99-17
Department Regulation No. 53 |

PROPOSED ORDER AND RECOMMENDATION

On April 1, 1999, proposed revisions to Regulation 53 were published in the Register of Regulations in accordance with 29 *Del C.* chapters 11 and 101 and notices of the public hearing to consider such revisions were published in two local newspapers, see Exhibits "1" and "2" attached hereto. Also in accordance with 29 *Del C.* chapters 11 and 101, a public hearing was held on May 24, 1999 before the below-signed hearing officer. Alan Shaw of INS Consultants and Mike O'Neil representing ACLI attended the hearing. The following is the Hearing Officer's Proposed Order and Recommendation in the above-captioned matter.

I. Summary of the Evidence

The evidence in this matter consists of the following:

1. The testimony of Alan Shaw who serves as the Department's primary actuarial consultant reporting the position of Department with regard to the proposed revisions of Reg. 53. Mr. Shaw recommended that numerous revisions be made to comply with recently adopted changes to the National Association of Insurance Commissioners Model Act concerning annuity mortality tables. These changes reflect the fact that the expectation of life continues to increase. The significance of improved mortality is that insurance companies must increase reserves to meet the corresponding increasing liabilities of serving a policyholder who is likely to enjoy a longer life-span. Most states have adopted the standard reserve requirements reflected in the proposed amendments to Reg. 53. Mr. Shaw also recommended several technical revisions to the proposed Reg. 53 relating to among other things its effective date, grammatical revisions and clarifying language. He submitted into the record Exhibit "4" which comprised the previously proposed amendments to Reg. 53 as well as those minor technical amendments he recommended during his testimony.

2. The testimony of Mike O'Neil representing the

American Council of Life Insurance. On behalf of ACLI he expressed his support for the proposed amendments to Reg. 53 and submitted a letter from ACLI to the same effect. Such letter was accepted into the record as Exhibit "3".

3. Exhibit "5", being the marked-up version of Reg. 53 as it was proposed prior to the hearing of May 24, 1999.

II. Findings of Fact and Conclusions of Law

Based on the evidence received in this matter, I find that the technical revisions suggested by Mr. Shaw during the May 24 hearing as well as the previously proposed revisions are justified and should be incorporated in Insurance Department Regulation 53 as set forth in Exhibit "4".

III. Recommendation

For the above reasons it is recommended that Insurance Department Regulation No. 53 be amended in the form attached hereto as Exhibit "4".

SO RECOMMENDED, this 14th day of June, 1999.

Fred A. Townsend III
Hearing Officer

FINAL ORDER

COMES NOW, the Insurance Commissioner of the State of Delaware and Orders in conformance with the Proposed Order and Recommendation of the Hearing Officer as follows:

WHEREAS, I have considered the Proposed Order and Recommendation submitted by the Hearing Officer, as well as the entire record of this matter; and

WHEREAS, I adopt the Proposed Order and Recommendation and incorporate the summary of evidence, the proposed findings of fact, and the recommendation of the Hearing Officer by this reference.

NOW THEREFORE, I Order that Regulation No. 53 be amended as referenced herein, effective August 1, 1999.

SO ORDERED this 15th day of June, 1999.

DONNA LEE WILLIAMS
Insurance Commissioner
State of Delaware

Regulation No. 53

NEW ANNUITY MORTALITY TABLE FOR USE IN DETERMINING RESERVE LIABILITIES FOR ANNUITIES

December 11, 1985
Revised [August 1,] 1999

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[6. Application of the 1994 GAR Table]

- [7.6.]** Separability
[8.7.] Effective Date

SECTION 1. AUTHORITY

This rule is promulgated by the Commissioner of Insurance pursuant to 18 *Delaware Code* Section 1113 and 29 *Delaware Code* Chapter 101 (Administrative Procedures Act).

SECTION 2. PURPOSE

The purpose of this regulation is to recognize ~~new~~ the following mortality tables; for use in determining the minimum standard of valuation for annuity and pure endowment contracts: the 1983 Table "a", and the 1983 Group Annuity Mortality (1983 GAM) Table, the Annuity 2000 Mortality Table, and the 1994 Group Annuity Reserving (1994-GAR) Table ~~for use in determining the minimum standard of valuation for annuity and pure endowment contracts.~~

SECTION 3. DEFINITIONS

A. As used in this regulation, "1983 Table 'a'" means that mortality table developed by the Society of Actuaries Committee to Recommend a New Mortality Basis for Individual Annuity Valuation and adopted as a recognized mortality table for annuities in June 1982 by the National Association of Insurance Commissioners.

B. As used in this regulation "1983 GAM Table" means that mortality table developed by the Society of Actuaries Committee on Annuities and adopted as recognized mortality table for annuities in December 1983 by the National Association of Insurance Commissioners.

C. As used in this regulation, "1994 GAR Table" means that mortality table developed by the Society of Actuaries Group Annuity Valuation Table Task Force and

shown at XLVII *Transactions of the Society of Actuaries* 866-867 (1995) and adopted as a recognized mortality table for annuities in December 1996 by the National Association of Insurance Commissioners.

D. As used in this regulation, "Annuity 2000 Mortality Table" means that mortality table developed by the Society of Actuaries Committee on the Life Insurance Research and shown at XLVII *Transactions of the Society of Actuaries* 240 (1995) and adopted as a recognized mortality table for annuities in December 1996 by the National Association of Insurance Commissioners.

SECTION 4. INDIVIDUAL ANNUITY OR PURE ENDOWMENT CONTRACTS

A. Except as provided in Subsections B and C of this section, ~~the~~ 1983 Table "a" is recognized and approved as an individual annuity mortality table for valuation and, at the option of the company, may be used for purposes of determining the minimum standard for valuation for any individual annuity or pure endowment contract issued on or after July 8, 1980.

B. ~~[Except as provided in Subsection C hereof, either the 1983 Table "a" [or the Annuity 2000 Mortality Table shall] is to be used for determining the minimum standard [of] valuation for any individual annuity or pure endowment contract issued on or after January 1, 1987.~~

C. Except as provided in Subsection D of this section, the Annuity 2000 Mortality Table shall be used for determining the minimum standard of valuation for any individual annuity or pure endowment contract issued on or after August 1, 1999.

D. The 1983 Table "a" without projection is to be used for determining the minimum standards of valuation for an individual annuity or pure endowment contract issued on or after August 1, 1999, solely when the contract is based on life contingencies and is issued to fund periodic benefits arising from:

(1) Settlements of various forms of claims pertaining to court settlements or out of court settlements from tort actions;

(2) Settlements involving similar actions such as worker's compensation claims; or

(3) Settlements of long term disability claims where a temporary or life annuity has been used in lieu of continuing disability payments.

SECTION 5. GROUP ANNUITY OR PURE ENDOWMENT CONTRACTS

A. Except as provided in Subsections B and C of this section, ~~t~~he 1983 GAM Table, ~~and~~ the 1983 Table "a" and the 1994 GAR Table are recognized and approved as group annuity mortality tables for valuation and, at the option of the company, ~~either any one of these tables~~ may be used for

purposes of valuation for any annuity or pure endowment purchased on or after July 8, 1980 under a group annuity or pure endowment contract.

B. Except as provided in Subsection C of this section, either the 1983 GAM Table or the 1994 GAR Table shall ~~is to~~ be used for determining the minimum standard of valuation for any annuity or pure endowment purchased on or after January 1, 1987 under a group annuity or pure endowment contract.

C. The 1994 GAR Table shall be used for determining the minimum standard of valuation for any annuity or pure endowment purchased on or after August 1, 1999 under a group annuity or pure endowment contract.

SECTION 6. APPLICATION OF THE 1994 GAR TABLE

In using the 1994 GAR Table, the mortality rate for a person age x in year (1994 + n) is calculated as follows:

$$q_{x-1994+n} = q_{x-1994} (1 - AA_x)^n$$

where the q_{x-1994} and AA_x s are as specified in the 1994 GAR Table.

SECTION ~~6-7~~. SEPARABILITY

If any provision of this Regulation or the application thereof to any person or circumstances is for any reason held to be invalid, the remainder of the regulation and the application of such provision to other persons or circumstances shall not be affected thereby.

SECTION ~~7-8~~. EFFECTIVE DATE

The effective date of this Regulation is December 31, 1985. ~~[Subsequent revisions hereto are effective 45 days following the Commissioner's signature. Revised August 1, 1999.]~~

~~David N. Levinson~~ Donna Lee H. Williams
Insurance Commissioner

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Sussex County Vocational-Technical School Board of Education	Ms. Teresa G. Carey	7/01/98
Violent Crimes Compensation Board	Mr. Stephen L. Manista	5/17/02

**DEPARTMENT OF
ADMINISTRATIVE SERVICES
DIVISION OF PROFESSIONAL REGULATION
BOARD OF PHARMACY**

Notice of Re-Proposed Regulations

PLEASE TAKE NOTICE, PURSUANT TO 29 DeI.C. 2509, the Delaware Board of Pharmacy has developed and proposes to adopt comprehensive Rules and Regulations. The Board of Pharmacy proposes changes to Regulations V(A)(7) and V(D)(3)(c), Dispensing, Regulation VI-D, Pure Drug Regulations, and a new Regulation XIV-Administration of Injectable Medications in accord with the text that follows. The changes to Regulations V and VI require compliance with federal law and regulation and Regulation XIV is necessary to implement new statutory provisions for injections by pharmacists.

A public hearing will be held on the proposed Rules and Regulations on Wednesday, August 11, 1999 at 10:00 a.m. in the Jesse Cooper Building, Room 309 (Third Floor Conference Room), Federal and Water Streets, Dover, DE 19901. The Board will receive and consider input in writing from any person on the proposed Rules and Regulations. Any written comments should be submitted to the Board of Pharmacy in care of Gradella E. Bunting at the above address or by calling (302) 739-4798.

This notice will be published in two newspapers of general circulation not less than twenty (20) days prior to the date of the hearing.

DEPARTMENT OF EDUCATION

The Department of Education will hold its monthly meeting on Thursday, July 29, 1999 at 11:00 a.m. in the Townsend Building, Dover, Delaware.

**DEPARTMENT OF HEALTH AND
SOCIAL SERVICES
DIVISION OF PUBLIC HEALTH**

**PUBLIC NOTICE
Communicable Disease Regulations**

In compliance with the State's Administrative Procedures Act (Title 29, Chapter 101 of the Delaware Code) and under the authority of Title 16, Part 1, Subchapter II, #122 Et. Seq. the Delaware Department of Health and Social Services/ Division of Public Health is amending its Communicable Disease Regulations. These regulations were last amended April 13, 1995.

A summary of the content of the revisions is incorporated in this notice. Anyone wishing a complete copy of the Regulations with recommended changes noted should call 302-739-3033 requesting same or write to the Division at the address listed below.

A Public Hearing will be held on Thursday, July 29, 1999, in the third floor conference room of the Jesse Cooper Building on the corner of Federal and Water Streets from 4pm to 6pm. Persons wishing to be heard on this matter should appear in person at that time. Parties must enter by 5pm in order to be admitted.

Persons who wish to make written suggestions, compilations of data, testimony, briefs or other written materials concerning the proposed regulations must submit same to the Office of the Director, Division of Public Health, P.O., Box 637, Dover, DE 19901 by close of business August 2, 1999.

**DIVISION OF PUBLIC HEALTH
OFFICE OF EMERGENCY MEDICAL SERVICES**

NOTICE OF COMMENT PERIOD

**PROPOSED AMENDMENT TO STATE OF DELAWARE
TRAUMA SYSTEM RULES and REGULATIONS**

The Office of Emergency Medical Services, Division of Public Health of the Department of Health and Social Services, will hold a public hearing to discuss the proposed amendment to the Delaware Trauma System Rules and Regulations on August 4, 1999 at 1:00 PM in the WIC Office Conference Room, Blue Hen Corporate Center Suite 4B, 655 Bay Road, Dover, Delaware.

The comment period ends at the close of business on August 4, 1999. All comments may be addressed to MarySue Jones, Trauma System Coordinator, at (302) 739-6637 or

Office of EMS, Blue Hen Corporate Center Suite 4H, 655 Bay Road, Dover, Delaware 19901.

DIVISION OF SOCIAL SERVICES**PUBLIC NOTICE**

The Delaware Health and Social Services, Division of Social Services, is proposing to add new policy to existing policy governing Child Care. The Division of Social Services Policy Manual at 11004.7 allows for the waiving of the child care fee for parents who are ABC participants. The new policy will also allow the Division of Social Services to waive the child care fee for caretakers, those who are not parents and who are not part of the ABC or GA grant.

COMMENT PERIOD

Any person who wishes to make written suggestions, compilations of data, testimony, briefs or other written materials concerning the proposed new regulations must submit same to the Director, Division of Social Services, P.O. Box 906, New Castle, DE, by July 31, 1999.

DEPARTMENT OF LABOR**DIVISION OF EMPLOYMENT & TRAINING****COUNCIL ON APPRENTICESHIP AND TRAINING**

Statutory Authority: 19 Delaware Code,
Section 202 (a) (19 Del.C. §202(a))

Notice of Proposed Rule Changes**Summary:**

The Council on Apprenticeship and Training proposes to recommend rule changes at the meeting to be held August 2, 1999 at 10:00 a.m. at Buena Vista Conference Center 661 South Dupont Highway, New Castle, DE 19720. Changes are proposed to certain definitions in Sec. 106.2 including Administrator, Apprentice, Apprenticeship Standards, Council, Delaware resident contractor, On-site visit, Registrant or sponsor, and Registration Supervisory inspection. In addition, changes are proposed to Sec. 106.3, 106.5, 106.6, 106.7

Comments:

Copies of the proposed rules are published in the Delaware Register of Regulation and are on file at the Department of Labor, Division of Employment and

Training, 4425 N. Market Street, Wilmington, DE 19802 for inspection during regular business hours. Copies are available upon request without charge. Interested persons may submit comments in writing to the Council on Apprenticeship and Training c/o Kevin Calio at the Department of Labor, Division of Employment and Training.

Public Hearing:

A public hearing on the changes will be held during the regular meeting of the Council at 10:00 a.m. on August 2, 1999 at Buena Vista Conference Center, 661 South Dupont Highway, New Castle, DE where interested persons can present their views. This public hearing results from a substantive change to the definition of Apprentice as compared to the proposed change published in the Register, Vol. 1, Issue 8, February 1, 1998.

**DEPARTMENT OF NATURAL
RESOURCES AND
ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
AIR QUALITY MANAGEMENT SECTION**

Statutory Authority: 7 Delaware Code,
Chapter 60 (7 Del.C. Ch. 60)

REGISTER NOTICE

1. TITLE OF THE REGULATIONS:
REGULATION NO. 38 - "EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES"

2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:

The Department is proposing to revise existing Subpart A of Regulation No. 38 to incorporate several minor changes that have recently occurred in the Federal language for Subpart A. This amendment will maintain Delaware's Subpart A language in line with the Federal language. There are no known sources affected by these changes at this time, but these changes could impact future sources.

Subpart A, the "General Provisions", establishes compliance, notification, performance testing, monitoring, recordkeeping and reporting requirements common to all of the National Emission Standards for Hazardous Air Pollutants promulgated at 40 CFR Part 63 (i.e., the MACT

standards).

3. POSSIBLE TERMS OF THE AGENCY ACTION:
None

4. STATUTORY BASIS OR LEGAL AUTHORITY TO ACT: 7 Delaware Code, Chapter 60

5. OTHER REGULATIONS THAT MAY BE AFFECTED BY THE PROPOSAL: None

6. NOTICE OF PUBLIC COMMENT:

The public comment period for this proposed amendment will extend through July 31, 1999. Interested parties may submit comments in writing during this time frame to: Jim Snead, Air Quality Management Section, 715 Grantham Lane, New Castle, DE 19720, and/or statements and testimony may be presented either orally or in writing at the public hearings to be held on Monday, July 26, 1999 beginning at 6:00 p.m. at the DNREC Office Building, 715 Grantham Lane, New Castle, DE 19720 or on Tuesday, July 27, 1999 beginning at 6:00 p.m. at the Owens Campus of Delaware Technical and Community College in Georgetown, DE.

7. PREPARED BY:

James R. Snead, (302) 323-4542, June 11, 1999

**DIVISION OF AIR AND WASTE MANAGEMENT
AIR QUALITY MANAGEMENT SECTION**

Statutory Authority: 7 Delaware Code,
Chapter 60 (7 Del.C. Ch. 60)

REGISTER NOTICE

1. TITLE OF THE REGULATIONS:

REGULATION NO. 38 - "EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES"

2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:

The Department is proposing to amend Regulation No. 38 by adopting by reference the National Emission Standards for Hazardous Air Pollutants for Source Categories found at 40 CFR Part 63 Subpart N.

Subpart N addresses the emissions of chromium, a hazardous air pollutant; establishes emission limitations and

work practice standards; and defines the compliance, notification, monitoring, recordkeeping and reporting requirements for hard and decorative chromium electroplating and chromium anodizing facilities.

3. POSSIBLE TERMS OF THE AGENCY ACTION:
None

4. STATUTORY BASIS OR LEGAL AUTHORITY TO ACT: 7 Delaware Code, Chapter 60

5. OTHER REGULATIONS THAT MAY BE AFFECTED BY THE PROPOSAL: None

6. NOTICE OF PUBLIC COMMENT:

The public comment period for this proposed amendment will extend through July 31, 1999. Interested parties may submit comments in writing during this time frame to: Jim Snead, Air Quality Management Section, 715 Grantham Lane, New Castle, DE 19720, and/or statements and testimony may be presented either orally or in writing at the public hearings to be held on Monday, July 26, 1999 beginning at 6:00 p.m. at the DNREC Office Building, 715 Grantham Lane, New Castle, DE 19720 or on Tuesday, July 27, 1999 beginning at 6:00 p.m. at the Owens Campus of Delaware Technical and Community College in Georgetown, DE.

7. PREPARED BY:

James R. Snead, (302) 323-4542 June 11, 1999

**DIVISION OF AIR AND WASTE MANAGEMENT
AIR QUALITY MANAGEMENT SECTION**

Statutory Authority: 7 Delaware Code,
Chapter 60 (7 Del.C. Chp. 60)

1. TITLE OF THE REGULATIONS:

SUMMARY OF Delaware 2002 Rate-of-Progress Plan For Kent And New Castle Counties: For Demonstrating Progress toward Attainment of the 1-Hour National Ambient Air Quality Standard for Ground Level Ozone.

2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:

The Clean Air Act Amendments of 1990 (CAAA) requires Delaware to submit to the US Environmental Protection Agency (EPA) a State Implementation Plan (SIP)

for every three years after 1996 to demonstrate how to achieve adequate rate-of-progress in reducing emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx), which are major precursors to form ozone. The plan proposed herein is for the period of 2000 to 2002, and thus termed as Delaware's 2002 Rate-of-Progress Plan.

3. POSSIBLE TERMS OF THE AGENCY ACTION:

None.

4. STATUTORY BASIS OR LEGAL AUTHORITY TO ACT:

- 7 Del. C., Chapter 60 Section 6010.
- Clean Air Act Amendments of 1990.

5. OTHER REGULATIONS THAT MAY BE AFFECTED BY THE PROPOSAL:

Public hearing will be held on August 3, 1999 at 6:00 p.m. in the DNREC auditorium, 89 Kings Highway, Dover, Delaware 19901.

6. NOTICE OF PUBLIC COMMENT:

Public hearing to be announced.

7. PREPARED BY:

Frank F. Gao, Project Leader
Alfred R. Deramo, Program Manager(302) 739-4791
June 11, 1999

**DELAWARE WASTEWATER
FACILITIES ADVISORY COUNCIL**

NOTICE OF PUBLIC HEARING

PLEASE TAKE NOTICE that a public hearing has been scheduled for Wednesday, July 14, 1999 on the 1999 Project Priority List for the Construction Grants Program and the 1999-2000 Project Priority List for the Water Pollution Control Revolving Fund at 9:00 a.m. in the Delaware State Police Academy Headquarters, Classroom #1, 1453 North DuPont Highway, Dover, Delaware. The Council will receive and consider input from interested persons on the proposed priority lists. The final date for interested persons to submit comments shall be at the above-scheduled public hearing. Anyone wishing to obtain a copy of the proposed priority lists or to make comments at the public hearing may notify the Council's Administrative Assistant Luoise Holt by calling (302) 739-5081, or by writing the Delaware Wastewater Facilities Advisory Council, 5 East Reed Street, Suite 200, Dover, Delaware 19901.

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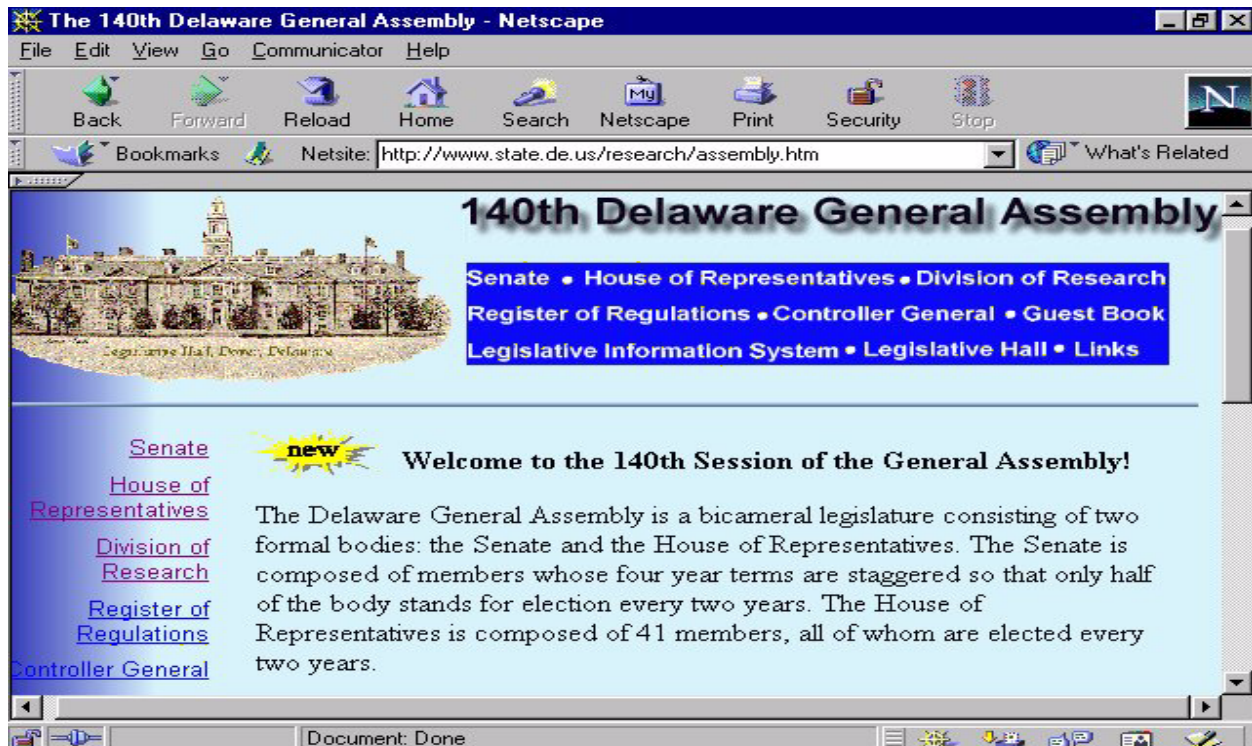
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